BMS INSTITUTE OF
TECHNOLOGY AND MANAGEMENT

(Approved by AICTE, New Delhi and Affiliated to Visvesvaraya Technological University, Belagavi)
Web site: www.bmsit.ac.in

Yelahanka, Bengaluru - 560 064

SELF STUDY REPORT

Submitted to

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BENGALURU – 560064

January - 2017

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Preface

I am happy to place this Self-Study Report (SSR) of our institute in your hands and share all pertinent information about the way our institute has developed, improved and sustained high quality education system over time. The report has been prepared keeping in mind all the guidelines of the National Assessment and Accreditation Council (NAAC), a premier accreditation body of our nation to assure quality in educational institutions/ Universities. We have found that the template of SSR developed by NAAC to collect institute's information to be very comprehensive and educative. We have enjoyed preparing this SSR entirely on our own, with no consultant/agent whatsoever at any stage. This is our first attempt seeking accreditation from NAAC, although National Board of Accreditation (NBA), New Delhi has accredited all the five UG programmes posed to it in their maiden evaluation itself.

BMS Institute of Technology & Management (BMSIT&M), established in 2002, is affiliated to Visvesvaraya Technological University, Belagavi, Karnataka, and is recognized by AICTE, New Delhi. The institute is recognized under section 2(f) of UGC act 1956. All its seven eligible programmes are permanently affiliated to the University and all its eligible departments are recognized as research centres of the University. Although, the institute is very young, it has developed enough maturity to understand its role and responsibility in the society. It has a clearly delineated strategic plan to implement its activities vis-à-vis a timeline. The Board of Governors (BOG) reviews the progress regularly and guides the institute to move towards realizing its vision. The Management has not only provided value-basis for the institution, but also sufficient resources to build and maintain modern infrastructure for all its academic and non-academic activities. The institute shares healthy and productive relationship with all its stakeholders. All these have facilitated the enrichment of human capital, innovative teaching-learning processes to develop students to their full potential, employee welfare and keeping the campus green and clean.

We believe in core values namely, contributing to national development, building global competences, inculcating value system in addition to promoting technology use and quest for excellence. The maturity of our internal systems have attained a respectable state and are ready for evaluation by accreditation bodies. The institution has posed itself for evaluation by NAAC and NBA to reassure itself that its vision, educational strategy, commitment of resources are all in line with the national developmental policies. Accreditation by these agencies would also uphold the institute's credibility and enhance its visibility to the outside world. Prospective students, their parents, employers, and Government are all assured of the quality of educational processes in the accredited institute. Therefore, accreditation from NAAC can certainly be leveraged for institute's future growth ingrained with quality.

I would like to thank Dr.T.C. Balachandra, Professor, Dept. of Electrical and Electronics Engg, who coordinated the preparation of this SSR, ably assisted by Dr. G.S.Jayadeva, Professor, Dept. of Telecommunication Engineering, members of the steering committee, department-level coordinators, Office staff and all others who contributed their best effort in compiling relevant information and bringing the SSR to its present form and value. I thank our visionary Management that is behind all our endeavours to stretch for greater accomplishments. We are indebted to all our family members for their excellent cooperation and necessary support.

I hope the reader would enjoy browsing through this SSR.

Dr. Mohan Babu G. N.
Principal, BMSIT&M

VISIONARIES

Dharmaprakasha
Rajyakaryaprasaktha

Late Sri B. M. Sreenivasaiah
Founder

Late Sri B. S. Narayan
Former Donor Trustee, BMSET

Dr B. S. Ragini Narayan
Donor Trustee and Member Secretary, BMSET
Educationist

6.	Dr U. Ramesh Unnikrishnan Director & Regional Officer, AICTE	Member AICTE Nominee	
7.	Prof A. Sridharan Professor of Civil Engg. (Retd.) Indian Institute of Science Bengaluru	AICTE Nominee	
8.	Sri Venkatesh Valluri Chairman, M/s Valluri Technology Accelerators	Member	
9.	Dr K. S. Jayantha Principal, Malnad College of Engineering, Hassan	Member VTU Nominee	
10.	Dr Mohan Babu G. N. Principal, BMSIT&M	Member Secretary	
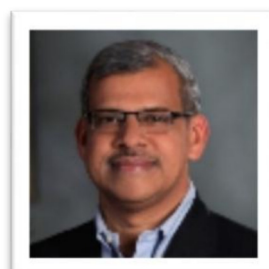
BMS INSTITUTE OF
TECHNOLOGY & MANAGEMENT

Vision

To emerge as one of the finest technical institutions of higher learning to develop engineering professionals who are technically competent, ethical and environment friendly for betterment of society.

Mission

Accomplish stimulating learning environment through high quality academic instruction, innovation and industry-institute interface.

Objectives

1. To impart high quality Scientific, Engineering and Technological knowledge and management skills to all the sections of the society.

2. To help students improve their leadership and entrepreneurship qualities ingrained with ethical, social and environmental concerns.

3. To ensure high value returns to all stakeholders of the institute.

Associated Strategies

1. To constantly improve the quality of institutional infrastructure and human capital.

2. To enhance interaction with the industry, research institutes and the Government to stay current and be relevant to the society.

3. To encourage faculty members and students to engage in thrust areas of research, consultancy and innovative activities.

4. To sensitize faculty members and students towards their responsibilities, to help build a better future for the society.

EXECUTIVE SUMMARY WITH SWOC ANYLYSIS

Preamble:

BMS Institute of Technology and Management (BMSIT&M) was established in the year 2002-03 to cater to the demand for high quality technical education in India. The institution is located in Bengaluru and is spread over an 18.5 acre sprawling & serene campus. The institute's serene campus, dedicated faculty & staff members, excellent academic and nonacademic infrastructure, quality learning aids, productive collaborations and networks with industry, research institutes and government have together provided the right impetus to the all-round development of students.

A noted philanthropist *Dharma Prakasha, Rajakarya Prasaktha* late Sri. B.M. Sreenivasaiah had a great vision of promoting prosperity of mankind by augmenting human resource capital through quality education and training. His illustrious son late Sri B.S. Narayan reinforced the effort of his father to realize the vision through formation of the Trust and pursuing the tradition. His wife, Dr. B.S. Ragini Narayan, now upholds the spirit with which the Trust was established with unwavering devotion. She is now the Donor Trustee and Member Secretary of the Trust. The Trust, which runs BMSIT&M, also runs 12 other highly reputed educational institutions under its umbrella. Among them, BMS College of Engineering established in 1946, is credited of being the First private engineering college in India, and has contributed tens of thousands of high quality engineers to the nation. The 'BMS' brand is an outcome of the exemplary vision, proactive approach, undivided commitment and dedicated effort of all its stakeholders over several decades.

Academic programmes: Focus and Achievements

BMSIT&M is affiliated to Visvesvaraya Technological University (VTU), Belagavi and recognized by the All India Council for Technical Education (AICTE), New Delhi. It is recognized under section 2(f) of the University Grants Commission (UGC) Act 1956. The institution offers UG programes in the disciplines namely, Electronics and Communication Engineering, Computer Science and Engineering, Mechanical Engineering, Electrical and Electronics Engineering, Telecommunication Engineering, Information Science and Engineering, and Civil Engineering. The PG programmes offered are Master of Computer Applications, M.Tech in Machine Design, and M.Tech in Computer Science & Engineering. The process of admission to all UG and PG programmes are as per the government norms and transparent. ***The 5 UG programmes that were posed for accreditation by National Board of Accreditation (NBA) New Delhi have been granted accredition (in line with Washington accord) for the period 2016 to 2019.*** The VTU, in 2015-16, has

accorded permanent affiliation status to 2 UG programmes and a PG programme, and has recognized seven departments as University research centers. In 2016-17, the university has recommended permanent affiliation of other eligible programmes, and recognition of other eligible departments as its research centres. The 9 university ranks and 8 gold medals that our students bagged during 2015-16, bear testimony for the qualityof education provided at BMSIT&M.

Engineers, to provide complete solutuions to problems, need to think holistically, have right competencies, lead multi-cultural teams, engage in continuous experimentation, and learn lifelong. BMSIT&M, with its clear vision and mission, is committed to produce such engineers and managers who can confidently take problems head-on. Hence, the institute has taken keen interest in, and invested significant resources for strengthening all components of engineering education system. All departments are guided by the respective Department Advisory Boards (DABs) which have eminent professors and scientists (from institutes of national importance such as IIT, IISc and IIIT), and senior practioners from industry. Special attention is paid to selection, training and motivation of faculty and staff members. The faculty strength, qualifications, and cadre ratio are as per AICTE norms. Of the total 151 faculty members, thirty three (33) have Ph.D degrees and 87 more are pursuing the same. The highly qualified, dedicated and motivated faculty members are trained to implement Outcomes-Based Education (OBE), which is an international standard to develop students to their full potential. The faculty team is ably supported by a contingent of 101 Lab and office staff members. The teaching-learning processes include course delivery through interactive classes, blended and co-operative learning, and partial delivery from practioners, etc. The processes are essentially student-centric. Above all, congenial student-teacher relationships have made teaching & learning, an enjoyable experience.

Infrastructure and Ambience:

The institute's Management has been proactive in for establishing state-of-the-art academic infrastructure. BMSIT&M has met all the norms of the AICTE with regard to infrastructural requirements, and has maintained '*Zero difficiency*' status since 2012. The institute's buildings are friendly to physically challenged persons. The institute has spacious lecture halls, tutorial rooms, fully equipped basic science and engineering laboratories, computer centers and air conditioned/non-air-conditioned seminar halls, board room, and open auditorium. The processes of teaching, learning, assessment and evaluation is strengthened by augmented ICT facilities, updated library resources, industry orientation, and an effective mentoring system.

The institute is highly environment-loving and the campus is eco-friendly. It has a vast green cover with lawns interspersed with trees, ornamental plants, fruit-bearing plants, medicinal plants, bio-diesel plants, shrubs, etc. Rain water harvesting is done in all academic and hostel blocks. Treated water from the sewage treatment plant is used for watering the campus gardens. Hostels are very good and known for hygiene and healthy environment. There is also a cafeteria that serves good food, and a bookstore to meet the stationary requirements. The opportunity for sports and multicultural activities is enormous. The institute has a good amphitheatre, sports grounds, sporting gadgets, and a gymnasium. Exclusive ladies' and gents' lounges, round-the-clock security, CCTV surveillance in hostels, 24/7 power supply, continuous housekeeping, and well-maintained transport system all bear testimony to the institute's commitment to provide the best life style to BMSITians.

Research and Industrtry Partnership:

The institue has been working on several sponsored research projects worth about a Crore rupees. An Advanced materials research laboratory has been established with the help of grants valued Rs. 56 lakhs by the Department of Science and Technology, New Delhi. Faculty members have published a good number of research papers in reputed international journals and conferences. Flexi-time policy, sabbatical policy, and seed money policy have been initiated to promote and strengthen research culture. Institute's Management financially supports meritorious interdisciplinary students' R&D projects.

BMSIT&M has signed MoUs with National Auornautical laboratory, Texas Instruments, EdGate, KPI Technologies, Valluri Technology Accelerators, National Design Research Forum, Steinbeis India, Sasken, National Institute of Technology - Karnataka and many more to train faculty members, set up labs in the campus, conduct collaborative training, and facilitate research by faculty members and students, industrial visits and internships. Industrial consultancy has seen a small beginning. Experts from various organizations are invited to share their experience and technical skills so as to help students to keep up to date.

Profile of Students and Student Support Systems:

The institute is able to attract better ranked students, given its high reputation. The institute is currently providing education to over 2400 students. The student community consists of a healthy mix of academically bright students, average students, students belonging to economically weaker sections, SC/ST & other backward and minority communities. Equity is assured for all of them in their access to learning resources, hostel facilities, placement opportunities, support services, etc. True to its vision, the institution is striving hard to develop all these students to be academically sound, physically active,

mentally alert and innovative, culturally accommodating and socially responsible citizens.

The students' support and empowerment systems at BMSIT&M include: (i) professional counselling, (ii) faculty mentors for first year students, (iii) proctor system, (iv) parent-teachers' meets, (v) student feedback system, (vi) financial assistance through fee concession and scholarships, (vii) book bank facility, (viii) SMS based alerts for attendance and IA marks, (ix) medical and accident insurance, etc. Regular interaction with industry, alumni and professional counselors helps students to choose their career. Department and institute level techno-cultural festivals, competitions, student clubs/department forums, and department/institute newsletters are some more activities that instill participative culture in students. Training in Aptitude, soft skills and English language communication is being provided from first year itself by professional trainers to make students more industry ready. Our students are placed through BMSIT&M and BMSCE placement cells. Over 80 reputed companies regularly visit our campus to recruit students. Year on Year, close to 90% of all eligible students get placed in them.

As a socially responsible entity, the institute discharges its Institutional social responsibility by involving itself in community service. The institute's NSS unit collaborates with NGOs and organizes activities such as blood donation campsand special health and hygiene camps in villages. Its faculty & staff members and students visit government schools, orphanages and old-age homes and exetend possible help and support.

Innovative Approach to System Improvements:

The institute's innovations in areas of academic development, co-curricular and extra-curricular activities, environmental protection, and staff welfare have helped to improve and sustain quality in its operations. Several innovations and best practices are in place, such as: (i) Gnanavardan or knowledge sharing (All senior faculty-members meet -one hour/week- for an interdisciplinary interaction on a topic presented by one of them, (ii) Faculty internship in industry, (iii) Sponsorship of life membership in professional bodies for faculty members, (iv) Town hall meetings with focused groups, (v) Green and clean campus initatives (vi) Direct channel of communication between students and BOG, (vii) Departmental Advisory Board, (viii) Innovative and case based questions and (ix) Project based learning. Unique technical and cultural events such as Tech-Transform, Employer meet, Start-up meets, Alumni meet, and Utsaha (annual techno-cultural fest) have aided in enhancing entrepreneurial, leadership and project management qualities in students.

All these efforts to strengthen the key components of our education system and to impart a rounded personality to graduating engineers is paying off. Students have excelled in curricular, co-curricular and extra-curricular activities. Students' accomplishments include: (i) Thirty two ranks at the University level, (ii) financial support from Karnataka State Council for S&T for several students' projects, (iii) awards from Wipro, General Electric, BEL, etc. in various competitions, (iv) merit scholarships, (v) best IEEE students' chapter, and (vi) national/international recognition, etc. Students' achievements in sports have been equally good with many of them bringing laurels to the institution in the form of awards, medals, and trophies at university, national and international levels.

BMSIT&M, with unwavering commitment to the vision of its great founders, has stepped into fifteenth year of its journey and is poised to be a responsible autonomous institute. In its effort to educate students with regard to equity, inclusiveness and sustainability (which are the three key pillars of India's 12th five year plan), BMSIT&M is creating competency, promoting passion and inculcating moral values in students for scholarly pursuits. This is a small and humble contribution of the institute towards nation building.

Strength, weakness, opportunities, and challenges (swoc) analysis:

The SWOC analysis forms the basis for assessing the current position of the institute among its strategic group of institutions on the one hand, and the position it proposes to reach on the other. Strengths and weaknesses are due to the systems and processes within the institution whereas the opportunities and challenges arise due to changes in the external environment. All the four components are dynamic in nature and these changes create a variety of situations wherein the institution necessarily has to devise its strategies to survive, grow, and prosper.

The analysis of BMSIT&M's strengths, weaknesses, opportunities and challenges has been done as follows: Initially all the Heads of the departments and sections, faculty and staff members were advised to update themselves with regard to changes in the global and national engineering educational environment. They also discussed the developments with experts from institutions of national importance like IISc, IIT and IIIT who serve on the departments' advisory boards. These changes were examined to identify those that are apparently permanent and are likely to affect the institution's activities either favourably or adversely. They also engaged in brainstorming within their departments to identify the strengths and weaknesses of their departments in specific, and institution as a whole. The information generated has been vetted by the employers, alumni, parents, and other stake holders. This information is collated as follows.

Strengths

1. The value-based ideology of the Management with its clear focus on contributing the best quality engineers to serve the society. The Management is efficient, proactive and benevolent.
2. The advantage of Brand 'BMS' (Since 1946, when the First Private Engineering College in India namely, BMS College of Engineering started).
3. Broad-based engineering education with the emphasis on student-centric learning. Practicing Outcome Based Education (OBE) with modern teaching-learning methods. Good interface with industries.
4. A large contingent of well qualified faculty and staff members. Faculty members committed to high quality teaching as well as research.
5. Good infrastructure with spacious classrooms, well-equipped labs, well designed offices and other facilities.
6. A State-of-the-art library infrastructure and resources.
7. An efficient system of administration with participative decision making approach. Considerable authority is delegated by the Management to the principal.
8. Employee welfare measures almost on par with those of Government employees, sometimes being better. The attrition rate of faculty and staff members is very low.
9. Ability to attract high quality students when compared to colleges in the strategic group.
10. Involved in appreciable community service through NSS, NCC and other outreach activities.
11. Presence of cordial relationships between all stakeholders.
12. An environment which is conducive for joyful learning and active research.
13. A vast strategically located eco-friendly green campus homing a host of species of plant and birds.
14. A good placement record over years

Weaknesses

1. The institution being an affiliated institution, it has no direct control over curriculum modifications. However can conduct value added courses.
2. Some students admitted under COMEDK and Management quota are less focused on studies.
3. Greater propation of time of faculty members is spent on academic research than industrial research.
4. Limited collaborative research, patents, and copyrights.
5. Consultancy capability needs to be developed.

Opportunities

1. With its ability to meet the requirements of regulatory & accreditation bodies, the institution can hope to be an autonomous institution soon and also a deemed university in future.
2. Sophisticated ICT available can be deployed to create academically smart campus.
3. The advent of foreign universities being round the corner, the institute can attract them to collaborate for a win-win arrangement.
4. With the expanding Indian economy, ample opportunities are available for launching more post-graduate, job oriented, enrichment and continuing education courses.
5. Given that the industry is also under pressure to tie up with institutes to ensure that they get employable graduates, BMSIT&M can partner with them to produce high quality graduates.
6. With our country riding the wave of innovations and start-up enterprises, BMSIT&M can well utilize its incubation centres and create some more.
7. The new schemes of Governments (such as PMKVY, AIM and Green campus) inviting the engineering colleges to participate can be well utilised
8. The mandatory requirement on the companies to discharge their corporate social responsibility can be capitalized for its outreach programes by the institute through its partnership with the corporate world.
9. Given that solar and wind energy is now greatly promoted in India, opportunity exists to use this energy source for campus power requirements.
10. With the revised norms of AICTE, the institute can hire up to 20% of its faculty as adjunct faculty.

Challenges

1. To enhance the quality of education to such a level where BMSIT&M always remains ahead of other institutions in the strategic group.
2. To match the academic and research strengths of the best foreign universities so as to be able to attract them for a tie up.
3. To keep all the faculty and staff members abreast with fast changing Information and Communication technologies.
4. To retain and enhance the relevance of class room teaching in the era of on-line courses.
5. To ensure that high quality engineering education is affordable to the deserving students, even when the cost of education is on dramatic rise.
6. To create an environment to retain the talented faculty members in the present time of increased mobility.
7. To promote the culture of engaging in sponsored research and industrial consultancy, among faculty members.

8. To ensure students are free from all psychological stresses/ailments and focus on academics.
9. To engage faculty members in publishing research papers in globally reputed journals with high impact factor.
10. To move from affiliated status to autonomy and eventually become deemed University.

CRITERIA WISE SUMMARY

BMSIT&M, established in 2002-03, is a self-financing private institution affiliated to Visvesvaraya Technological University (VTU), Belagavi. The institute has been following semester system of education. Choice Based Credit System (CBCS) has been introduced for students admitted in 2015-16 onwards. Since inception, BMSIT&M has been striving hard to impart quality engineering education to all sections of society with emphasis on technical competencies, and environmental & ethical concern.

A summary of various key aspects such as: (i) Curriculum, (ii) Teaching-learning process, (iii) Research, consultancy and extension, (iv) Infrastructure and learning resources, (v) Student support systems, (vi) Governance and (vii) Innovation & best practices, is given below.

CRITERIA – I: CURRICULAR ASPECTS

BMSIT&M is committed to create technically competent & confident graduates with leadership skills through holistic learning environment in tune with its vision & mission. The institution makes all out effort to effectively implement the curriculum and also to bridge the gap between the curriculum and the and the learning capabilities in students through co-curricular & extra-curricular activities. The college offers seven undergraduate programmes and three postgraduate programmes. The above programs are well supported by the basic science departments. Seven departments of the college are recognized as research centres by the affiliating university.

The academic monitoring committee consisting of representatives from all departments ensures the effective implementation of the curriculum prescribed by the VTU. The institution also conducts various activities such as technical seminars, workshops, soft skill development programmes, project exhibition, and industry institute interaction workshops for the holistic development of the students. Faculty upgrade their knowledge by conducting / attending seminars, workshops, conferences and also going through industry internship training. The institution encourages faculty to take up professional activities by way of granting leave and financial assistance. The affiliating university extends its support to the institution by providing access to facilities such as on-line video courses and subscriptions to journals through VTU consortium.

 Feedback is obtained from students on delivery of courses and on infrastructure facility, parents feedback is used for improvement of the system. Proctor system is in place to help the students academically. Parent teacher meetings are conducted to communicate performance of their wards in

addition to letter/mail/telephone phone correspondence. Alumni & employer's survey are conducted to assess competencies of graduates.

CRITERION – II: TEACHING- LEARNING AND EVALUATION

The institute prepares academic calendar which enables timely curriculum delivery and evaluation. Classroom lectures are supplemented through audio-visual aids, charts, models, tutorials, industrial visits etc. Innovative teaching-learning methods such as partial delivery, blended learning, poster presentation, role-play, think pair share, pair testing etc. are used with emphasis on student-centric strategies. Remedial classes are conducted to assist the slow learners.

Internal tests are conducted regularly and student's performance is evaluated as per university norms. Central and department libraries have excellent facilities to cater to students and faculty needs. College Magazine and Newsletters provides an excellent opportunity for the students to develop their creative talent. Various committees, cells and clubs take care of personality development and skill development. Student Proctor system and grievance redressal mechanism are in place.

Faculty are members of BOS, BOE besides being research guides. Many faculty members publish and review research articles in reputed journals / conference proceedings. The institute publishes its prospectus annually which provides all the relevant information for the students.

CRITERION – III: RESEARCH CONSULTANCY AND EXTENSION

The Institute is currently running seven UG programs and two PG programs. The institute has faculty strength of 151, with 33 faculties having PhD degree and others with masters' degree. Many faculties are perusing their PhD's and have published books, articles, research papers etc. Visvesvaraya Technological University has approved several departments as its recognized research centres. Many faculties are engaged in funded research under leading government sponsor agencies such as, NRB, DST etc. Few faculties have obtained research awards by the leading technical societies. Few faculties have taken up consultancy work.

Students are encouraged to participate in various co-curricular and extracurricular activities which motivate students to carry out research, innovate and develop an entrepreneurship culture. This includes publishing research/project work. With industry tie-ups few add on courses have been floated across student community.

The institute has promoted extension services by way of organizing awareness programs targeting stake holders and also focussing towards women empowerment. Apart from these blood donation camps and health camps through NSS are also organized. The garden maintain by the institution has be recognized as the "Best Ornamental Garden" by Horticulture society of Karnataka.

CRITERION – IV: INFRASTRUCTURE AND LEARNING RESOURCES

The institution with a lush green campus of 18.5 acres is located in the northern part of Bengaluru close to the International Airport. The Institution has a built-up area of 49772 m^2. The institution has adequate number of well ventilated, spacious class rooms, fitted with sufficient number of lights and ceiling fans.

Some of these class rooms are also provided with multimedia support, smart boards, overhead projectors, computers and Public Address Systems. The library, faculty rooms, offices computer labs are provided with modern software and hardware equipment. Each department has a library, well-furnished office rooms, a meeting/conference hall and a Board Room. Ramp and lift facility for the physically challenged persons and UPS are provided.

The institute has well equipped seminar halls with audio and visual tools, an amphitheatre for conducting bigger events and spacious ventilated laboratories.

The central internet enabled library with 28 computers is completely digitalized with ICT facility including smart board and projectors and EDUSAT facility and access to online courses through the wi-fi connection. The total area of the library is 1492 m^2 with a total seating capacity of 247.

The institution has gymnasium facility with modern equipment such as multi gym, hyper extension bench, twister, etc. The institution has ample facility for conducting indoor and outdoor sport events. The institution has five sufficiently equipped seminar halls.

The Placement cell organizes training for students by experts on personality development, communication, soft skills and tests of reasoning & aptitude,

The institution has computers with a computer to student ratio of 1:3.5 (for UG) and 1:2 (for PG). More than 180 access points of Wi-Fi are spread through the campus with 2600 users.

Hostels have a typical room size of 16 m^2 with single cot, study table, chair and wardrobe and Wi-Fi facility. Constant supply of safe drinking water & 24x7 security is provided. At present hostel is accommodating more than 500 students.

The institute has a fully functional first aid cum sick room with a qualified doctor visiting the health centre on daily basis. Round the clock ambulance facility is available in case of emergency. Insurance is provided for all the staff and students.

The canteen facility at reasonable rates is provided. A feedback system is in place to assess the quality of central facilities like library, canteen, transport and hostel facilities.

At the institutional level maintenance and upkeep of the infrastructural facilities of the campus is taken care by a Resident engineer assisted by a site engineer, supervisor and an office assistant. Round the clock security personnel are posted at various places of the college. Campus manager, faculty coordinator and service staff maintain the lush green campus. For gardening purposes the institute uses treated water from the Sewage Treatment Plant. Every floor in the block has a dedicated water filter.

CRITERION – V: STUDENT SUPPORT AND PROGRESSION

The college admits students to different academic courses through CET, COMEDK and Management quota. The institution prospectus contains information regarding admission procedure, fee structure, rules and regulations and best practices adopted. Various welfare measures are offered to students like book bank and medical insurance. The institution offers scholarship to encourage and support poor and meritorious students in the name of the founder Sri B M Srinivasaiah, in addition to the scholarships received from various government and other agencies.

The institute encourages and supports students to participate in sports and cultural activities and has a placement cell to facilitate recruitments. Besides, anti – sexual harassment committee, anti-ragging committee, entrepreneurship cell, incubation centre and proctoring system are in place.

The college brings out annual techno cultural magazine "MANTHANA", quarterly newsletter "TECHSANCHALANA" and organizes various activates under IEEE, ISTE, IETE and CSI student chapters. In all these activities students play an active role. College has a registered Alumni association.

CRITERION – VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

The institution has a highly enlightened Management which provides complete autonomy to the Principal,HoDs/decion heads. Various committees are formed and the prominent among these committees are academic monitoring committee, proctoring committee, internal assessment committee, disciplinary committee, library committee, canteen committee etc. The institution with its focus on quality education has formed an IQAC.

Various academic activities are planned and coordinated by the Principal, who conducts periodical meetings with HoDs/section heads to review the overall activities of the institution. The staff members work under the supervision of the respective department/section heads. Heads of the departments play a proactive role in the implementation of various programs and welfare initiatives. Periodic meetings of the Principal with HoDs are convened to review the overall activities of the institution.

The management reviews faculty performance through performance based appraisal system in which student feedback, university results and academic contributions of faculty are accounted. The Principal deals with the redressal of grievances of both students and staff.

Welfare schemes like medical insurance, PF loan, personal loan from employees' co-operative society, educational aid for children of non-teaching staff and provision of seats for employee's children are available. The financial accounts of the college are well maintained and are audited regularly by internal and external auditors.

CRITERON – VII: INNOVATIONS AND BEST PRACTICES

Keeping with the importance to green India, institution has taken an initiative to set up the green environment and plastic free zone in the campus. The green cover in the campus makes the weather in the campus plesant. The institution makes significant efforts for carbon neutrality by restriction of vehicle traffic within the campus and providing specific parking slots for students and staff. Lush greenery around the campus is maintained to reduce the effect of pollution. STP is designed to have 2 lakh litres treating capacity tank and treated water is used for watering of the lawns, plants and landscaping of the entire campus and also 6 rainwater harvesting units with different capacities store close to 2.2 lakh litres of water. It is treated through aerobic system and treated water is used for gardening. The total greenery area in the campus is more than 50% of total campus area. Number of trees is about 2500. Campus is interspersed with medicinal plants, Indoor plants, flowering shrubs, Creepers, Flowering Trees, Fruit-bearing plants, sacred plants. All bio-

degradable waste (Vegetable waste/kitchen waste, garden trimmings, fallen leaves and flowers) are converted into usable manure in compost pits located at different location in the campus.

The institution has introduced the use of ICT in teaching-learning processes through introduction of NPTEL program facilities, and smart class rooms in major departments to make the teaching more dynamic and interactive and following outcome based education. Emphasis has been laid on entrepreneurship development by establishing an Entrepreneurship Development Cell and conducting various programmes to nurture entrepreneurship culture amongst students. BMSIT-CII roadshow was conducted to bring the awareness on manufacturing to the students of core engineering branches. Various sensitization programmes are conducted for women through women development cell. The Academic Monitoring cell monitors the academic progress. The college also conducts remedial classes for needy students. The college has counselling process in each department to tackle the students' issues and take corrective actions. The institution has employed a professional counsellor. In order to review and enhance the quality of final year projects in the institution, an SPARC (Students Project and Assessment committee) has been established. With the objective of promoting student ideas and to develop innovative solutions for the betterment of society, institution has established innovation Centre. There is a dedicated placement cell, for guiding students towards a better career and providing job opportunities. With the objective of enhancing the proactiveness in the teaching learning process, faculty members are encouraged to undergo internship based on their interest after the semester examination to understand the current scenario in the industry. The whole purpose of this exercise is to bring industry- academia together to ensure requirements of industry and the prevailing practices in academics. The institution has proctoring system which helps in the overall development of the student during his/her stay in the college. The system also aims to keep the parents/guardians informed about the academic progress of their children on a regular basis helping them to guide their wards in the right direction.

SELF STUDY REPORT

SELF-STUDY REPORT

1. Profile of the Affiliated / Constituent College

1. Name and address of the college:

Name:	BMS Institute of Technology & Management	
Address:	Post Box No. 6443, Doddaballapura Main Road, Avalahalli, Yelahanka, Bengaluru-560064.	
City:	Pin: 560064	State: Karnataka
Website:	www.bmsit.ac.in	

2. For Communication:

Designation	Name	Telephone with STD code	Mobile	Fax	Email
Principal	Dr. Mohan Babu G N	O: 080-28561576 R: 080-23443140	9632555300	080-28561566	principal@bmsit.in
Vice Principal	Dr. Annamma Abraham	O: 080-65996594 R:	9448970039	080-28567186	viceprincipal@bmsit.in
Steering Committee Co-Ordinator	Dr. T.C. Balachandra	O:080-64569483 R:	9740327184	080-28567186	balachandratc@bmsit.in

3. Status of the Institution
Affiliated College
~~Constituent College~~
~~Any other (specify)~~

4. Type of Institution
a. By Gender
   i. For Men
   ii. For Women
   iii. Co-education √
b. By Shift
   i. Regular
   ii. Day √
   iii. Evening

5. It is recognized minority institution?

Yes

No   √

If yes specify the minority status (Religious / linguistic / any other) and provide documentary evidence. [ ]

6. Sources of funding:

Government

Grant-in-aid

Self-financing   √

Any other

7. a. Date of Establishment of the college: 06/06/2002

b. University to which the college is affiliated / or which governs the college (if is a constituent college)   Visvesvaraya Technological University, Belagavi.

c. Details of UGC recognition:

Under Section	Date, Month & Year (dd-mm-yyyy)	Remarks (if any)
i. 2(f)	17-08-2016	2(f) receieved
ii. 12(B)		

(Enclose the Certificate of recognition u/s 2(f) and 12(B) of the UGC Act)

c. Details of recognition / approval by statutory / regulatory bodies other than UGC (AICTE, NCTE, MCI, DCI, PCI, RCI etc.)

Under Section / clause	Recognition / Approval details Institution / Department Programme	Day, Month and Year (dd-mm-yyyy)	Validity	Remarks
i.	AICTE approval No. F No. South-West/1-2816291599/2016/EOA UG Programme: 1. Electronics & Comm. Engg. 2. Computer Science & Engg. 3. Information Science & Engg. 4. Mechanical Engineering 5. Electrical & Electronics Engg. 6. Telecommunication Engg. 7. Civil Engineering PG Programme: 1. M.Tech: Computer Science & Engg. 2. M.Tech: Machine Design 3. Master of Computer Applications	25-04-2016	2016-17	

(Enclose the recognition / approval letter)

8. **Does the affiliating university Act provide for conferment of autonomy (as recognized by the UGC), on its affiliated college?**

   Yes [√]   No [ ]

   If yes, had the College applied for availing the autonomous status?

   Yes [ ]   No [√]

9. **Is the college recognized**
   a. By UGC as a College with Potential for Excellence (CPE)?

   Yes [ ]   No [√]

   If yes, date of recognition: .... (dd/mm/yyyy)
   b. For its performance by any other governmental agency?

   Yes [ ]   No [√]

   If yes, Name of the agency .... and
   Date of recognition: ....(dd/mm/yyyy)

10. **Location of the campus and area in sq.mts:**

Location *	Bengaluru Urban
Campus area in sq.mts.	74867
Built up area in sq.mts.	49772

   (* Urban, Semi-urban, Rural, tribal, Hilly Area, Any others specify)

11. **Facilities available on the campus (Tick the available facility and provide numbers or other details at appropriate places) or in case the institute has an agreement with other agencies in using any of the listed facilities provide information on the facilities covered under the agreement.**

   - Auditorium / seminar complex with infrastructural facilities √
   - Sport facilities
     - Play ground   √
     - Swimming pool   --
     - Gymnasium   √
   - Hostel
   * Boys' hostel   √
       i.   Number of hostels   03
       ii. Number of inmates   494
       iii. Facilities (mention available facilities)
   * Girls' hostel   √
       i.   Number of hostels   01
       ii. Number of inmates   124
       iii. Facilities (mention available facilities)
   * Working women's hostel   --

    i.   Number of inmates
    ii.   Facilities (mention available facilities)
- Residential facilities for teaching and non-teaching staff (give numbers available – cadre wise)
- 18 residential flats very close to the institute across the road
- Cafeteria –   √
- Health centre –   √

First aid, Inpatient, Outpatient, Emergency care facility, Ambulance   **01**
Health centre staff –

Qualified doctor	Full time	√	Part time	
Qualified Nurse	Full time		Part time	

- Facilities like banking, post office, book shops   √
- Transport facilities to cater to the needs of students and staff   √
- Animal house   --
- Biological waste in the hostels is disposed through Bruhat Bengaluru Mahanagara Palike.
- Generator or other facility for management / regulation of electricity and voltage   √
- Solid waste management facility   √
- Waste water management   √
- Water harvesting   √

12. Details of programme offered by the college (Give data for current academic year)

Sl. No.	Programme level	Name of the Programme / Course	Duration	Entry qualification	Medium of instruction	Sanctioned / approved student strength	No. of students admitted
	Under Graduate	Electronics & Comm. Engineering	4 years	10+2 level	English	90	98
		Computer Science & Engineering	4 years	10+2 level	English	90	108
		Information Science & Engg.	4 years	10+2 level	English	60	71
		Mechanical Engineering	4 years	10+2 level	English	60	67
		Electrical & Electronics Engg.	4 years	10+2 level	English	60	72
		Telecommunication Engineering	4 years	10+2 level	English	60	59
		Civil Engineering	4 years	10+2 level	English	60	66
	Post Graduate	Master of Computer Applications	3 years	10+2+UG (Specific)	English	60	54
		M.Tech – Computer Science & Engineering	2 years	Bachelor of Engineering	English	18	14
		M.Tech – Machine Design			English	18	11

Integrated Programmes	-	-	-	-	-	-
Ph.D	ECE/CSE/ME/EEE/Phy / Che / Mathematics	-	PG	English	-	-
M.Phil	-	-	-	-	-	-
Certificate Courses	-	-	-	-	-	-
UG Diploma	-	-	-	-	-	-
PG Diploma	-	-	-	-	-	-
Any other (specify and provide details	-	-	-	-	-	-

13. Does the college offer self-financed Programmes?

Yes [√]   No [ ]

If yes, how many?   [10]

14. New programmes introduced in the college during the last five years if any?

Yes	√	No		Number	03

15. List the departments: (respond if applicable only and do not list facilities like Library, Physical Education as department, unless they are also offering academic degree awarding programmes. Similarly, do not list the departments offering common compulsory subjects for all the programmes like English, regional languages etc.)

Faculty	Departments (Eg. Physics, Botany, History etc)	UG	PG	Research
Science	-	-	-	-
Arts	-	-	-	-
Commerce	-	-	-	-
Any other (Specify)	Engineering	Electronics & Comm. Engg.	-	Electronics & Comm. Engg.
		Computer Science & Engg.	Computer Science & Engg.	Computer Science & Engg.
		Information Science & Engg.	-	-
		Mechanical Engg.	Machine Design	Mechanical Engg.
		Electrical & Elns. Engg	-	Electrical & Elns. Engg

		Telecommunication Engg.	-	-	
		Civil Engineering	-	-	
		-	-	Physics	
		-	-	Chemistry	
		-	-	Mathematics	
	Management		-	Master of Computer Applications	

16. **Number of Programmes offered under (Programme means a degree course like BE / MCA/M.Tech)**
   a. Annual system
   b. Semester system
   c. Trimester system

   10

17. **Number of Programmes with**
   a. Choice Based Credit System
   b. Inter / Multidisciplinary Approach
   c. Any other (specify and provide details)

   10

18. **Does the college offer UG and / or PG programmes in Teaching Education?**
   Yes ☐   No ☑ √

   If yes,
   a. Year of Introduction of the programme(s) …………………….. (dd/mm/yyyy) and number of batches that completed the programme
   b. NCTE recognition details (if applicable)

   Notification No.: ……………………………………………………..
   Date: ………………………………….. (dd/mm/yyyy)
   Validity: …………………………………

   c. Is the institution opting for assessment and accreditation of Teacher Education Programme separately?
   Yes ☐   No ☐

19. **Does the college offer UG or PG programme in Physical Education?**
   Yes ☐   No ☑ √

   If yes,
   a. Year of Introduction of the programme(s) ……………………… (dd/mm/yyyy) and number of batches that completed the programme
   b. NCTE recognition details (if applicable)

Notification No.: …………………………………………………………..
Date: ………………………………….. (dd/mm/yyyy)
Validity: …………………………………

    c. Is the institution opting for assessment and accreditation of Teacher Education Programme separately?

Yes   ☐   No   ☐

20. Number of teaching and non-teaching positions in the Institution

Positions	Teaching faculty						Non-teaching staff		Technical staff	
	Professor		Associate Professor		Assistant Professor					
	*M	*F	*M	*F	*M	*F	*M	*F	*M	*F
Sanctioned by the UGC / University / State Government *Recruited*	-	-	-	-	-	-	-	-	-	-
zYet to recruit	-	-	-	-	-	-	-	-	-	-
Sanctioned by the Management / society or other authorized bodies *Recruited*	15	02	17	11	52	54	36	19	39	7
Yet to recruit										

    * M-Male   *F-Female

21. Qualification of the teaching staff:

Highest Qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent teachers							
D.Sc / D.Litt	-	-	01	-	-	-	01
Ph.D	11	02	10	04	02	-	29
M.Phil	-	-	-	01	-	02	03
PG	-	-	06	06	49	52	113
Temporary teachers							
Ph.D	04	-	-	-	-	-	04
M.Phil	-	-	-	-	-	-	-
PG	-	-	-	-	01	-	01
Part-time teachers							
Ph.D	-	-	-	-	-	-	-
M.Phil	-	-	-	-	-	-	-
PG	-	-	-	-	-	-	-

22. Number of visiting faculty / Guest faculty engaged with the college.

08

23. **Furnish the number of the students admitted to the college during the last four academic years.**

Categories	Year 1(2015-16)		Year 2 (2014-15)		Year 3 (2013-12)		Year 4 (2012-13)	
	Male	Female	Male	Female	Male	Female	Male	Female
SC	85	78	83	68	77	65	76	60
ST	21	10	17	12	14	12	15	10
OBC	290	186	301	183	260	152	274	154
General	1168	505	1133	486	1048	470	887	425
Others	-	-	-	-	-	-	-	-

24. **Details on students enrolment in the college during the current academic year:**

Type of students	UG	PG	M.Phil	Ph.D	Total
Students from the same state where the college is located	1558	181	-	47	1739
Students from other states of India	569	13	-	00	582
NRI students	22	-	-	00	22
Foreign students	-	-	-	00	-
Total	2149	194		47	2343

25. **Dropout rate in UG and PG (average of the last two batches)**
    UG ☐ 1.98%   PG ☐ 0.8%

26. **Unit Cost of Education**
    (Unit cost – total annual recurring expenditure (actual) decided by total number of students enrolled)
    (a) Including the salary component   Rs. 1,71,393/-
    (b) Excluding the salary component   Rs. 96,216/-

27. **Does the college offer any programme / s in distance education mode (DEP)?**
    Yes ☐   No ☑
    If yes,
    a) Is it a registered centre for offering distance education programmes of another University
    Yes ☐   No ☐
    b) Name of the University which has granted such registration.
    ☐
    c) Number of programmes offered ☐
    d) Programmes carry the recognition of the Distance Education Council.
    Yes ☐   No ☐

28. **Provide Teacher-student ratio for each of the programme / course offered**

1. Electronics & Communication Engineering   1:15.4
2. Computer Science & Engineering   1:17
3. Information Science & Engineering   1:18
4. Mechanical Engineering   1:15
5. Electrical & Electronics Engineering   1:16.6
6. Telecommunication Engineering   1:15
7. Civil Engineering   1:18
8. Master of Computer Applications   1:15
9. M.Tech - Machine Design   1:12
10. M.Tech - Computer Science & Engineering   1:12

29. Is the college applying for

Accreditation: Cycle 1 [√]   Cycle 2 [ ] Cycle 3 [ ] Cycle 4 [ ]

Re-Assessment: [ ]

(Cycle 1 refers to first accreditation and Cycle 2, Cycle 3 and Cycle 4 refers to re-accreditation)

30. Date of accreditation* (applicable for Cycle 2, Cycle 3, Cycle 4 and re-assessment only)

Cycle 1: …………………….. (dd/mm/yyyy) Accreditation Outcome/Result
Cycle 2: …………………….. (dd/mm/yyyy) Accreditation Outcome/Result
Cycle 3: …………………….. (dd/mm/yyyy) Accreditation Outcome/Result
* Kindly enclose copy of accreditation certificate(s) and peer team report(s) as an annexure.

31. Number of working days during the last academic year.

180

32. Number of teaching days during the last academic year
(Teaching days means days on which lectures were engaged excluding the examination days)

150

33. Date of establishment of Internal Quality Assurance Cell
(IQAC) IQAC : 12/05/2016

34. Details regarding submission of Annual Quality Assurance Reports (AQAR) to NAAC

AQAR (i)   ……………………… (dd/mm/yyyy)
AQAR (ii)   ……………………… (dd/mm/yyyy)
AQAR (iii)   ……………………… (dd/mm/yyyy)
AQAR (iv)   ……………………… (dd/mm/yyyy)

35. Any other relevant data (not covered above) the college would like to include. (Do not include explanatory/descriptive information)

- Thirty two students have excelled in academics securing ranks in the University examination.
- In the last 5 years more than 15 students have participated in University, National & International Sports and cultural events.
- The institution has won best ornamental garden prize six times successively from Horticulture Department of the state of Karnataka.
- Not less than 20% of students have conducted final year projects in reputed industries and research organizations.
- Student projects related to societal concern & health have won prizes from KSCST.
- The NSS wing and women empowerment cell of the institution has conducted various extension activities

BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT

YELAHANKA, BANGALORE - 64

Vision

To emerge as one of the finest technical institutions of higher learning, to develop engineering professionals who are technically competent, ethical and environment friendly for betterment of the society

Mission

Accomplish stimulating learning environment through high quality academic instruction, innovation and industry - institute interface

Criteria-wise Inputs

CRITERION – I: CURRICULAR ASPECTS

1.1 Curriculum Planning and Implementation

1.1.1 State the vision, mission and objectives of the institution, and describe how these are communicated to the students, teachers, staff and other stakeholders.

Vision

To emerge as one of the finest technical institutions of higher learning to develop engineering professionals who are technically competent, ethical and environment friendly for betterment of society.

Mission

Accomplish stimulating learning environment through high quality academic instruction, innovation and industry-institute interface.

Objectives

1. To impart high quality Scientific, Engineering and Technological knowledge and skills to all the sections of the society.
2. To help students improve their leadership and entrepreneurship qualities ingrained with ethical, social and environmental concerns.
3. To ensure high value returns to all stakeholders of the institute.

Associated Strategies

1. To constantly improve the quality of institutional infrastructure and human capital.
2. To enhance interaction with the industry, research institutes and the Government to stay current and be relevant to the society.
3. To encourage faculty members and students to engage in thrust areas of research, consultancy and innovative activities.
4. To sensitize faculty members and students towards their responsibilities, to help build a better future for the society.

The vision, mission and objectives of the institution are communicated to and reinforced in students, teachers, staff and other stakeholders by disseminating them as appropriate at the places given below.

1. Institution's website: www.bmsit.ac.in
2. Notice boards in the Institution
3. Institution's annual magazine (MANTHANA), Quarterly newsletter - TechSanchalana
4. Department Heads/Faculty members' Cabins
5. Faculty members' work dairy
6. Institution's Prospectus
7. Hostel notice boards
8. Laboratory manuals, Laboratory records, Course files, Internal Assessment booklets
9. Class rooms and Laboratories
10. Official correspondence with stake holders: Letter heads/emails

1.1.2 How does the institution develop and deploy action plans for effective implementation of the curriculum? Give details of the process and substantiate through specific example(s).

- BMS Institute of Technology & Management is affiliated to Visvesvaraya Technological University (VTU) and has been following the curriculum and academic schedule prescribed by the University.
- The faculty council of an engineering programme (e.g. Mechanical Engg.) will analyse gaps in the University prescribed curriculum vis-à-vis the objectives/outcomes expected to be attained by students of the programmes, and prescribe the value addition activities (co-curricular) to bridge the gap
- The courses are allocated to faculty members (course coordinators) based on their qualification, specialization and experience.
- The calendars of academic and non-academic events for all the programmes of the institution are prepared jointly by the Heads of the Departments (HoDs) / sections incorporating the suggestions of the faculty council. The central time table committee ensures consistency among time tables of all programmes. Both the calendar of events and the time-tables are approved by the Principal.
- Lesson plans are prepared and maintained by course coordinators and verified by the Heads of the Departments.
- The teachers' work dairies are verified by the heads of the departments for adherence to lesson plan. The regular conduction of classes, students' attendance & punctuality is also monitored by

the heads, who report to the chief co-ordinator of the central Academic Monitoring Committee (AMC) once every month, The reports given by the heads are reviewed by the chief co-ordinator and the Principal to decide the necessary course of action.

- Special classes are conducted to ensure the completion of syllabus and to help students to understand complex topics. Remedial classes are conducted for weak students and slow learners. Tutorial classes, which are over and above the University requirement, form a part of the regular time-table and are conducted to solve additional problems in mathematical and analytical subjects.

- Guest lectures, Partial delivery of the courses by SMEs, workshops & industry visits are arranged to provide students with knowledge of trends in new technologies and their deployment to meet societal needs.

- Modern teaching/learning methods such as collaborative and co-operative learning are often adopted for effective implementation of the curriculum.

- Detailed laboratory manuals are prepared and updated regularly. Students are sensitised with respect to the experimental setup/tools/software prior to the commencement of the experiment. Wherever possible, attempts are made to conduct additional experiments (includes open ended experiments).

1.1.3 What type of support (procedural and practical) do the teachers receive (from the University and/or institution) for effectively translating the curriculum and improving teaching practices?

Support from the University

- The institute has Satellite Interactive Terminal (SIT) provided by VTU through which University telecasts expert video lectures (in real time) of selected courses. They are presented to students and this programme is named as EDUSAT and is supported by ISRO. The e-notes of all courses of EDUSAT programme is available in https://elearning.vtu.ac.in

- The University has developed and distributed to all students, the videos of learning material for all courses of first year.

- The University revises syllabus once in every four years and conducts faculty development programmes/workshops for the new subjects introduced in the syllabus, to facilitate new concepts to faculty.

- AICTE mandates the institutes to subscribe for specified number of print journals/e-journals and e-books. VTU has formed a consortium of engineering colleges and collectively subscribed to the e-journals mandated by the AICTE. BMSIT&M being a member of the consortium has access to all of them.

- VTU has instituted a "Research Grants Scheme" in basic sciences and engineering to harness and nurture the research talents which is available to all affiliated institutions.
- VTU also offers grants for Faculty Development Programmes (FDP) in technology/research areas which are of international importance under VTU-VGST FDP's scheme.

Support from the Institution

- The central library of the institution provides University recommended text and reference books, as well as the books recommended by faculty and students in both engineering and allied areas. It also has hand-books, year-books, encyclopaedia (subject/general), treatises, monographs e-journals, e-books and print journals, technical and general magazines, NPTEL videos/web-courses, CDs/DVDs (books/magazines/attachments), books of general interest and newspaper. The institute has a digital library too. The library has deployed OPAC to facilitate quick and easy access of resources.
- All departments use LCD projectors for effective teaching & learning in addition to the conventional (talk & chalk) method. Faculty members are encouraged to try out new methods of teaching.
- Faculty members are deputed for workshops/conferences/short term courses and seminars with financial assistance whose themes are not only related to technical subjects but also to engineering/research/education and teaching methodologies in general. This helps in effective rendition of the curriculum.
- Institute encourages & supports faculty members to pursue higher studies. Study leave is sanctioned to faculty members to pursue higher studies.
- Internet connectivity with 60 Mbps bandwidth and additional 50 Mbps Wi-Fi facility is made available to the students and staff of the institute. To ensure standby connectivity in case of emergency, net connectivity is sourced from three service providers: (i) D-VOIS communication (40 Mbps) (ii) BSNL (20 Mbps) and (iii) Jio (50 Mbps Wi-Fi). In addition, girls' hostel is provided with 10 Mbps FTTH (Fibre to the Home) connections.
- The institution provides full financial assistance to enable faculty members to become members of Indian professional societies such as Institution of Engineers, IETE, ISTE, CSI etc. For foreign professional body memberships, 75% of the annual membership fee is provided by the institution subject to a maximum of Rs. 15,000/-.
- The institution has signed MoUs with the industry/agencies to facilitate student training and placement, higher studies abroad and impart knowledge in energy, environment and pollution and waste

management to improve living standards. The institution has inked Memoranda of Understanding (MoU) with companies to sponsor laboratories equipped with latest tools and software to encourage faculty and students to engage in research activities. One such example is, Texas Instruments through its University programme partner EdGate Technologies have set up a "System on Chip Laboratory".

- Faculty in the institution attend industry internships during vacations to get practical exposure to help them improve their ability to deliver sessions and guide students with their projects.

- To give thrust to research, the institution has initiated an Internal Research Promotion Scheme to fund internal research projects. Three such projects were funded during the year 2015.

- BMSIT& M initiated an innovation centre to inspire and motivate faculty and students to undertake creative, interdisciplinary, and innovative project works.

1.1.4 Specify the initiatives taken up or contribution made by the institution for effective curriculum delivery and transaction on the curriculum provided by the affiliating University or other statutory agency.

- The calendar of events prepared by the institute as per University guidelines incorporates adequate time for academics, evaluation, co-curricular and extra- curricular events.

- Lesson plans, class notes, course materials, and laboratory manuals are prepared and updated regularly by the faculty members. They are made available to students well in advance.

- The academic monitoring committee oversees the effective implementation of the institutional academic plan with the help of departmental faculty representatives and the HoDs.

- Special classes are arranged to ensure complete curriculum coverage. Remedial classes are taken for slow learners. Tutorial classes are taken to solve additional problems in mathematical and analytical subjects.

- Co-operative learning methods are used for better understanding of subjects. They include: jigsaw, think pair sharing, brain storming, flip classes, presentations, blended classes (e.g.: NPTEL Lecturers) etc. Partial delivery classes are being conducted where industry professionals handle a part of the course. This helps bringing into classroom, a practical and industry relevant exposure.

- The institute has five seminar halls with public address systems and LCD projectors for conducting guest lectures, workshops, seminars etc. All departments have adequate number of well ventilated class rooms and many have LCD projectors for effective curriculum

delivery. Each department has well equipped laboratories to conduct experiments specified in curriculum and add on/open ended experiments.

- The institute has a well stacked library with books and journals, e-learning resources, NPTEL lectures, general & technical magazines and newspaper. The institution also has departmental libraries to cater to student and faculty needs. The institution utilises Dspace, through which the faculty members share their learning material with students.
- In addition to regular subject classes, the college also organizes special lectures by inviting experts from various fields to share their knowledge and experience with the students.
- Project exhibitions and poster presentations are organized for students to enhance their interest in courses and demonstrate their practical knowledge.
- Students are encouraged to participate in technical & extracurricular events organized in-house, and by other colleges & universities.
- Students and faculty members are encouraged & supported to undergo industry internships and undertake interdisciplinary & innovative projects.
- The institute has taken steps to practice outcome based education and many valued added courses/programmes are conducted every semester to impart better competencies and behaviour in students.

1.1.5 How does the institution network and interact with beneficiaries such as industry, research bodies and the University in effective operationalisation of the curriculum?

The institution interacts closely with the industry, research bodies and the university to achieve its mission.

Industry and Research Bodies:
- Each Department has an Advisory Board comprising of industry experts, academicians and researchers from renowned institutions. This body guides the department to move in right direction and provides inputs on international curriculum and standards.

- Experts from the industry & research bodies are invited to deliver talks, deliver partial courses, and conduct faculty development programmes/workshops to enrich student & faculty knowledge.
- Once in two months, the institute organizes a special day called Start-up Day wherein well known entrepreneurs, venture capitalists, mentors, government catalysts directly interact with students, on the campus providing them insights into the opportunities and challenges of starting and operating a new business.

- Most of the faculty are members of professional bodies like ISTE, IETE, IE, IEEE, CSI and SAE. Networking with these bodies has helped them bring in the latest technological developments to class room. The institution also provides financial support to teachers to become members of these societies.
- The institution utilises its network with industry to secure internships and projects for students and faculty members which enriches their academic interaction.
- The institution has initiated the conduction of an annual technical festival 'Techtransform' to promote entrepreneurship culture in the student community. Start-up and established companies with which the institute has a strong network are brought together on the 'Techtransform' platform to interact with students and faculty and discuss various challenges involved in starting and operating an enterprise.
- The institute, in collaboration with the Confederation of Indian Industry (CII), organized BMSIT&M-CII road show to enlighten students from core engineering programmes on the technological trends and opportunities in those areas and encourage them to pursue manufacturing/construction/core engineering as a profession rather than switching to IT Services.
- All departments conduct technical festivals in which various technical seminars, projects and design competitions are held and industry experts are invited to judge the quality of students work. The institute funds selected innovative and interdisciplinary projects of both students and faculty members.
- Regular industrial visits are organized by all departments for the benefit of students.
- The institution is in the process of adopting 'sabbatical leave' system for teachers and provides them a private/free intellectual space to consolidate the gains of their experience and contribute something substantial for the institute/industry/society.

University:
- The institute has seven departments (EEE, ECE, CS, ME, PHY, CHE, Mathematics) recognized as research centres by VTU. A good number of research scholars are pursuing research in these centres. The research experience acquired by teachers form these centres flow into class room discussions.
- Many faculty members are members of various boards of the University (Board of Studies, Board of Examinations, Senate Membership etc.) and contribute to the development of curriculum and its effective delivery.
- The institution utilises the various services of the University (to effectively operationalize the curriculum) such as:

a) On-line video lectures through NPTEL-NMEICT-VTU which help basic, demonstrative, interactive and supplementary learning.
b) The University has provided all students of first year, DVDs containing video learning material of all the first year courses including laboratories.
c) Access to online resources (e-journals & e-books) through VTU Consortium.
d) Access to research grants in basic sciences and engineering to harness and nurture the research talent of staff and students.
e) Access to VTU-VGST grants to conduct FDPs.
f) Access to online real-time lectures through VTU – EDUSAT programme.

1.1.6 What are the contributions of the institution and/or its staff members to the development of the curriculum by the University?(Number of staff members/departments represented on the Board of Studies, student feedback, teacher feedback, stakeholder feedback provided, specific suggestions etc.

Several faculty members of the institution are members of the Board of Studies (BOS) and Board of Examiners (BOE) of various engineering programmes of the VTU. They take inputs from course coordinators of their programme and deliberate on them with their co-members of the board. Thus they take active role in framing the curriculum and syllabi for their respective programmes. However, in the absence of representation of the institute in the BOS of a programme of the VTU, course coordinators give feedback to the board through mails before the board meets for finalizing the curriculum. Their inputs along with inputs from other colleges will be given due consideration by the boards. Members of the BOE also share their experiences with the members of the BOS of their programme to bring in clarity in the syllabi.

The following faculty members of BMSIT & M have been actively involved in development of curriculum at the University level. The details are given below.

Sl. No.	Name of Faculty	Role in VTU / Other University	Period
Dept. of Industrial Engg. & Management, Dept. of Industrial & Production Engg.		
1.	Dr.Mohan Babu.G.N.	Member of LIC, VTU (2 times)	2009 & 2016
		Member of BOS, VTU (2 times)	2001-04, 2007-10
		Member of BOE, VTU (3 times)	2002-03, 2006 – 07, 2007 – 08
		Member of BOS (Autonomous institutions such as MCE, MSRIT, Bengaluru; Hassan)	2013 -16 2010 -2015
		Member of BOE (autonomous institutions such as MCE, Hassan; MSRIT, Bengaluru; SIT, Tumkur, RVCE, Bengaluru)	2013 -15, 2010 – 15, 2014, 2013
Dept. of Electrical & Electronics Engineering		
2.	Dr. T.C. Balachandra	BOS Member	2006 – 2011
		LIC Member	2009 – 2010
Dept. of Telecommunication Engineering		
3.	Dr. G.S. Jayadeva	BOE (Member ECE/TCE board)	2012 – 2013
		LIC Member	2014 – 2015
		BOS (E&C) Member NMAMIT (VTU Nominee)	27/05/2014 – 26/05/2016
		BOS Member ECE Board (SIT Tumkur- Autonomous Institution)	2013 – 2014 & 2015 – 2016
		BOE Member – ECE Board (SIT Tumkur- Autonomous Institution)	2011 – 2012 & 2013-2014
		BOE Member TCE Board (MSRIT- Autonomous Institution)	2012 – 2015
4.	Dr. C.S. Mala	VTU Special Officer (Academic Section)	1999 – 2001
		LIC Member	2000 – 2001
Dept. of Information Science and Engineering		
5.	Dr. Manjunath T. N.	BOE Member, Solapur University	2013 – 2014
		VTU-LIC member	2015 – 2016
		BOE VTU (CS/IS Board)	2016 – 2017
6.	Dr. Bharathi M. A.	BOE Member (MSRIT- Autonomous Institution)	2015 – 2016

Dept. of MCA			
7.	Dr. Arun Kumar B. R.	BOS Member (MCA Board)	2013 – 2016
		BOE Member (MCA Board)	2014 - 2015
		BOE Member for Bengaluru University	2015 – 2018
Dept. of Mechanical Engineering			
8.	Dr. H. K. Govindaraju	LIC Member	2014 – 2015
9.	Dr. A. V. Suresh	LIC Member	2013 – 2014
Dept. of Computer Science			
10.	Dr.Thippeswamy G	Member, LIC, VTU	2014 – 16
		Member, BOE,VTU	2015 – 16
		Member, BOS, BEC, Bagalkot	2015 – 17
		Member, BOS/BOE, Dayanand Sagar University	2015 – 16
Department of Electronics and Communication Engineering			
11.	Dr. M. C. Hanumantharaju	Member of LIC (Two Times)	2015 and 2016
		BOE Member (ECE) Dr. Ambedkar Institute of Technology, Bengaluru	2016-17
		BOE Member (ECE) Nitte Meenakshi Institute of Technology, Bengaluru	2016-17

The institute authorities also communicate to the VTU regarding rectification of any of its services (say VTU consortium library).

1.1.7 Does the institution develop curriculum for any of the courses offered (other than those under the purview of the affiliating University) by it? If 'yes', give details on the process (Needs assessment, design, development and planning) and the courses for which the curriculum has been developed.

The institution in its capacity to contribute and participate in the realm of automotive industry has contributed to the development of two courses in collaboration with KPIT Technologies Pvt. Ltd, a major player in Automotive ECU providers. The growing demand for students trained in automotive electronics and infotainment in today's world, required the institute to collaborate with this leading automotive electronics company. These courses are run as open electives for 8th semester students of ECE, TCE and EEE departments in addition to the curriculum offered by the affiliated University. The students who get placed in KPIT Tech Pvt. Ltd. along with other interested ones undergo these courses. This enhances the job prospects of the latter too in

automotive industry. A good number of students are already placed in such companies in the last 2-3 years.

1.1.8 How does institution analyse/ensure that the stated objectives of curriculum are achieved in the course of implementation?

The following methods are adopted by the institution to ensure that the stated objectives of the curriculum are achieved.

- The scope for improvement in the University curriculum is identified and measures are initiated to realize it through value added courses, training and various co-curricular activities that help students become complete professionals.
- The institution prepares well in advance a calendar of events clearly indicating the schedule of events and activities. The individual departments, as per their requirement, incorporate their programmes into it.
- The Academic Monitoring Committee (AMC) and HODs ensure adherence to the academic calendar through regular review of teachers' diary, lesson plan and attendance register etc. Based on the observations corrective actions are initiated.
- Internal assessments are conducted at regular intervals to ascertain the level of understanding of the students with respect to various curricular topics. Semester end examination also helps to assess the students' curricular competencies. The institution analyses results and takes necessary actions such as remedial classes, extra tutorial classes, mentoring, etc. for improvement.
- Alternative methods/assessment tools like assignments, quizzes, surprise tests, course seminars, mini projects and contemporary discussions are used to assess UG/PG students.
- Feedback obtained from students on the delivery of courses they attended provides the inputs necessary to improve the effectiveness of the same. Faculty members scoring below 60% in students' feedback would be counselled.
- The proctor system which is in place helps to locate the pain points of students in the learning process so that efforts to mitigate them could be made by the respective proctor in consultation with course coordinators.
- Parent-Teachers' Meeting (PTM) is conducted as per the calendar of events to communicate to the parents the performance of their wards and also the University regulations regarding attendance/internal assessment requirements. Feedbacks from parents serve as an effective input to improve the system.
- Surveys of employers and alumni are conducted to assess the competencies of our graduates. This feedback helps in fine-tuning the teaching learning process.

- Students are encouraged to organize events such as Techtransform, Road shows, start-up festival, utsaha, department festivals etc. so as to help them improve their communication, leadership and team skills.
- They are involved in NSS, NCC, Red Cross and social service activities, so as to bring in sensitivity & responsiveness to societal problems.
- Students' annual feedback on the institution's academic infrastructure helps in understanding the shortfalls, if any, which could be set right.
- The Students Project Assessment and Review Committee (SPARC) provide the timeline for all student projects and monitor their compliance. Interdisciplinary and innovative projects are identified and supported.
- The Principal follows an open-door policy to address students' related academic issues, and directly interacts with them. His regular Town Hall meetings with students of various categories bring out the latent academic issues and concerns, which are addressed based on priority.
  All the above and many more activities have helped to build technically competent, ethical & environment friendly engineers. This satisfies the expectations of all stake holders.

1.2 Academic Flexibility

1.2.1 Specifying the goals and objectives giving details of the certificate/diploma/skill development courses etc., offered by the institution.

Being a non-autonomous institution, BMSIT&M is not entitled to offer any certificate/diploma programmes. However, it has offered skill development courses to students. The following skill development courses in the area of Automotive Electronics focusing on Electronic Control Unit (ECU) are offered as open electives for 8th semester students of ECE, TCE and EEE departments, in addition to the curriculum offered by the affiliated University:

(i) Automotive Sensors (AUTOSAR)
(ii) Automotive Electronics and Infotainment.
Apart from this, the institution routinely conducts training on soft skills and personality development for all students. The duration of this course is about 60 hours and is spread over 4 semesters.

The institution conducts English language communication course for first year students. A basic course in English is run especially for Afghanistan students for about 6 months before the commencement of their first semester.

The institution also offers bridge courses required for the dynamic employment market, through placement cell regularly.
Skill oriented programmes on software like Labview, simulation, Latex are also conducted.

1.2.2 Does the institution offer programmes that facilitate twinning/dual degree? If 'yes', give details

No, the institute does not offer dual degree programmes as it is still a VTU affiliated institution.

1.2.3 Give the details on the various institutional provisions with reference to academic flexibility and how it has been helpful to students in terms of skill development, academic mobility, progression to higher studies and improved potential for employability. Issues may cover the following and beyond:

Academic flexibility:

Range of Core and Electives:

- BMSIT&M being an affiliated institution offers all the core and elective courses prescribed by the University.
- B.E., M.Tech. And M.C.A. programmes have 10%, 25% and 20% of their total courses as electives offered in five, four and five groups respectively. BE Students opt for electives from sixth semester onwards, whereas M. Tech from first semester and MCA from third semester.

Projects and Seminars:

- Students can choose their final year projects from any domain either in industry or institution. Similarly, the range of seminar topics that they can choose from is also unlimited.
- A student can choose electives, projects and seminars in such a way that he/she can develop special knowledge and skills in that area, and hence improve his/her employability or prospects of higher studies.

Choice Based Credit System and range of subject options:

- The institute has adopted Choice Based Credit System (CBCS) from the academic year 2015-16, as per VTU directions. Hence, these students can pick courses from within their branch of study and also across branches so that they can build the specialized skills in the area of their choice which helps improving employability and scope for higher studies.

Flexibility to complete Humanities courses:

- As per VTU regulations a student can complete the courses Environmental Science, Constitution of India and Professional Ethics, and Kannada any time before the completion of the engineering programme. This aids unhindered vertical mobility of students. Lateral entry diploma students can complete diploma mathematics course any time before the completion of the programme.

Courses offered in modular form:

- VTU to which the institute is affiliated has introduced courses in modular form from the academic year 2014-15 only for first year courses, and is continued for 2015-16 first year courses along with CBCS. While the student needs to study all the modules to answer the question paper, there exists enough choice within the module.

Credit transfer and accumulation facility:

- The institute being an affiliated college permits students to change the college or branch of study after I year and the credits earned till then remain valid. But presently one cannot sandwich courses from other institutions.

Lateral and vertical mobility within and across programmes and courses:

As per the Government rules, diploma students can directly get admitted to third semester under lateral entry scheme.
The institute allows a student to change his/her branch of study (Engg. programme) while entering 3rd semester subject to VTU norms. Students can take transfer from BMSIT&M to other colleges and vice versa in 3rd, 5th and 7th semesters, subject to University rules and government regulations. This provision facilitates academic mobility.
The flexibility in vertical mobility is provided in line with the University norms as follows:

- There shall not be any restriction for promotion from an odd semester to the next even semester, provided the candidate has fulfilled the attendance requirement.
- A candidate shall be eligible for promotion from an even semester to the next odd semester (i.e. to the next academic year) if the candidate has not failed in more than four courses in the immediately preceding two semesters and has passed in all the subjects of all the still lower semester examinations.

Enrichment courses:

The institution has been organizing various enrichment courses/programmes to improve skill development and employability. For example,

- Dept. of ECE organized a skills development programme on 'Introduction to document preparation system - Latex'.
- A course on AUTOSAR is offered to final year students in association with KPIT Technologies.
- Courses are conducted in regional language Kannada to help non-Karnataka students to acquire Kannada speaking skills.
- Courses are also conducted in English to promote effective communication. However, there is no examination with credits for these subjects. A post assessment is conducted to evaluate the value addition achieved.
- Several entrepreneurial skill development programmes namely, Techtransform, Start-up day, Employers meet, and CII Road show have been conducted. Activities from Entrepreneurship Development Cell and various departmental associations, students club and Professional bodies are a routine in the institute.
- Placement and Training Cell regularly conducts many skill development programmes that help employability of students.
- Industrial visits and internships for students have also helped improving their employability.

1.2.4 Does the institute offers self-financed programmes? If 'yes' list them and indicate how they differ from other programmes, with reference to admission, curriculum, fee structure, teacher qualification, salary etc.

All the programmes offered by the institute are self-financed. The following is list of programmes offered in the institute:

UG programmes (BE):
- Mechanical Engineering
- Computer Science and Engineering
- Electronics and Communication Engineering
- Electrical and Electronics Engineering
- Telecommunication Engineering
- Information Science and Engineering
- Civil Engineering

PG Programmes:
- M.Tech in Design Engineering (Mechanical Engineering)
- M.Tech in Computer Science and Engineering
- Master Of Computer Applications (MCA)

Research Centres:
- Mechanical Engineering
- Computer Science and Engineering
- Electronics and Communication Engineering
- Electrical and Electronics Engineering
- Physics, Chemistry and Mathematics

As all programmes of the institute are self-financed, comparison (difference) with other programmes does not arise. However, the following points are important to note.

- Admissions are made as per Karnataka Government norms.
- Institute follows the curriculum prescribed by VTU, Belagavi.
- Fee structure followed by the institute is as per the policies of the State Government and Consortium of Medical, Engineering and Dental Colleges of Karnataka (COMEDK) and Management.
- The qualifications of teachers appointed are as per AICTE guidelines.
- The salary paid to the faculty members is as per AICTE - 6th pay commission recommendations.

1.2.5 Does the college provide additional skill oriented programmes, relevant to regional and global employment markets? If 'yes', provide details for such programme and beneficiaries.

Yes, college organized short term programmes and activities as follows:

Sl.No	Name of Programme	Department	Date and Duration	Beneficiaries
1	Web Application Development	ISE	Feb-2016 to May – 2016	VI sem ISE students
2	Data Mining Using Informatica	MCA	21-12-2013 to 22-12-2013	III & V sem MCA
3	RSA and Design Pattern		18-3-2014 to 22-3-2014	V sem MCA
4	Software Testing		13-9-2014	III & V sem MCA
5	Mobile Application Development Using MAC iOS		28-2-2015	II & IV MCA
6	Mobile Application Development Using Android		7-3-2014	II & IV sem MCA
7	Software Testing Tools		22-4-2016	II & IV sem MCA
8	Mobile Application Development Using Android		29-4-2016	II & IV sem MCA
9	SOFT SKILLS	All Departments	July 2012, 4 days	VI sem students

10	APTITUDE		June/July 2012, 2 days	VI sem students
11	SOFT SKILLS		July 2013, 6 days	VI sem students
12	APTITUDE		July 2013, 4 days	VI sem students
13	SOFT SKILLS		July 2014, 6 days	VI sem students
14	APTITUDE		July 2014, 4 days	VI sem students
15	SOFT SKILLS		July 2015, 6 days	VI sem students
16	APTITUDE		July 2015, 4 days	VI sem students
17	Industrial Automation	**EEE**	27th Sept. 2012	All Higher sem students
18	GNU Compiler & Debugger		15[th]Feb 2014	VIII sem Students
19	Product Building Using Raspberry Pie		29th, 30th March 2014	VI and VIII sem students
20	One day Workshop on FOSS, Google Summer of Code	CSE	28th Aug 2014	All Students
21	Industrial Oriented Add-on-Course on "Project Management & Agile Framework"		13th, 20th and 27th SEP 2014	All Students
22	JAVA Enrichment Programme		Aug-2015 to Nov 2015	III sem students

1.2.6 Does University provide for the flexibility of combining the conventional face to face and Distance Mode of Education for students who choose the courses/combination of their choice? If 'yes', how does the institution take advantage of such provision for the benefit of students?

The institution is affiliated to Visvesvaraya Technological University, Belagavi which does not have the flexibility for distance mode of education. However, students are provided with a facility to access NPTEL/MOOC educational materials. EDUSAT facility is also available.

1.3 Curriculum Enrichment

1.3.1 Describe the efforts made by the institution to supplement the University's Curriculum to   ensure that the academic programmes and Institution's goals and objectives are integrated?

University's curriculum is supplemented by the institution in the following ways.

- The Departmental Advisory Boards (DAB) constituted play a key role both in setting the direction and benchmark for its programmes and providing guidance to attain them.
- Every engineering programme run by the institute has defined programme outcomes to achieve in line with Outcome Based Education (OBE). The institute reviews the University curriculum vis-à-vis the outcomes to be attained and identifies the curricular gaps.
- A variety of co-curricular activities are conducted to supplement the University curriculum to ensure the attainment of the stated institutional objectives. These activities include value added courses, partial delivery lectures, training programmes, quiz, seminars, internships, industrial visits and mini projects.
- A range of extra-curricular activities are also organized to attain the institutional goals. Events like Techtransform, Start-Up fest, Employers Meet and Road Show with Confederation of Indian Industry (CII) and departmental Tech fests contribute enormously to the holistic development of our students. They help them learn project and finance management, working in multidisciplinary teams, getting acquainted with contemporary issues, learning to learn, etc. which do not generally come from University curriculum.
- Many socio-cultural activities mark the institution's commitment to groom students to work in multi-disciplinary and multi-cultural groups. These activities help students to develop leadership and problem solving capabilities. It also instils a sense of oneness through synergy. These activities include Utsaha (institute's cultural fest), Melton Foundation Programme (International Students' Cultural Exchange Programme), and intra- and inter-collegiate sports.
- Many activities that elevate the sensitivity of students to environmental and societal concerns and discharge their responsibility are conducted. They include NSS activities (like blood donation camps and awareness programmes on rural health and hygiene), Red Cross activities (like Eye camps and First Aid camps), Shramadhan for environmental cleanliness, Societal Awareness Programmes by Walk Free, Melange and motivational talks on professional ethics.

1.3.2 What are the efforts made by the institution to enrich and organize the curriculum to enhance the experiences of the students so as to cope with the needs of the dynamic employment market?

To enable students to cope up with the needs of the dynamic employment market, the institution has taken up the following measures:

- All students are provided with training in soft skills and personality development through placement cell. This activity starts as early as 3rd semester itself.
- More and more students are sent to various companies/R&D centres to undergo internships during their vacation period.
- The institution is an academic partner of KPIT Technologies Ltd. and under its Programme for Academic Connect and Engagement (PACE); the institute conducts courses as per the company's requirement.
- Various interdepartmental and interinstitutional competitions are conducted to improve and assess the students' capabilities to design and test the hardware and software.
- Sufficient encouragement is provided to the students to enrol and complete online certification courses (Massive Open Online Courses).
- Industrial visits are organized to expose students to latest industry environment.
- Events relating to innovation and entrepreneurship, projects and poster presentations are being conducted. (as indicated in section 1.3.1)
- A part of the selected courses are delivered by senior industry professionals who provide an industry perspective for the course.
- Invited talks by industry executives, experts from R&D centres and institutions of national importance are very regular.
- Events such as Techtransform, Start-up days, CII Road shows, etc. are conducted with active participation by students.
- The students who aspire to pursue higher education are advised by the senior faculty in the department and recommendation letters are provided to deserving students. In addition, the institute has collaborated with National Education Foundation (NEF) Washington DC, USA and M/s. Rao Associates, Bengaluru to assist students to get into higher education.

All the above and many more activities expose students to changing business environment and equip them with necessary confidence and competence to cope up with it.

1.3.3 Enumerate the efforts made by the institution to integrate the cross cutting issues such as Gender, Climate Change, Environmental Education, Human Rights, ICT etc., into the curriculum?

The institution appreciates the need for engineering graduates with sensitivity to gender disparity, climate change, and human rights. It believes that environmental education and knowledge of use of ICT are very important to address the plethora of issues bothering the society. Given below are the ways in which the institution attempts to supplement the University curriculum. While some of them contribute directly to curriculum, many others

demonstrate/showcase how these issues are effectively addressed within an institutional framework.

Sl. No.	Cross Cutting Issue	Efforts made by the institution
1.	Gender	✓ Anti Sexual Harassment Committee has been functioning (As per VTU norms) ✓ A cell for Gender Championship is operational (As per VTU norms) ✓ Activities to sensitize students towards the transgender commmunity are undertaken.
2	Climate Change	✓ 18.5-Acre lush Green campus demonstrating the institute's commitment to Green cover ✓ Institute has water recycling system to maintain the above green garden ✓ All buildings (college and hostels) have rain water harvesting systems ✓ Hostels have solar energy harvesting systems. Now, the institute is planning to have roof-top solar power plant to meet its energy needs. Students learn about dealing with climate change through these live demonstrations by the institute.
3	Environmental Education	✓ The engineering curriculum includes a core course on Environmental Studies. ✓ Students carry out projects improving the efficiency and effectiveness of systems relating to environment ✓ Students choose topics on environment, green energy etc., for their seminars. ✓ Invited talks on Global warming and Environmental issues have been arranged ✓ Students actively participate in environment related activities under National Service Scheme's (NSS). ✓ Events such as Sramadhan and Poster presentation on environmental issues have been carried out. ✓ An ECO club which involves both faculty & students has been quite active in creating environmental awareness among all.
4.	Human Rights	✓ Engineering curriculum has a core course on Constitution of India and Professional Ethics. ✓ The institution observed Constitution Day on 26th Nov 2015. ✓ The institution observed Sadhbhavana Divas on 20th August 2015

		✓ Anti-ragging committee proactively monitors the campus to ensure that ragging does not occur.
		✓ A Grievance Redressal Cell is functional to fairly address the grievances of staff and students
		✓ A Woman Empowerment Cell is functioning to help women to effectively involve in decision making roles
		✓ Anti-Sexual Harassment Committee is functioning to prevent such incidents from happening.
		✓ The need of differently-abled persons is well appreciated and attended to (Scribe in exams, wheel chair, ramps in buildings, etc.)
		✓ Proctors, faculty facilitators and HODs counsel rural and disadvantaged students to quickly get them to the mainstream of education
		✓ A functional SC/ST cell for the welfare of SC/ST students
5	Information Communication Technology (ICT)	✓ All engineering programmes have adequate number of ICT related courses in the curriculum.
		✓ 60 Mbps campus-wide wired and 50 Mbps Wi-Fi internet connectivity is available
		✓ Institute has a State-of-the-art computing facility
		✓ Many courses employ ICT enabled teaching and learning.
		✓ Web-based learning is also practiced.
		✓ A e-discussion board has been trial-tested and will be implemented across all programmes,
		✓ Seminar Halls are provided with ICT tools such as projectors, computers, etc.
		✓ Institute has a Digital Library and employs OPAC system.
		✓ Faculty have formed an instant messaging group for effective and continuous communication.
		✓ Boarders and deputy wardens are members of an instant messaging group to ensure quick reporting and resolving of complaints.

1.3.4 What are the various value-added courses/enrichment programmes offered to ensure holistic development of students?

- The VTU prescribes a course on "Constitution of India and Professional Ethics" in the first year for all engineering programmes to create awareness about an individual's rights and responsibilities, and inculcate moral and ethical values, both of which ensure holistic development of students.

- The institute provides students with training in professional and life skills to develop their full potential and become complete and competent professionals. The Placement & Training department of the institute provides inputs and training on aptitude and soft skills like, effective communication, group discussion, body language, facing interviews, corporate etiquette, and team work etc. These help students in personality development.

- **Students of all engineering programmes actively participate in:**
  ❖ publishing quarterly newsletters (Departmental and TACO) and Annual Magazine
  ❖ tech-fests, technical competitions and quizzes
  ❖ activities of chapters of professional associations
  ❖ industrial visits and internships
  ❖ cultural fests such as Utsaha, VTU cultural competition, etc.
  ❖ institution-level and VTU sports
  ❖ activities of social concern through student forums 'Walkfree' and 'Milange'
  ❖ expert talks and guest lectures
  ❖ NSS and Red Cross activities
  ❖ anti-ragging, women empowerment, gender championing, and SC/ST welfare, etc.
  ❖ seminars, workshops, conferences and paper presentations
  ❖ activities of entrepreneurship development cell and innovation centre
  ❖ hostel management and such other activities.
  These activities enable the students to learn inter-personal communication, adaptability to changing environment, time management, leadership, teamwork, budgeting & financial management, marketing, risk mitigation, event management skills, etc., all of which are expected to enhance their potential and help them develop holistic personality.

1.3.5 By citing a few examples, enumerate on the extent of use of the feedback from stakeholders in enriching the curriculum?

The institution has a mechanism to obtain feedback from all stake holders which includes parents, students, alumni and employers. For example:
- The feedback from the parent during the parent-teachers' meeting is recorded by the proctors and the information is passed on to the concerned persons/authority for appropriate action.
- Feedback from students about the competency of the course faculty to deliver the course is taken twice a semester and is used to help teachers improve upon the same.

- Feedback on curriculum, if any, would be collected and passed onto BOS, if justified.
- Students' feedback on the quality of institutional academic and non-academic infrastructure taken once a year helps in providing the best laboratories and facilities.

All academic departments have advisory boards including representation from all stake holders. Industry representatives provide inputs relating to current trends in industry, changing industry needs, employability improvement strategies, etc. which are considered while planning value addition programmes.

While alumni of the institution keep visiting the departments at their convenience, they are also a part of DABs. Their inputs in terms of gap between academics and industry have been very useful in fine tuning the teaching-learning process. They also deliver a part of selected courses to students.

1.3.6 How does the institution monitor and evaluate the quality of its enrichment programme?

All the enrichment programmes conducted by the institution are monitored and the student feedback is taken at the end of the programme. The feedback is analysed and efforts are made to improve their quality. Some of the enrichment programmes supported by the MoU (with KPIT Technologies) not only monitor the programme but also give a feedback on the impact of the training in terms of employability of the students who undergo the training. Sometimes, oral feedback taken from the speakers/resource persons will also be helpful in improving the programme in future.

1.4 Feedback System

1.4.1 What are the contributions of the institution in the design and development of the curriculum prepared by the University?

There is no direct involment of the institution in the design and development of the curriculam prepared by the university. However many faculty members of BMSIT&M have served/are serving the University as members of the Board of Studies and contribute to the curriculum development & implementation process. The faculty members do give written suggestions either through letters to the University or through discussions in the meetings conducted by University for the purpose, whenever a new Curriculum/Course is introduced. Many faculty members are on the Board of Examiners (VTU) whose experiential inputs are available for BOS while designing/revising syllabus.

1.4.2 Is there a formal mechanism to obtain feedback from students and stakeholders on Curriculum? If 'yes', how is it communicated to the University and made use internally for curriculum enrichment and introducing changes/new programmes?

Yes. There is a mechanism to obtain feedback directly from students and teachers, and indirectly from employers and parents. However, as the institution is an affiliated one, feedback of students and teachers can only be communicated to the University for Consideration. The feedback from students reveals the effectiveness of the concerned teacher rather than about the curriculum. However, the feedback may indicate the value added programmes to be conducted in the programme to achieve curriculum objectives. The feedback from the course coordinator, if any, will be communicated to the BOS of the respective programme for consideration. The feedback from the employer does reveal the deficiency in the curriculum indirectly which may be communicated to the BOS of the programme for consideration during syllabi revision. Feedback from teachers and employers also help in determining if a new UG/PG programme is to be offered or not. The following pattern is followed for different feedback systems.

- Student feedback is taken twice a semester, one each after first and the second internals
- Teacher's feedback is taken once in a semester usually at the end of the semester
- Employer feedback is also taken once in a year
- Student feedback is also taken on various facilities in the institution to improve their utilization, and also to enhance facilities.
- The institution takes feedback from alumni regarding infrastructure facilities and placement activities.

1.4.3 How many new programmes/courses were introduced by the institution during the last four years? What was the rationale for introducing new courses/programmes? Any other relevant information regarding curricular aspects which the college would like to include.

Following were the new programmes introduced during the last four years:
- M.Tech in Computer Science & Engineering (CSE) during 2014-15 with a sanctioned intake of 18
  Rationale for introduction of the course:
  i) In the global scenario the market for IT consultation & services is expected not only to sustain and also to grow at least in the next decade.

ii) Advanced knowledge in CS&E is required for students aspiring for teaching carrier and to work in areas related to system software development and design.

- M.Tech in Machine Design during 2014-15 with a sanctioned intake of 18.

  Rationale for introducing the course:

  As there is a huge demand for good design that facilitates efficient and effective manufacturing and assembly, strong concepts of design & quality is very important. In order to meet this market demand, the postgraduate course in machine design is started.

- B.E. programme in Civil Engineering during 2013-14 with a sanctioned intake of 60.

  Rationale for introducing the course:

  India is witnessing huge growth in infrastructure. This requires civil engineers to work in areas such as transportation, water resource management, smart buildings, environmental & structural engineering branches. Therefore, starting civil engineering undergraduate course is very relevant.

AICTE approved programmes are interduced and the required laboratory fecilites are established.

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CRITERION - II

TEACHING-LEARNING AND EVALUATION
</div>

2.1 Student Enrolment and Profile

2.1.1 How does the college ensure publicity and transparency in the admission process?

Publicity in the Admission Process

Students' admission to the college is through (i) Common Entrance Test (CET), (ii) Entrance exam by Consortium of Medical, Engineering and Dental Colleges of Karnataka (COMEDK) and (iii) Management quota.

- Karnataka CET (KCET) (UG/PG): Well before the admission to Engineering programmes begins, Karnataka Examination Authority (an examination wing of Government of Karnataka) provides details of the admission process for Government quota seats with the calendar of events. It disseminates on its website www.kea.kar.nic.in, information about the seats available at BMSIT&M under various quotas along with those of other engineering colleges. It keeps updating the information all along the admission process.
- Similarly, Consortium of Medical, Engineering and Dental Colleges of Karnataka (COMEDK) also posts its admission process, calendar of events, and the seats available in various colleges for different engineering programmes under its quota in its website www.comedk.org.
- Management Quota: The institute provides on its website www.bmsit.ac.in all the facts and figures about itself. Further, the institute has uploaded the document "Mandatory Disclosure" as required by the AICTE on to its website. It displays the number of seats available in each programme under Management quota.
- Several queries are received over telephone, web, email, and SMS. They are responded by appropriate means.
- The institute publishes and distributes its brochure for wide publicity, and prospectus for information and dissemination.
- Admission notification is published in all leading national and regional daily newspapers in English, Kannada, and other vernacular languages.

Transparency in Admission Process:

Admission under Government Quota: The on-line admission process conducted by the KEA (Govt. of Karnataka) is fully transparent. Students have the choice of selecting the programme of engineering and college of his/her choice by on-line counselling process. Government of Karnataka regulates the fee structure.

Admission under COMEDK Quota: The admission through UG Entrance Test (UGET) is governed and managed by COMEDK through an on-line test, and students can select both program and College of his/her choice during the counselling process. The transparency of seat allotment is maintained for both CET and COMEDK.

Management Quota: The Management quota seats are filled subject to the norms of the Government of Karnataka such as the candidate should have appeared for COMEDK examination. The admission under this quota is made by the Management of BMSIT&M on the first-come-first-served basis provided all the Government norms are satisfied.

2.1.2 Explain in detail the criteria adopted and process of admission (Ex. (i) merit (ii) common admission test conducted by state agencies and national agencies (iii) combination of merit and entrance test or merit, entrance test and interview (iv) Any other) to various programs of the Institution.

The admission to Engineering/MCA Programs is made by following the eligibility criteria prescribed by Govt. of Karnataka.
The process of admission through CET is based on the merit in the qualifying examination and the entrance test conducted by KEA. The process of admission through COMEDK is based on the entrance test conducted by COMEDK. The admission through management quota is based on qualifying marks and first-come-first-served basis. Further as per the government/ACITE norms admission is made under Supernumerary Quota (SNQ) also.
The eligibility criteria for the admission of students to UG and PG programs are as given below:

(i) Admission to UG Programs (Bachelor of Engineering)

Through KEA: 45% of the sanctioned intake is admitted through KCET conducted by KEA. The rank of merit is determined by considering marks in equal proportions from the Qualifying Examination (QE) and Karnataka Common Entrance Test (KCET) in Physics Chemistry and Mathematics.
Eligibility Criteria: A candidate who has passed prescribed qualifying (2nd PUC/12thStd/ Equivalent) examination with English as one of the languages, and a minimum of 45% of marks in aggregate in Physics and Mathematics along with one optional subject out of Chemistry/Bio-Technology/Biology/ Electronics/Computer Science (40% of marks in case of SC, ST, Category-I, 2A, 2B, 3A and 3B category candidates) is eligible for admission.

Through COMEDK: 30% of the sanctioned intake of the students to full-time UG programs is through UG Entrance Test conducted by COMEDK. The COMEDK conducts UGET every year for the purpose of determining eligibility/merit for admission to the engineering programme.

Eligibility Criteria: The qualifying examinations prescribed for admission for B.E. is second PUC or 10+2 (Higher Secondary) or equivalent Examination recognized by State / Central Government; the last two years of study shall comprise of Physics, Chemistry, and Mathematics with English as a compulsory subject.

The General Merit candidates should have passed with a minimum aggregate of 45% marks (40% in respect of SC, ST and OBC candidates of Karnataka State) in Physics, Chemistry, and Mathematics and should have passed these subjects individually. Physics and Mathematics are compulsory subjects along with Chemistry or Bio-Technology or Biology or any other technical vocational courses as one of the optional subjects. However, changes, if any, in the eligibility criteria by the AICTE are adopted.

An attempt in the COMEDK Entrance Test seeking admission to Engineering courses is considered adequate for figuring in the rank list.

Diploma candidates are not eligible to take the Entrance Test as there is no provision of lateral entry admissions to first year.

Admission through Management Quota: 25% of the total intake of students is through Management Quota.

Eligibility Criteria: Candidates who satisfy KEA eligibility criteria qualify for admission under management quota.

Admissions under Lateral Entry Scheme through KEA:

The Common Entrance Test is being conducted for Diploma students (DCET) every year by KEA, for admission to the third-semester B.E program.

Eligibility Criteria: The candidate should have studied and passed in one or more Government, or Government recognized educational institutions located in the state of Karnataka for a minimum period of seven academic years commencing from 1st standard to final Year as on 1st July of the year in which the Entrance Test is held. He / She must have appeared and passed SSLC / 10th standard or Diploma (All Semesters / Years) examination from Karnataka State. In the case of the candidates who have taken more than one year to pass a class or standard, the years of academic study is counted as one year only. The candidate should have studied and passed three years Diploma Examination within the State of Karnataka from an Educational Institution run or recognized by the State Government and that either of the parents should have studied in Karnataka for a minimum period of seven years.

(ii) Admission to Post Graduate Programs (M. Tech / MCA)

Through KEA: The candidates who have qualified in GATE and Karnataka Post Graduate Common Entrance Test (PGCET) are eligible for taking admission to PG programs. The Karnataka PGCET is conducted every year by Karnataka Examinations Authority (KEA) for admission of Karnataka and non-Karnataka candidates (Non-GATE) to full time and part time programs in

M. Tech./M.E and MCA. The admission to PG programs is based on PGCET ranking. The composition of seat matrix includes GM, SC, ST, OBC, Sponsored, and management quota. First preference is given to GATE qualified candidates based on valid GATE score.

Eligibility Criteria:

Full-Time M. Tech Program: A candidate who has passed prescribed qualifying or equivalent examination and obtained an aggregate minimum of 50% marks (45% of marks in case of SC, ST and Category-I candidates) taken together in all the subjects in all the years is eligible for admission.

MCA Program: A candidate who has passed any recognized UG examination or equivalent examination with Mathematics/Statistics/Computer Science/Computer Applications/Computer Programming/Business Mathematics/Business Statistics as one of the optional subjects. The candidate who has an aggregate of minimum 50% marks (45% of marks in case of SC, ST and Category-I candidates) taken together in all the subjects in all the years of the degree examination is eligible for admission. Provided that in respect of candidates who has studied and passed one of the subjects specified above in Pre-University course with 50% marks (45% of marks in case of SC, ST and Category-I candidates) that subject shall also be considered for admission.

Lateral Entry to 2nd year MCA: A candidate who has passed recognized Bachelor's Degree of minimum of 3 years duration examination in BCA, B.Sc. (I.T. / Computer Science) with Mathematics at 10 + 2 level or at Graduate Level and obtained an aggregate minimum of 50% marks taken together in all the subjects in all the years of the Degree Examination is eligible for admission to MCA courses (45% of marks in qualifying examinations in case of SC, ST, and Category-I of Karnataka candidates)

2.1.3 Give the minimum and maximum percentage of marks for admission at entry level for each of the programs offered by the college and provide a comparison with other colleges of the affiliating university within the city/district.

As mentioned earlier, admission to UG and PG programmes is based on rank of merit obtained in the test conducted by KEA and COMEDK. Given below is the data on the opening and closing ranks under General Merit (GM) category admitted under CET quota for various programmes at BMSIT&M during 2015-16.

A comparison with Sai Vidya Institute of Technology (SVIT), Bengaluru, MS College of Engineering (MSEC), Bengaluru and Sir M.Visvesvaraya Institute of Technology(MVIT), Bengaluru affiliated to the same university is provided with whatever data available/applicable for the programmes conducted at BMSIT&M.

Program	BMSIT & M		SVIT		MSEC		MVIT	
	Opening Rank	Closing Rank	Opening Rank	Closing Rank	Opening Rank	Closing Rank	Opening Rank	Closing Rank
ECE	1479	4784	15759	46525	32118	85873	1765	4563
CSE	2334	4399	12302	24459	38394	126422	1861	3366
ME	2743	6855	26195	62673	60392	128427	4498	8496
EEE	4193	8803	29140	86229	97949	100163	6478	10058
TCE	5715	9348	----	---	----	----	5383	10926
ISE	5248	6534	23360	47841	----	----	2573	4861
CV	10859	15592	17583	66774	----	----	9407	15019
CSE (PG)	2177	6323	----	----	----	----	----	----
ME (PG)	4537	7001	----	----	----	----	----	----
MCA	83	2820	----	----	----	----	312	1548

---- Indicates programms not existing in the institute

2.1.4 Is there a mechanism in the institution to review the admission process and Student profiles annually? If 'yes', what is the outcome of such an effort and how has it contributed to the improvement of the process?

Yes, the institution has a mechanism wherein the admission process is reviewed by HODs Council as well as by the BOG. The HODs' council analyses the cut-off ranks of students admitted under various categories, especially under General merit (government seats) quota. The council then sets improved targets to various programmes to achieve for the next academic year. The departments meticulously plan their curricular and co-curricular activities for the next year and execute them well so as to improve the results and impact on outcomes of students. The information on improvement in the system gets disseminated by word-of-mouth. The website is also helpful in the information dissemination process. This effort has generally contributed to improve the quality of students who choose to get admitted at BMSIT&M. It should be noted that the policies relating to admission process through CET and COMEDK are in the purview of the Government and COMEDK and 75% admissions happen through them. However, policies regarding admissions to Management Quota are framed by the institution.

2.1.5 Reflecting on the strategies adopted to increase/improve access for following categories of students, enumerate on how the admission policy of the institution and its student profiles demonstrate/reflect the National commitment to diversity and inclusion.

SC/ST and OBC: Admissions to first year under CET quota are made online,

and are governed by the rules and regulations of AICTE, Govt. of Karnataka and VTU. The access of the SC/ST/OBC students to engineering programmes of study is ensured by the Government reservation policy itself. A defined percentage of seats are reserved by the Govt. for these categories while admitting them to various engineering colleges.

Further, the institution counsels students belonging to SC/ST/OBC categories to ensure that they continue their studies confidently and comfortably. There are occasions when students belonging to this category were about to discontinue the programme of study citing personal and academic difficulties, personal and one-to-one counselling was done which made the students to continue their study.

Support is extended to SC/ST students in the form of special privileges to library resources. A special SC/ST cell with a faculty member in-charge of it is functional to take care of their welfare, etc. SC/ST/OBC students are provided with fee concession or fee reimbursement during their admission to first year itself by the Government of Karnataka. Most students are provided with scholarship from the Department of Social welfare/Director of Technical Education, Government of Karnataka depending on their income certificate.

Women: The percentage of the girl students in the institution is more than 30. In some programs of study the number of girls is quite comparable to that of boys. As such there is no special quota for girl students. Management seats are offered giving equal priority to girls as given to boys.

Different categories of persons with disabilities: Differently abled students are allotted seats as per the reservation policy of the Government of Karnataka. The infrastructure in the institution is friendly to differently abled persons.

Economically weaker sections: Government of Karnataka has provided for admitting meritorious students with poor economic background to the extent of 5% in excess of the total intake. As per state government policy, 5% of the sanctioned intake seats are allotted as Supernumerary Quota (SNQ) to financially weak students and these students do not to pay any fees. Besides, the institution supports students of this section through means cum merit scholarship (B. S. Narayan Merit Scholarship).

The Minority Community: The institution facilitates scholarships instituted by external agencies and minority communities to students of the minority community. The students of all religions are treated with equal care and compassion. The secular environment in the institution ensures the admission of a sizable number of students belonging to religious and linguistic minorities.

Outstanding achievers in sports and extracurricular activities: Seats are allocated for outstanding achievers in sports, NCC, etc. as per the state Government policy through KEA. Institute offers excellent facilities and

opportunities for excelling in sports and extracurricular activities. Scholarships & incentives for sports achievers are also provided.

Thus the admission policy of the Government and the Institute go hand in hand to improve the access of various category students (such as SC/ST/OBC/Women/Differently abled /Minority/Sports) to engineering education and help them to make best out of their studentship. The composition of students in the institution clearly reflects the vision of inclusive growth of the management.

2.1.6 Provide the following details for various programs offered by the institution during the last four years and comment on the trends i.e. reasons for increase / decrease and actions initiated for improvement.

Since 75% of the students are admitted to the institution through KEA and COMEDK, the detail of number applications received is not available with the institution and hence the institution is unable to provide required data.

The institute received more than 450 enquiries through email for 120 seats available under management quota. The available seats were over-subscribed for all the branches. The admission for management quota is done in the trust office. Year on year, the demand for admission to BMSIT&M is increasing.

2.2 Catering to Student Diversity

2.2.1 How does the institution cater to the needs of differently-abled students and ensure adherence to government policies in this regard?

The institution provides the assistance required by the differently- abled students in many ways.

- Helper assistance is provided to the differently abled according to their needs.
- Ramp and Lift facility are provided in all the buildings to enable differently abled students to easily get into the class rooms/labs/library at different floors.
- A wheelchair is provided for internal mobility.
- Separate rest rooms are provided.
- Scribe assistance is provided during examination, if needed
- Resident doctor also provides necessary medical support.
- Admission of differently abled students is also done as per the reservation by KEA.
- All care is taken to implement the government policies for the differently-abled students.

2.2.2 Does the institution assess the students' needs in terms of knowledge and skills before the commencement of the programme? If 'yes', give details on the process.

Yes.

Students admitted under PIO quota will undergo test in English speaking and writing skills. Depending on their competencies, English language programme is designed and delivered for 4-6 months before the commencement of engineering programme. Each programme of study analyses the needs of students in terms of the competencies they would need to solve industrial and societal problems after their graduation, and the University curriculum is examined to determine if it is adequate enough. Wherever, there is a need to provide additional skills, selected value added programmes are conducted to make up for the deficiency in the University curriculum.

Need analysis of students concerning what they expect from BMSIT&M is done through feedback from the students taken at regular intervals. Town-hall meetings by the Principal and HODs with students of different programmes reveal the difficulties they are facing with respect to acquiring academic knowledge and skills and help initiating measures to address them appropriately. Further, after the completion of first year of the programme, the students' needs and interests are considered to facilitate change of programme (Change of branch).

2.2.3 What are the strategies adopted by the institution to bridge the knowledge gap of the enrolled students (Bridge/Remedial/ Add-on/Enrichment Courses, etc.) to enable them to cope with the programme of their choice?

In order to produce competent graduate engineers, the curriculum prescribed by the University is supplemented with sufficient number and variety of value adding programmes. These programmes are conducted throughout the semester. The institute considers the University prescribed curriculum as the minimum standard to be attained, and strives to go much beyond the same.

To bridge the knowledge gap of students enrolled in a program of study, the following initiatives are taken:

- Scientists, researchers, entrepreneurs and practitioners from the industry are invited to share their expertise and experience with students and faculty.
- Special training to students is provided by conducting add-on courses to minimize the knowledge gap during the regular class itself.
- Faculty members make extra efforts to provide information on topics beyond the syllabus.
- Industrial visits are arranged every semester by all departments to expose students to real industrial setting. This exposure helps them to effectively engage in class room interaction.
- Bridge courses in English, Mathematics, Physics and Chemistry are conducted for Afghanistan students and Mathematics for laterally entered diploma students.

- All departments conduct tutorial classes for analytical courses as a part of their time table itself.
- Additional books are provided to students through 'Book Bank' facility,
- Remedial classes are conducted for weak students as per schedule soon after the internal assessment marks are declared.
- Students are encouraged to repeat and revise laboratory experiments.
- Assignments, seminars and mini projects are done by students.
- Video-based learning material for all courses of first year (acquired from the VTU) is distributed in DVDs to all first year students.
- Facilities to take part in EDUSAT lectures offered by the VTU are provided.
- Learning resources acquired from the NPTEL (8 TB) are made available for students to download and enable e-learning.
- Co-curricular activities are included in the timetable to supplement class room learning.
- All departments encourage students to participate in collegiate and inter-collegiate competitions to demonstrate their capabilities to design, coding, testing, etc.

2.2.4 How does the college sensitize its staff and students on issues such as gender, inclusion, environment etc.?

The College sensitizes its staff & students on the gender issues by:

- Creating a healthy co-education environment
- Disseminating information regarding the need to treat all genders equally,
- Making them a part of Anti-sexual Harassment committee's programmes,
- Facilitating gender sensitising events by the NGO "Walk free"
- Empowering women through the initiatives of the Women empowerment cell
- Recruiting a significantly larger percentage of female staff and students.
- Creating a functional Grievances Handling Cell
- NSS Unit and Anti-Ragging Committee.

The institute sensitises the staff and students with regard to inclusion in the following ways.

- The institute provides a common platform to all students irrespective of category, class and creed to participate in co-curricular activities & extracurricular activities.
- A SC/ST/OBC students' cell has been created to extend the necessary support to those students to bring them to the main stream

- Extending special privileges to SC/ST students to access library resources
- Provide a greater scope for students from sports, minority, defence, differently abled, etc. categories while admitting under Management quota.
- Facilitating the scholarships/freeships to SC/ST/OBC students
- Faculty facilitators work closely to make sure that first year students who are from underprivileged groups (SC/ST/OBC/rural/diploma, etc.) easily get into the main stream campus life by extending special counselling.
- Students participate in BOG meeting, department advisory boards, production of department/institute's newsletters, and all forums/clubs/associations of the institute.

The institute sensitises the staff and students with regard to environment in the following ways.

- The institute has developed a lush green campus with a large variety of trees, plants, and shrubs. The gardens are maintained by recycled water. Hostels use solar water heaters. All buildings are built with Rain water harvesting systems. Campaigns are on to minimize the use of plastics.
- The institution, through NSS, organizes various programs on environmental and societal issues. The activities include cleaning the campus, planting saplings on the campus, blood donation camps and health camps in selected villages.
- Encouraging students to form teams of their own and conduct activities to address issues of inclusion, sustainability, and environment.
- The Eco-Club of the college involving students and staff has been taking initiative to create awareness for environmental protection.

2.2.5 How does the institution identify and respond to special educational/learning needs of advanced learners?

The institution identifies the special educational/learning needs of advanced learners in various ways such as classroom interaction, internal assessment tests and participation in co-curricular and extracurricular activities and also through the feedback from stakeholders.

The college responds to individual educational /learning needs of advanced learners by:

- Counselling them and providing advanced teaching-learning resources.

- Encouraging them to deliver seminars in the classroom so that their level of understanding increases and they become exemplary to slow learners.
- Giving lead roles in awareness programs and other extra-curricular and extension activities held for slow and medium learners.
- Supporting them to take part in symposiums, workshops & seminars, and regional & national competitions to hone knowledge in the advanced topics.
- Prompting them to do innovative projects and mini projects in the advanced topics under the guidance of the faculty members and also encourage the students to publish technical articles.
- Facilitating guest lectures on the advanced topics by resource persons from industry and academic institutions which will benefit them.
- Providing e-journals and eBooks for acquiring higher knowledge.
- Encouraging them to take competitive exams like GATE/GRE/CAT/MAT/IES.
- Facilitating learning from NPTEL/MOOCS etc.
- Funding innovative projects.
- Engaging career counsellors to help them plan their higher education, and providing a letter of recommendation for studying abroad.

2.2.6 How does the institute collect, analyse and use the data and information on the academic performance (through the programme duration) of the students at risk of drop out (students from the disadvantaged sections of society, physically challenged, slow learners, economically weaker sections etc. who may discontinue their studies if some sort of support is not provided)?

The institution has a central academic monitoring committee (AMC) to monitor academic performance of students. Every month, soon after the internal assessment is over, each department collects and analyses the data on the attendance and class marks and submits to the central AMC which in turn analyses and summarizes the information on those students performing poorly who could potentially drop out from the programme. The Principal discusses the matter in the HODs' council and the students are in turn counselled at the appropriate level (faculty/HOD/Principal).

The institute has a functional proctored system. A group of around 20 students is assigned to a faculty member who is called as proctor. Each proctor constantly monitors both academic and non-academic issues of his/her students. The proctor listens to their grievances and addresses them through counselling and informs the parents about their ward's progress. The parent-teacher meeting conducted by each department is of great help to identify the students who are at the risk of drop out and need urgent help. The proctor identifies students who are slow learners, have financial hurdles to continue studies, are at a disadvantage or are underprivileged and brings up the matter

immediately to the higher-ups. The HOD/Principal initiates suitable measures such as:

- providing academic counselling to build confidence in them,
- engaging a professional counsellor to get them out of distress,
- recommending the case to the Management for financial help,
- recommending to the Bank for educational loan,
- arranging for tutorial/remedial/special classes,
- Providing learning additional resources (Book bank, etc.)
- advising parents or guardians of student as appropriate
- engaging alumni for mentoring students
- Deploying faculty facilitators to identify and help first year students with rural background, who made lateral entry, who are finding it difficult to sail into the main stream, and home sick, etc.

All the above measures have helped students to refrain from dropping out of studies and improved their academic performance.

2.3 Teaching-Learning Process

2.3.1 How does the college plan and organize the teaching, learning and evaluation schedules? (Academic calendar, teaching plan, evaluation blue print, etc.)

Academic Calendar

The institute prepares the academic calendar well before the beginning of a semester. Since the institute is affiliated to VTU, Belagavi, Karnataka, the calendar is prepared in line with the University academic calendar and schedule.

Figure 2.3.1 Academic Calendar of Events for the Year 2015-16

Teaching Plan

- All the academic activities like conduction of classes, internal assessment tests, co-curricular activities, extracurricular activities, and Parent-Teachers' meeting (PTM) follow the University calendar of events.
- Well before the commencement of a semester, the courses are allocated to faculty members (course coordinators) based on their qualification, specialization and experience.
- The faculty council of the programme will analyse gaps in the University prescribed curriculum vis-à-vis the programme objectives expected to be achieved by students of the programme, and prescribes the value addition activities (co-curricular) to bridge the gap.
- The calendars of academic and non-academic events for all the programs of the institution are prepared jointly by the heads of the departments / sections incorporating the prescription of the faculty council. The central time table committee ensures consistency among time tables of all programs. Both the calendar of events and the time-tables are approved by the Principal.
- The course coordinator prepares the lesson plan, gets it verified by the Head of the Department (HoD), and disseminates to students before the commencement of the semester. All course coordinators prepare and maintain their course files.
- The department heads verify the teachers' work dairies for adherence to lesson plan, and monitor the regular conduction of classes, students' attendance & punctuality, and report to the Chief co-ordinator of the central Academic Monitoring Committee (AMC) once in a month, which will be reviewed by the Chief co-ordinator and the Principal for necessary action.
- Special classes are conducted to ensure the completion of syllabus and help students to understand complex topics. Remedial classes are conducted for weak students and slow learners. Tutorial classes, which are over and above the University requirement, form a part of the regular time-table and are conducted to solve additional problems in mathematical and analytical subjects.
- Guest/Invited lectures, Partial delivery of the courses, workshops & industry visits are arranged to provide students with the knowledge of trends in new technologies and their deployment to meet societal needs.
- Modern teaching/learning methods such as collaborative and co-operative learning are often adopted for effective implementation of the curriculum.
- Detailed laboratory manuals are prepared and updated regularly. Students are sensitised with respect to the experimental

setup/tools/software prior to the commencement of the experiment. Wherever possible, attempts are made to conduct additional experiments (includes open ended experiments).

Evaluation Blueprint

As per the university guidelines, the institute conducts internal assessment tests at the end of 6th, 8th and 12th week of a semester. The institute conducts internal assessments with the same seriousness and in the same way as the University conducts semester end examinations. To do so, it has constituted a central internal assessment coordination committee to plan, implement, and monitor the conduction of the assessments across all programmes at once.

- Before the commencement of an internal assessment, question papers are prepared by the course coordinators and are submitted to the concerned HOD for scrutiny.
- The coordinating committee will schedule the assessment timings, room allotment, assign invigilating and squad duty to teachers, distribution of question papers, distribution and collection of answer scripts (blue books), etc.
- The blue books in which the tests are answered are evaluated as per the scheme of solutions/answers, within a time frame of 7 days and the marks obtained by students in various courses are compiled.
- The marks scored by a student are communicated to their parents/guardians through group SMS services. This process is done for all internal assessment tests.

2.3.2 How does IQAC contribute to improve the teaching-learning process?

The institution hitherto has been adopting various measures to assess the quality of teaching learning process and attainment of objectives, vision, and mission through various committees at the institution and department levels. The committees have been suggesting necessary changes for continuous improvement. Now, the process has been given a better structure in the form of creating an Internal Quality Assurance Cell (IQAC) which develops quality benchmarks and parameters for academic programmes.

The Primary aim of the IQAC (Internal Quality Assurance Cell) is to develop a system for conscious, consistent and catalytic action to improve the academic and administrative performance of the institution as specified by NAAC.

The IQAC is constituted under the chairmanship of Principal. The IQAC consists of Principal, Coordinator, various program coordinators, heads of the departments and faculty representatives.

The functions of IQAC involve:
1. Development and application of quality benchmarks/parameters for the various academic and administrative activities of the Institute.
2. Facilitating the creation of a learner-centric environment conducive for quality education and faculty maturation to adopt the required knowledge and technology for participatory teaching and learning process.
3. Arrangement for feedback responses from students, parents and other stakeholders on quality-related institutional processes.
4. Dissemination of information on the various quality parameters of higher education.
5. Documentation of the various programs/activities of the Institute leading to quality improvement.
6. Acting as a nodal agency of the Institute for coordinating quality-related activities, including adoption and dissemination of good practices.
7. Development and maintenance of Institutional database through MIS for the purpose of maintaining /enhancing the institutional quality.
8. Development of Quality Culture.
9. Preparation of the Annual Quality Assurance Report (AQAR) based on the quality parameters/assessment criteria developed by the relevant quality assurance body (like NAAC, NBA) in the prescribed format.
10. Any other assignment by the Principal.

2.3.3 How is learning made more student-centric? Give details on the support structures and systems available for teachers to develop skills like interactive learning, collaborative learning and independent learning among the students?

Institution supports student-centric learning and creative learning environment, where students think and interact with peers and teachers that provide a diversified learning environment and creates an atmosphere for real communication. Assignments, discussions, interactions, industrial training, and projects are part of the teaching-learning process.

Different student-centric learning strategies adopted as a part of implementing Outcome-Based Education (OBE) system are as follows:

- Interactive teaching methods.
- Quiz, flipped classes, poster presentations, and group discussion
- Collaborative learning and blended learning
- Regular industrial visits and industrial internships.
- Student counselling by teachers and professional counsellors
- Interaction with Alumni of the institution
- Student forums/chapters of professional bodies conduct different technical events.
- Financial support from the management for selected student projects.

- National level symposia in all departments provide a platform for the students to acquire additional knowledge apart from regular teaching. Moreover, the students themselves organize and participate in various technical events. These programs are fully student-centric, and they nurture their organizational and management skills apart from enriching their technical knowledge.
- Regular guest lectures by eminent persons from industry and academia.
- The Institution provides all the necessary infrastructural support (seminar halls, LCD projectors, Wi-Fi connectivity, etc.), resources and services (NPTEL, library, transport, training, etc.) to faculty and staff members to prepare the necessary teaching/learning material.

2.3.4 How does the institution nurture critical thinking, creativity and scientific temper among the students to transform them into life-long learners and innovators?

- Students interested in research and development work are continuously motivated and encouraged to present/publish their work in national/international seminars/conferences/ journals etc.
- Faculty members who are continuously engaged in research work share their ideas with potential students with research aptitude thus promoting critical thinking and scientific temper.
- The institution has formed Student Projects Review and Assessment Committee (SPRAC) that reviews and identifies interdisciplinary projects involving different technologies thereby promoting creativity and teamwork for lifelong learning.
- The institute provides even the financial support to student projects having high quality and innovative content. Departments conduct many design competitions, programming and testing contests. The BMSIT&M innovation centre conducts innovative idea contests among all students.
- The incubation centre in the campus run by students itself is a standing example for creative and innovative environment nurtured by the institute. This also serves as a source of motivation to other students to be creative, and critical in thinking.
- The Institution motivates and facilitates students to apply for possible funding from agencies such as Karnataka State Council for Science and Technology (KSCST), Vision Group of Science and Technology (VGST), Department of Science and Technology (DST), etc.
- Events conducted such as Tech Transform, Start-up days, Entrepreneurship development programmes help students to develop critical thinking needed for transforming technical ideas into viable products/business solutions.

2.3.5 What are the technologies and facilities available and used by the faculty for effective teaching? E.g.: Virtual laboratories, e-learning - resources from National Programme on Technology Enhanced Learning (NPTEL) and National Mission on Education through Information and Communication Technology (NME-ICT), open educational resources, mobile education, etc.

The Institute promotes the use of Information and Communication Technology (ICT) for effective teaching-learning process by providing:

- Multimedia content delivery
- Campus wide Wired and Wi-Fi internet connectivity
- Dspace facility for uploading and accessing learning material
- Digital Library facility (Institutional Repository) and language lab
- Access to e-journals and books through AICTE/VTU consortium,
- Access to Developing Library Network (DELNET), DSPACE, OPAC, open source software, etc.
- Access to NPTEL and Open Courseware (OCW)
- Access to VTU-NPTEL-NME-ICT resources
- Encouragement to register and acquire knowledge through MOOCs.
- Facilitating VTU-EDUSAT programme
- Providing learning/teaching resources obtained from VTU (DVDs of Video courses for I year)

2.3.6 How are the students and faculty exposed to advanced level of knowledge and skills (blended learning, expert lectures, seminars, workshops etc.)?

In order to expose students and faculty to advance level of knowledge and skills the following initiatives are in place:

- Expert lectures from senior practitioners from industry, research organizations, national institutes of excellence and national being conducted organizations are being conducted.
- The faculty members adopt blended learning for facilitate effective absorption of complex topics.
- Every department regularly takes students for industrial visits.
- Students are encouraged (and facilitated through a central coordination cell) to undergo internship in industries in every semester breaks.
- Faculty members and students are encouraged to participate in various national, international seminars, refresher courses, workshops etc.
- The college organizes national, international seminars, conferences, and workshops to enrich the knowledge.
- All faculty members of the institute undergo internships of at least 10 days a year in industries.

- Access to national educational resources such as EDUSAT, NPTEL and NMEICT are provided through both wired and Wi- Fi networks of higher bandwidth.
- An excellent library (both print and digital) is made available for students and staff to enrich themselves with advanced knowledge and skills.
- Faculty members are sponsored to become life members of a professional body of their choice and be an active member.
- Gnanavardhana programme facilitates technical interaction among the senior professors/ faculty members.
- From 2016-17, project based experiential learning has been adopted at all semesters.

2.3.7 Detail (process and the number of students\benefitted) on the academic, personal and psycho-social support and guidance services (professional counselling/mentoring/academic advise) provided to students?

Students are provided with support and guidance service through various systems in the institute.

1. Academic Support to Students
- Proctor system: Every teacher serves as a proctor for around 20 students. Students approach their proctor for all academic issues. Proctor dairy is maintained to record all the interactions between them.
- Academic monitoring system and the proctored system identify slow learners and are given special care, counselling / academic advice. All the students will benefit from this system.
- Fast learners are facilitated to engage in online courses, seminars on advanced topics, and offered innovative projects. Not less than 150 students are expected to have been benefitted.

2. Personal Support
- The students can avail the services of the following committees / cells with regard to any issue/problem faced by them on the personal front
- Grievance handling: Any grievances relating to academic (internal assessment, attendance, inability to understand what is taught, completion of syllabi, laboratory classes, project work, etc.) and non-academic (hostel, transport, sports, amenities, etc.) issues are handled largely by the proctors/HODs/Concerned section heads. More than 500 students might have benefitted.
- Anti-Sexual Harassment Committee: Any cases of sexual harassment is accepted by the committed for investigation. So far, no case has been reported.

- Anti-ragging committee: A large anti-ragging committee operates to meet the stipulations by the regulatory bodies like AICTE, UGA and State Government. Subcommittees of this committee make random visits to hostels and campus to ensure that no incident of ragging can occur. All concerned are educated about the ill effects of this and the consequence of indulging in it. No case of ragging has been reported.
- Women Empowerment Cell: Women are encouraged to take part in all activities of the institute including supporting administration. About 40% of teaching staff and 31% of students are women.

3. Psycho-Social Support Services

The college provides psycho-social support services to students through the following committees:

- **Health Centre:** Resident doctor and ambulance service is available. Doctor is available between 9 am to 3 pm. A medical counsellor has also been hired to attend distress students.
- **Anti-Ragging Committee:** The anti-ragging committee comprises of senior staff members and vice-principal. Subcommittees visit the hostel and campus premises at random hours to ensure that the institute is free from all sorts of ragging. Even a small deviation in this regard is not tolerated. Hence, no incidents of ragging are reported.
- **Faculty facilitators for I year students:** Four senior faculty members who handle I year classes have taken the responsibility of identifying the students with rural background and diploma education, psychologically weaker or girl students who need assistance of some sort to get to the main stream of education and quickly sync with the institutional requirements. More than 20 students have benefitted in 2015-16. From 2016-17, a cell with 2 faculty members for I year students has been created who will serve as single point contact for the students for all non-academic issues.

2.3.8 Provide details of innovative teaching approaches/methods adopted by the faculty during the last four years? What are the efforts made by the institution to encourage the faulty to adopt new and innovative approaches and the impact of such innovative practices on student learning?

The faculty members of the institute aim to deliver their lectures in an effective manner to enrich the knowledge of the student community. Faculty continuously explore opportunities to evolve innovative teaching approaches/methodologies.

Some of the innovative teaching methodologies are:
- Collaborative learning
- Blended teaching methods

- Use of digital classroom and audio/video resources.
- Use of e-resources such as NPTEL, open course ware (OCW) and EDUSAT programs.
- Group assignments and mini projects.
- Visits to industries
- Design innovation competitions.
- Project based experiential learning.
- Incubation centres.
- Encouragement to prepare technical posters and work on mini projects which are exhibited openly
- Distribution of DVDs (shared by VTU) containing video courses for first year students.
- Remedial classes and special classes for the needy students.

Efforts made by the institution:
- Sponsored a Collaborative learning workshop for all the faculty members by inviting Dr.Khairiyah Mohd Yousof and Dr. Syed Ahmed Helmi from Centre of Engineering Education, University of Teknologi Malaysia. Several teachers have successfully tried out this method of teaching.
- Inviting industry practitioners (partial delivery method) to teach a part of a few courses every year to help students appreciate the context of the course in real-life setting.
- Arranging industrial visits for students each semester.
- The institution has recognized the importance of multimedia content delivery in teaching and has facilitated projectors for all departments.
- Departments are provided with computers, printers, internet facility to make ICT based teaching easy.
- The college library has a vast resource of reading and reference materials.
- Established state of the art laboratories and facilities
- Faculty members are deputed to attend FDPs/Conferences/workshops/seminars and Research course work.

Impact on student learning:
The students are benefitted from the above mentioned innovative methods and the use of ICT. The conventional black board teaching which is still of immense importance is now further strengthened with multimedia presentations, internet resources, charts, three dimensional models, invited talks, workshops, seminars, mini project, project exhibitions, industrial visits etc.

2.3.9 How are library resources used to augment the teaching- learning process?

The institute library is a very good repository of information available for the service of students and staff. The library employs OPAC system and uses KOHA software for its management. The resources that augment the teaching-learning process include:

- Books (Text /reference) Printed and e-version
- Data handbooks and Project reports
- Journals (printed and e-journals) and Conference proceedings
- Dspace
- Newspapers, magazines and
- Digital library to enhance knowledge in interested areas.

The Details of resources are as follows:

1. List of Journals

S.N.	E-Journals packages	No. of Titles
1	IEEE & IEL online	Journals: 273 Conf. Proceedings: 6514 Standards: 3043
2	Springer (CSE, ECE, MECH, EEE, MATHS, PHY & CHE)	680
3	ASCE	35
4	J-Gate Engineering & Technology	Free Full text: 4200 Indexed: 7800
5	K-Nimbus	12000
6	Elsevier (Science Direct)	275
7	ASTM	Standards, Annuals etc.,: 1700 Jrl. articles 13000

2. Total No. of E-Books

S.N	e-Books	No. of e-books
1	Cambridge University Press (2009)(Perpetual access)	94
2	McGraw-Hill Access Engineering (2015-16)	363
Total		**457**

3. Books for SC/ST Students   :   361

4. Total no of Newspapers and Magazines   :

No. of Newspapers	Gen. Magazines	Tech. Magazines	Print Journals
11	17	14	132

5. Number of seats in reading space   : 247

Furniture type	Qty.	Location
S-Type Chairs	12	Circulation Section
	223	Reference Section
Cushion Chairs	12	Reference Section
Total	**247**	

Average Number of users (issue book) per day   : 134
Average Number of users (reading space) per day   : 190

(Ref. Section+ Digital Lib.)
- Number of library staff with degree in Library Science : 08
- Management Computerization for search (Yes/No)   : Yes
  http://100.127.2.254
- Indexing, issue/ return records Barcoding used (Yes/No) : Yes
- Provide other information, if any   : OPAC
  under intranet

2.3.10 does the institution face any challenges in completing the curriculum within the planned time frame and calendar? If 'yes', elaborate on the challenges encountered and the institutional approaches to overcome these.

No, the institution does not normally face any problem in completing the curriculum as prescribed by the affiliating University. Calendar of events is prepared well in advance as per the university academic schedule. As per the calendar of events, faculty members prepare lesson plans for various courses. Hence completion of the curriculum within the planned time frame is not difficult at all. However, if some unexpected holidays are declared by the Government under unavoidable circumstances, it is compensated by arranging special classes for theory and laboratory for which classes are lost.

2.3.11 how does the institute monitor and evaluate the quality of teaching learning?

The institute conducts an elaborate exercise planning its academic activities even before the semester begins, which culminates in a comprehensive Calendar of Events. This calendar will guide all the academic activities of the departments. It helps the central Academic Monitoring Committee (AMC) and the concerned HODs to monitor and evaluate the quality of teaching-learning process through periodic collection, assessment and evaluation of data on classes conducted, students' attendance and class marks, completion of syllabi, students' feedback on teachers' performance, etc. They ensure the effective implementation of academic plan as follows. They ensure that:

- All departments prepare all the required academic (e.g. lesson plan) and administrative documents (e.g. work plan, attendance register) before commencement of the classes, and share the information with the concerned persons.
- Faculty members conduct the academic activities within the stipulated time and as per the calendar of events.
- Internal assessment of students to be conducted as per schedule, evaluation of answer scripts on time and notifying the students (on notice boards) and their parents (through SMSs). The AMC and

HODs review the overall performance of students in every class. The reports are discussed with the principal and corrective actions are initiated, if called for.

- Students' feedback on the quality of delivery of lectures by faculty members is taken twice at predetermined days in a semester. The online feedback portal will be open for sufficient amount of time so that all the students will be able to provide their feedback. The feedback is obtained not only on theory courses but also on laboratory courses and project work. The teachers are counselled by the head of the department and also by the Principal if required, for better performance.

- The results of the university examinations are also reviewed to see how each department has fared. If the results are not up to the mark, the departments are advised to inquire into the reasons, and advised to improve teaching-learning processes.

2.4   Teachers' Quality:

2.4.1 Provide the following details and elaborate on the strategies adopted by the college in planning and management (recruitment and retention) of its human resource (qualified and competent teachers) to meet the changing requirements of the curriculum

The Institute has been able to attract and retain a large number of highly qualified and competent faculty members for all its programmes. It distinguishes itself by offering among others, an excellent working conditions, academic freedom and flexibility, value-based environment and AICTE recommended salary (with full DA).

Recruitment Strategies:

- Each department assesses, at least 6 months in advance, the number of faculty members required for each of its programme vis-à-vis the AICTE stipulations of Faculty-Student ratio of 1:15. Further, the departments also consider the required cadre ratio while estimating their requirement of human resource.

- This information on faculty requirement in each department is gathered by the office of the Principal, and necessary sanctions are obtained from the Management to call for recruitment and selection.

- Applications are invited by the qualified and competent candidates for the vacant positions through advertisements in reputed Kannada and English dailies.

- The college website (http://www.bmsit.ac.in) also carries this advertisement with relevant details. Thus applications are received at the office at least 4 months in advance of the commencement of the semester.

- All applications received are scrutinized by the HoD and shortlisted on the basis of merit.
- Short-listed candidates are called to give demonstration lecture in the presence of HoD and senior faculty, where first round of assessment is done. Background verification is done wherever needed.
- The candidates who qualify in the first round are called for the interview. The faculty selection committee is comprised of representatives of management, Principal, State Govt. nominee, AICTE nominees, VTU nominee, subject experts, and Head of the concerned department.
- Selection of candidates depends solely on their qualification, merit and performance in the demonstration lecture and interview.
- In addition to the regular faculty, the Institution also appoints senior professors and industry experts as visiting faculty.

Retention Strategies:

The Institution has adopted the following exceptionally good policies to retain faculty members:

- The faculty members are extended AICTE prescribed 6th pay scale along with full dearness, house rent and other allowances.
- All faculty members meeting the normal performance requirements of a good teacher will get annual increments and promotions at appropriate time.
- The faculty members may opt to go on leave for higher studies.
- The Institution deputes faculty with financial assistance to attend national / international conferences, workshops, seminars, symposiums, industry internships, etc.
- The Institution fully subsidizes the cost for a faculty member to become a life member of any professional body of his/her choice in his/her area of competency.
- The Institution encourages the faculty to get research grants from AICTE, industry or other funding agencies.
- Many good research proposals by faculty members are funded by management itself.
- The facilities such as medical insurance, festival advance and family welfare fund are all present
- Maternity and paternity leaves are sanctioned to eligible faculty members as per norms.
- Faculty members get the gratuity amount as per Gratuity act of the Central Government.
- The children of both teaching and non-teaching staff are given admissions in the BMS group of Institutions at a subsidized tuition fee.

- The children of the nonteaching staff members get reimbursement of the tuition fees to the tune of Rs. 10,000/- per year.
- The Institute has adopted contributory Provident Fund and Encashment of EL as per law.
- All faculty members can avail loan facility provided by BMS Co-operative Society as per their eligibility.

The following is the table for retention percentage:

Sl.NO	Year	Retention Percentage
1	2011-2012	91.1
2	2012-2013	92.6
3	2013-2014	91.4
4	2014-2015	95.2
5	2015-2016	98.1

The following is the table showing the number of Professors, Associate Professor & Assistant Professors with highest qualifications:

Highest qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent faculty							
D.Sc./D.Litt.	-	-	01	-	-	-	01
Ph.D.	11	02	10	04	02	-	29
M.Phil.		-	-	01	-	02	03
PG	-	-	06	06	49	52	113
Visiting faculty							
Ph.D.	04	-	-	-	-	-	04
M.Phil.	-	-	-	-	-	-	-
PG	-	-	-	-	01	-	01
Temporary/Part- time faculty							
Ph.D.	-	-	-	-	-	-	-
M.Phil.	-	-	-	-	-	-	-
PG	-	-	-	-	03	-	03

2.4.2 How does the Institution cope with the growing demand/scarcity of qualified senior faculty to teach new programmes/modern areas (emerging areas) of study being introduced (Biotechnology, IT, Bioinformatics etc.)? Provide details on the efforts made by the Institution in this direction and the outcome during the last three years.

The above employee-friendly policies (stated in the previous section) of the Institution play a key role in attracting highly qualified faculty members to seek teaching positions, and staying with the Institution. The Institution meets the growing demand/scarcity of qualified persons in emerging areas by taking the following steps:

- Although the Institution's recruitment process is open every six months, the applications seeking faculty positions are received as and

when they come throughout the year. All applications so received will be considered when the recruitment process starts.

- The Institution invites eminent senior professors / industry experts as visiting faculty to teach new programmes and modern subjects, whenever required.
- Eminent academicians from reputed Institutions give guest lectures on current issues.
- The Institution organizes guest lectures, faculty development programs, workshops and seminars to facilitate quick and easy flow of knowledge on emerging technologies into the Institute.
- Departments organize the partial delivery lectures (a part of the theory course is handled by an expert/senior industry practitioner) in select courses involving emerging technologies.
- Faculty members are sent for orientation programmes, conferences and workshops to teach the emerging areas of study.

The Institution has invited and appointed senior professors / industry experts to teach new programmes in the following departments.

Year	Branch	Name	Qualification	Name of the College /Industry	Designation	Programmes Taught	Outcome of the Programme
2013-14	ECE	Dr. Hasrhan	Ph.D.	Nanyang Technological University Singapore	Professor	Signals and system	To meet program's objective defined in NAAC
		Dr Seema Singh	Ph.D.	BMSIT	Assoc. Professor	Neural Network for Eng. Application	
		Dr. Ravi Shankar	Ph.D.	RVCE	Prof. & HOD of PG Dept.	Recent Trends in Broadband Wire line	
2014-15	ECE	Mr Faizon	BE	Sun Softtronics systems	Team lead	RTOS	Exposure to real time queries
		Prof. Hebbar	M.Tech.	TCE, BMSIT	Assistant Professor	Digital Switching system	
		Prof. Narayan Iyer	Ph. D	TCE, BMSIT	Professor	Digital Communication	
		Prof Sudarsha	M.Tech	REVAITM	Associate Professor	Microelectronics	

		Prof Nagabhushan	M.Tech	MSRIT	Professor	Analog electronics circuits	
		Prof Guruprasad	M.Tech	CSE, BMSIT	Asst. Professor	JAVA	
	CSE	Manjunath H R	Ph. D	The Datalifecycle® company	Product Manager	Data Storage Technology	To expose the students with the current technology
		Dr. Satnam Singh and Mr Venkat Babji	Ph. D	CA Technologies.	Data Scientist Big Data Architect	Importance of Data Science	To expose the students with the current technology
		Dr. Manjunath	Ph. D	AchIT, Bengaluru	Professor	Cloud Computing/Big Data Analytics	To expose the students with the current technology
		Mr Sriharsha S	B E	Symphony Teleca	Project Manager	Project Management & Team Building	To understand the software life cycles in Industry Projects
	EEE	Dr. Narayan Iyer	Ph.D.	NITTE, Mangalore	Professor	Signals and Systems.	
	MCA	Mr Praveen Alur,	B E	Cisco	Senior Database Admin	DBMS	Exposure to real time queries
		Mr Surya Reddy,	B E	Philips	IT Tech Lead,	J2EE	
		Mr Chengappa	M.Sc., MCA	PESIT, Bengaluru	Assistant Professor	Problem Solving Skills	

2015-16	CSE	Mr Shankar	Asst. Professor	MVIT	Brand Ambassador	Open Source & Mozilla	Motivated to start Mozilla Club at BMSIT
	TCE	Dr. Narayan Iyer	Ph.D.	BMSIT&M	Visiting Professor	Control Systems	Better understanding of the subject
		Dr. Narayan Iyer	Ph.D.	BMSIT&M	Visiting Professor	Applications of Matlab & Simulink	Exposure to real world queries
	MCA	Mr Praveen Alur,	B E	Senior Database Admin	Senior corportation	DBMS	Exposure to real time queries
		Mr Ganesh Hedge	BE	Colt Technology India Ltd. Bengaluru	Application Developer	J2EE	

2.4.3 Provide details on staff development programmes during the last four years. Elaborate on the strategies adopted by the Institution in enhancing the teacher quality.

a) Deputation of faculty to various Faculty development programmes: The Institution has deputed faculty members for various faculty development programmes.

S No.	Academic Staff Development Programmes	Number of faculties Nominated
01	Refreshers Course	29
02	Faculty Development Program	280
03	Orientation Programme	23
04	Staff Training Colleges and Others	43
05	Summer/Winter Schools and Workshops	228

b) Strategies adopted by the Institution to improve teaching quality:

Regular conduction of/sponsorship to Faculty Development Programmes:

- **FDPs on Teaching-learning methods/approaches:**

The Institution organizes programmes to encourage teachers to prepare multimedia teaching/learning materials. Two experts from Malaysia, Dr. Khairiyah Mohd Yusof & Dr. Syed Ahmed Helmi were invited to train faculty members on various outcome based education methods, and also to make learning a joyous activity. The Management supports innovative teaching initiatives by providing infrastructural support. Teachers are sent for acquiring pedagogical skills. Various departments of the Institution regularly organize

training programs for faculty to make them aware of the latest developments in ICT thereby enabling them to adopt the same while teaching.

- **FDPs to enhance Domain knowledge and Skills:**

The Institution has experienced and qualified staff to handle the new curriculum effectively. HoD discusses in the department faculty council, the new syllabus and the council plans methods/tools and techniques to empower teachers to handle the new syllabus. Further, teachers are regularly sent for training to acquire and improve domain knowledge. They are deputed for national & international seminars / industrial visits / industry internships / train the trainer programmes which help them to update their knowledge and skills. Generous sponsorships are offered to faculty members to attend UGC refreshers programs/summer/winter courses in AICTE recognized technical Institutions and other regional & national agencies.

- **Deputing faculty as resource persons:**

The Institution organizes seminars/workshops so as to enrich all aspects of teaching and learning process. Further the faculty members are deputed as resource persons to FDPs at other Institutions, or chair technical sessions at international/national conferences, or present research papers in leading national and other conferences.

- **Instructional facilities and informational resources:**

All departments are provided with audio visual aids and teaching learning aids. Faculty are trained to use audio visual aids and multimedia in the classroom and lectures are delivered using them. The Institution has a well-stacked library containing both reference and text books of various subjects. Faculty are given free access to internet which helps them to traverse through repository of learning materials. Newly inducted faculty will undergo orientation programme which not only enables them to be aware of policies, procedures and facilities of the Institution, but also helps them to know how to use library resources.

c) **Percentage of faculty invited as resource persons in Workshops / Seminars / Conferences organized by external professional agencies; participated in external Workshops / Seminars / Conferences recognized by national/ international professional bodies ; presented papers in Workshops / Seminars / Conferences conducted or recognized by professional agencies.**

The following is the table showing the percentage of faculty invited as resource persons, participated or presented papers in Workshops / Seminars / Conferences organized by external professional agencies:

Event	% of faculty
Invited as a resource person in Workshop / Seminar /Conference	(19/630)*100 = 3.02
Participated in external workshop/seminar/conference	(248/630)*100 = 37.78
Papers presented in Conference	(153/630)*100 = 22.22

2.4.4 What policies/systems are in place to recharge teachers? (e.g.: providing research grants, study leave, support for research and academic publications, teaching experience in other national Institutions and specialized programmes, industrial engagement etc.)

To recharge teachers, the Institution has implemented the following policies:

Support for attending workshops, short term training and faculty development programs: In view of the fast changing technology and pedagogy, faculty members are:

- generously offered sponsorships/deputation for attending UGC/AICTE/TEQIP/Other agency sponsored refresher programs/FDPs/Workshops to acquire special knowledge and skills
- sent to industrial internships for a minimum of 10 days in a year
- Given OOD/special casual leave for participation in refresher programmes/FDPs/workshops/Ph.D. course work exams. Financial assistance is given for FDPs and workshops.
- provided with 100% financial assistance to become life members of any national professional bodies
- Encouraged to serve as resource persons in various professional forums and short term training programs conducted by other Institutions and agencies, which helps the faculty to interact with the outside world.
- Provided seed money for initiating research activities.
- provided access to latest learning/teaching material including e-Journals through the digital library
- provided with unlimited access to computing and high bandwidth wired and Wi-Fi internet facility
- encouraged to organize National conferences/FDPs/Workshops and Invited talks in the Institution
- are offered laptop loans with zero interest to the faculty members
- In addition to the above,
- Teachers with good experience are recruited with additional increments.
- Management has extended financial support to selected research projects of faculty members.
- The Institution encourages faculty to accompany students on industrial visits.

Facility & research encouragement:

- The Institute has almost all of its departments recognized as research centres by the VTU, and any faculty member wishing to pursue Ph.D. can register and pursue Ph.D. programme in the centre of his/her choice in the Institute. If they wish to register in centers other than BMSIT that would also be facilitated. Further, they may register for their doctoral programs in any of the AICTE/UGC recognized research centres and work in any of the scientific labs set up by the Government of India.
- The Institution provides study leave for the faculty to work towards their Ph. D programme
- Faculty members are encouraged to supervise Ph.D. research scholars from both within and outside the Institute.
- Faculty members are encouraged to submit research proposals to funding agencies. Some of the research proposals are selected for funding by management too.
- A sabbatical leave policy is being adopted to encourage faculty members to take 6 months to one-year time off to pursue their research interest anywhere outside BMSIT&M.

Sponsorship for conferences & seminars: As per the Institutional norms,

- faculty members are sponsored for both international and national conferences
- the Institution also supports conducting invited talks/seminars/conferences
- faculty members are given OOD/special casual leaves for research paper presentation

2.4.5 Give the number of faculty who received awards / recognition at the state, national and international level for excellence in teaching during the last four years. Enunciate how the Institutional culture and environment contributed to such performance/achievement of the faculty.

In the last four years, a faculty member of the Institution has received award in area which is related to teaching excellence as detailed below:

Number of faculty who received awards / recognition at the state, national and international level for excellence in teaching during the last four years - 01	
Dr M C Hanumantha Raju, HoD, ECE	Senior Educator & Scholar Award by National Foundation for Entrepreneurship Development (NFED), India, on the occasion of Teachers Day Celebration, 5th September, 2015

The management encourages and supports the faculty for their creative initiatives. Their achievements are recognized and appreciated. Many departments in the Institution are recognized as R&D centres by the VTU

thereby motivating the faculty to carry out research. Some projects are internally funded by the Institution's management. Faculty members are respected for their professional commitment and scholarship. They are involved in decision making process which has made them more enthusiastic and committed to their professional excellence. This has created a good Institutional culture and environment for the faculty to achieve performance excellence.

2.4.6 Has the Institution introduced evaluation of teachers by the students and external Peers? If yes, how is the evaluation used for improving the quality of the teaching-learning process?

Yes. The Institution has in place a robust system for evaluation of teachers by the students. Feedback is obtained with respect to teachers handling theory courses, laboratory courses and project work courses.

Students provide feedback on the performance of teachers twice in every semester. First feedback is collected after the first internal assessment test and the second one is taken after the second internal assessment test. The inputs from students with respect to every course are summarized into a report, which is made available to the faculty members handling it by the Principal. Teachers utilize this information for self-improvement. In case the evaluation of a faculty member is less than 60%, he/she would be counselled by the Principal and the respective HOD. The results of the university examination are also used as an indicator in assessing teacher's performance.

The students' feedback enables the teacher to get constructive suggestion and counselling about their teaching style, participative teaching learning, and use of innovative methods for teaching, teaching laboratory courses and guiding projects.

2.5 Evaluation Process and Reforms

2.5.1 How does the Institution ensure that the stakeholders of the Institution especially students and faculty are aware of the evaluation processes?

Evaluation is the part of teaching-learning and their improvement processes. The Institution ensures that relevant information is communicated to all the stakeholders, especially students and staff members. Rules and regulations governing undergraduate/post graduate courses are mentioned in the corresponding 'Scheme and Syllabus' book supplied by VTU.

In respect of Internal Assessment (IA) test evaluation the procedure is as follows:

- Hand book consisting of rules and regulations, details of examination process is given to all the students during first year. Orientation

programs are conducted to make the students aware of the examination process.

- Three IAs are conducted as per the university prescribed schedule. At the time of assessment, the central IA coordination committee of the Institute will prepare a plan as per which the IAs are to be conducted by all the departments and publicizes for the attention of all students and faculty members.
- The question paper pattern to be used in the IA is discussed and finalized. The question papers are scrutinized by the departmental committee. The question paper pattern and scheme of evaluation are discussed in the class rooms to orient them. Scheme of evaluation is made known to the students.
- The IAs are conducted in the same spirit of the University examinations. Room invigilation, squad duties are assigned as if it is university conducted examination.
- Once, the IA is over, evaluated answer books are shown to students and their queries are addressed by the faculty members. Students can also meet the HoD, if need be.
- Parent Teacher meeting is held, and parents meet the concerned faculty member for appraisal on their ward's performance.

In respect of University conducted Semester end examination (SEE), the procedure is as follows:

- The Registrar (Evaluation) of the VTU will send circulars/time-table indicating the schedule of examinations and evaluation activities of the university. The examination time table is widely circulated and displayed for the information of students and staff.
- The VTU will also provide guidelines and make job assignments for the Institution/faculty members which will be made known to all the concerned.
- The Institute conducts the university examination as per the schedule and the University's guidelines.
- The VTU provides photocopies of the answer scripts to students on request and also facilitates revaluation and challenge re-valuation.
- VTU directly communicates with the faculty members with respect to schedule of evaluation of answer scripts.

The Institution organizes the orientation program at the beginning of the semester wherein the major stake holders (students and parents) are present and a detailed presentation of the examination and evaluation process is described.

2.5.2 What are the major evaluation reforms of the university that the Institution has adopted and what are the reforms initiated by the Institution on its own?

In an affiliated set up, evaluation process is centralized and carried out as per VTU norms.

VTU from time to time has brought about several reforms in the process of evaluation.

- **On-line resume entry**: First year students are required to enter on-line, their admission data, academic information and other details to the VTU database.

- **On-line entry of internal assessment marks:** The final IA marks of the students are to be entered into the VTU database during the period notified by the university. The concerned subject teacher has to enter the IA marks and the same is to be approved by the HOD and the Principal.

- **On-line uploading of examination/revaluation application forms**: Examination/revaluation applications are to be uploaded to VTU website during the period notified by the university. A printout of the receipt is kept in the department for future reference.

- **Question Paper Delivery System:** All VTU examination question papers are delivered through a highly secured on-line electronic data transfer system. Separate security codes are supplied to Chief Superintendent, external deputy chief superintendent and system operator by the University for downloading question papers. The question paper can be downloaded only 30 minutes before the commencement of examination. Further, necessary copies of the same are made and packed in a secured manner under CCTV surveillance. As per VTU guidelines, the entire process strictly takes place in a strong room exclusively meant for the purpose. Entry to the strong room is restricted to examination staff only.

- **Digital evaluation of answer scripts:** On completion of an examination, the answer scripts are immediately sent to the VTU regional offices, wherein they are scanned into digital form and communicated to various evaluation centres across the state so as to be evaluated by faculty members. This avoids the problems associated with transporting a huge number of answer scripts to various evaluation branches and back. The examination system ensures correct online entry of marks by the faculty member himself avoiding transcription errors and saving a lot of tabulation time. The entire process is automated and the time required to announce results is also cut down enormously.

- M. Tech and Ph. D Thesis evaluation also happens online, which has speeded up the overall evaluation process and also announcement of results.

- Examination results are announced on the VTU website/communication through SMS. Students can get the result from website or by sending SMS to the university.
- From the academic year 2015-16, VTU has introduced Choice Based Credit System (CBCS) in all its affiliated Institutions.

The Institution has introduced centralized internal assessment system which works almost similar to the University examination system. Three IA are conducted as per the university prescribed schedule. At the time of assessment, the central IA coordination committee of the Institute will prepare a plan as per which the IAs are to be conducted by all the departments and publicized for the attention of all students and faculty members. The question paper pattern to be used in the IA is discussed and finalized. From 2015-16, Questions that demand innovative thinking and Questions based on case study /web resources have been made mandatory in all courses. The Question Papers are scrutinized by the departmental committee. The question paper pattern and scheme of evaluation are discussed in the class rooms to orient them. Scheme of evaluation is made known to the students. The IA is conducted in the same spirit of the University examinations. Room invigilation, squad duties are assigned as if it is university conducted examination. The results of the IAs are sent to the parents through SMSs within a week after the IA is over.

2.5.3 How does the Institution ensure effective implementation of the evaluation reforms of the university and those initiated by the Institution on its own?

- The Institution is affiliated to VTU and hence cannot take any initiatives to reform the examination system at the university level. But the Institution is strictly following the university prescribed rules with regard to IAs, assignment and university examinations.
- Faculty members take enough care not to commit any error with regard to evaluation of answer scripts and report of marks.
- As far as Question paper distribution system is concerned, it is the combined responsibility of the chief superintendent, internal and external deputy chief superintendents for maintaining confidentiality.
- Flying squad members of the university inspect the system during their visits.
- There is an examination committee comprising of faculty members and office staff which ensures the smooth conduction of examinations.
- The eligible staff members attend without fail, the evaluation of answer scripts at the university designated centres, and also conduct practical examination, project viva-voce, etc.
- The IA is conducted at the Institute level with the same seriousness as that of university examination. The marks scored by students are sent by SMSs to their parents within a week's time.

2.5.4 Provide details on the formative and summative evaluation approaches adopted to measure student achievement. Cite a few examples which have positively impacted the system.

Departments maintain proctor diaries for each student which contains information on his/her academic performance from first semester onwards. Proctor diaries help the teacher in continuously monitoring the students such that appropriate action can be taken at the right time.

Formative evaluation process: The Institution

- conducts three internal assessment tests, practical and viva-voce examinations
- Arranges class test, mock test, industrial visit, guest lecture for the students. Students are asked to submit the report on visits and expert lectures
- encourages the students to take up mini projects, paper presentation, attend workshops, seminars etc. which provides forum for formative evaluation
- organizes workshops and programs on technology and sciences and evaluates the students at the end of the program
- identify the weak students and take measures to improve their performance
- In addition to the above, poster presentation contests are held by various departments in the Institution.
- SMS sent to the parents regarding their wards attendance states and internal assessment marks.

Summative evaluation process

- The institution conducts theory, practical & project viva-voce examinations at the end of each semester as per norms prescribed by the affiliating University.
  The university performs online evaluation of students' answers scripts to speedup result declaration.
- The above processes of assessment have resulted in getting good results and yielded ranks. The average placement among the eligible students is around 85%. A good number of students' projects are funded by KSCST during the last five years.

2.5.5 Details on the significant improvements made in ensuring rigor and transparency in the internal assessment during the last four years and weightages assigned for the overall development of students (weightage for behavioural aspects, independent learning, communication skills etc.).

- The Institution makes ample effort to have transparency in the internal assessment. Tests are conducted with the same rigor as main exams (question paper scrutiny, proper seating arrangement for students,

invigilation process, and squad monitoring). The test answers and scheme of evaluation are given to the students. Student gets opportunity to discuss the performance in the tests with the concerned teachers. During this discussion, students also get to know the way to answer specific questions.

- Continuous evaluation is an important part of both Under Graduate and Post Graduate programs. In case of UG programs and PG programs internal assessment carries 25 marks and 50 marks respectively. Awarding internal assessment marks to students is also governed by VTU regulations and the Institution does not have authority to award marks for behavioural aspects. However, the Institution ensures utmost transparency in the overall evaluation process. Weightage is given to continuous evaluation which includes attendance, extension of experiment, communication of proper conclusion for the experiment performed etc. while valuating practical subjects and award of marks for the experiments.

- From 2015-16, Questions that demand innovative thinking and self-learning have been introduced.

- The semester internal assessment marks are displayed on the notice boards so as to clarify any discrepancies that might have crept in due to typographical errors.

- Institution encourages independent learning which includes paper presentations by students, projects, innovative mini projects, publishing the articles in newspapers & gives proper weightage to these parameters.

- Proficiency in communication and independent learning habit help in scoring marks in seminar and project work. A total of 150 IA marks is allotted to these two activities.

2.5.6 What are the graduates' attributes specified by the Institution/affiliating university? How does the Institution ensure the attainment of these attributes by the students?

The following are the graduate attributes followed by the Institution:
- Engineering Knowledge
- Problem Analysis
- Design/Development of Solutions
- Conduct investigations of complex problems
- Modern Tool Usage
- The Engineer and Society
- Environment and Sustainability
- Ethics
- Individual and Team Work
- Communication

- Project Management and Finance
- Life-Long learning

The Institution is trying its best for attainment of these attributes by students through its teaching, learning, assessment and evaluation processes. The Institution's calendar of events very well includes curricular, co-curricular and extra-curricular activities apart from regular placement &training activities. NSS & Community services (blood donation camp, orphanage visits) are taken up by the students and staff members who contribute to attain the attributes. National festivals (Independence Day, Republic Day etc.) and Global Awareness programmes (Environment day, Health day, etc.) are also being observed fervently. Activities of student clubs, Chapters of professional bodies, department associations, etc. also contribute to the attainment of graduate attributes.

2.5.7 What are the mechanisms for redress of grievances with reference to evaluation both at the Institution and university level?

Grievance Redress mechanism at the Institution level:
Institution has a well-represented grievance redress cell wherein all issues related to evaluation at the Institution level can be resolved. Display of marks on the notice board also plays a very important role.

- At the end of each internal assessment, student has the opportunity to discuss the evaluation of his/her answer scripts/blue books with the course coordinator and gets his/her grievance addressed.
- The students are informed about internal assessment marks and signatures of the students are recorded in the blue books after each test and the marks are recorded in the IA register at the end of the semester by the faculty-in-charge.

Grievance Redress mechanism to evaluate at the university level:
- The university has the system of addressing grievances related to evaluation. It provides an opportunity for obtaining a photocopy of their answer script, re-totalling of marks, revaluation and challenge valuation of their answer scripts.
- After the announcement of the results, the university allows specific periods of time for each of these. The prescribed fees and dates are notified and relevant forms are issued.
- If there is any error in totalling of marks, the student can appeal for correction. If the results after revaluation are favourable to the student, the benefit is passed on to him/her. Revaluation / challenge revaluation for semester end examination is carried out by expert examiner appointed by the university.
- Students can utilize these opportunities to alleviate their grievances.

2.6 Student Performance and Learning Outcomes

2.6.1 Does the college have clearly stated learning outcomes? If yes, give details on how the students and staff are made aware of these?

Yes. The Institute has clearly stated the Educational outcomes both at the Institutional-as well as at the programme-levels.

At the Institutional-level, broader Educational Objectives are defined to guide the collective efforts of all towards the stated Vision and Mission. These long-term objectives are:

- To impart high quality Science, Engineering and Technological knowledge and skills to all the sections of the society.
- To help students improve their leadership and entrepreneurship qualities ingrained with ethical, social and environmental concerns.
- To ensure high value returns to all stakeholders of the Institute.

In line with the objectives for each program of study, the outcomes have been clearly defined (For example, POs of ECE are shown in Table 2.6.1). In addition to the above, each program of study has programme specific objectives (PSOs). (Refer Tables 2.6.1 (A) - (G))

Table 2.6.1

	Program Outcomes
PO1	**Engineering knowledge :** Apply the knowledge of mathematics, science, engineering fundamentals & engineering specification to the solution of complex engineering problems.
PO2	**Problem analysis:** Identify, formulate, research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3	**Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety, and cultural, societal, and environmental considerations
PO4	**Conduct investigations of complex problems:** The problems that cannot be solved by straightforward application of knowledge, theories and techniques applicable to the engineering discipline, which may not have a unique solution.
PO5	**Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling to complex engineering activities, with an understanding of the limitations.
PO6	**The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7	**Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8	**Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	**Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with t h e society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions
PO11	**Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments
PO12	**Lifelong learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Table 2.6.1 (A)

Program Specific Outcomes of ECE	
PSO1	Exhibit competency in embedded system domain
PSO2	Exhibit competency in RF & Signal Processing domain

Table 2.6.1 (B)

Program Specific Outcomes of CSE	
PSO1	Analyse the problem and identify computing requirements appropriate to its solution.
PSO2	Apply design and development principles in the construction of software systems of varying complexity.

Table 2.6.1 (C)

Program Specific Outcomes of ME	
PSO1	Design, analyse and fabricate the mechanisms
PSO2	Analyse the thermal aspects of different mechanical systems and components
PSO3	Develop materials and components through different manufacturing methods with management skills.

Table 2.6.1 (D)

Program Specific Outcomes of EEE	
PSO1	Analyse and design electrical power system.
PSO2	Analyse and design electrical machines.
PSO3	Analyse and design power electronic controllers for industrial drives
PSO4	Analyse and design analog and digital electronic systems.

Table 2.6.1 (E)

Program Specific Outcomes of TCE	
PSO1	Analyse and Design Communication Systems
PSO2	Analyse and implement signal processing applications
PSO3	Design and implement embedded systems

Table 2.6.1 (F)

Program Specific Outcomes of ISE	
PSO1	Demonstrate an ability to apply the knowledge of information technology to solve business problems.
PSO2	Ability to organize an IT Infrastructure, manage and monitor resources and secure data.

Table 2.6.1 (G)

Program Specific Outcomes of CIVIL	
PSO1	Design and analysis of civil engineering built environment with sustainable approach.
PSO2	Develop solutions by analysing field problems in the areas of Highway, survey, water supply

Students and staff are made aware of learning outcomes by means of displaying them in prominent locations and they are also communicated through various printed/electronic media- for example website and lab manual.

2.6.2 Enumerate on how the Institution monitors and communicates the progress and performance of the students through the duration of the course/programme? Provide an analysis of the students' results/achievements (programme/course wise for last four years) and explain the difference if any and patterns of achievement across the programmes/ courses offered.

The progress and performance of students through the duration of the course is monitored by keeping a tab on improvement in University examination results of that batch of students. The key metrics used are:
- Percentage of passes from semester to semester
- Number of students securing FCD, FC and SC
- Number of co-curricular and extracurricular achievements of students

The progress and performance of students is communicated to their students/parents/guardians in the following ways:
- Display of marks on notice board
- Through interactions in classrooms
- Ensuring transparency in evaluation by allowing the students to have a look at the evaluated blue books/answer sheets.
- Through teacher parent interactions.
- Communication of marks through mails and SMS
- Felicitating achievers in open platform (student functions)

RESULT ANALYSIS
BRANCH: Electronics and Communication Engineering

SEMESTER	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
BE I SEM	91.3	94.5	81.72	77.7	80.6
BE II SEM	94.3	92.5	89.01	83.8	83.1
BE III SEM	79.04	79.24	74.1	70	75.7
BE IV SEM	74.75	78.5	75.9	67.5	63.4
BE V SEM	88.2	81.6	80.1	79.2	81
BE VI SEM	80.5	87.87	82.07	65.4	69.3
BE VII SEM	94.44	92.55	89.69	96.15	91
BE VIII SEM	97.2	96.7	99	94.23	93.6

BRANCH: Computer Science & Engineering

SEMESTER	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
BE I SEM	89	95	89	68	70
BE II SEM	80	85	88	68	85
BE III SEM	75	69	73	61	85
BE IV SEM	79	81	77	76	59
BE V SEM	73	85	84	86	91
BE VI SEM	86	87	92	83	86
BE VII SEM	92	85	94	83	87
BE VIII SEM	93	95	99	93	97

BRANCH: Mechanical Engineering

SEMESTER	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
BE I SEM	80.60	64.00	70.42	60.27	75
BE II SEM	76.12	80.93	85.91	59.15	78.69
BE III SEM	72.46	92.00	77.00	57.83	76
BE IV SEM	75.00	92.11	73.97	66.25	73.33
BE V SEM	81.54	67.74	70.13	67.12	76.81
BE VI SEM	92.42	80.64	77.66	60.56	69.44
BE VII SEM	86.49	94.00	90.00	82.19	69.44
BE VIII SEM	100	100	96.67	97.26	90.54

BRANCH: Electrical & Electronics Engineering

SEMESTER	2011-12	2012-13	2013-14	2014-15	2015-2016
BE I SEM	83.33	82.54	75	60.3	73.61
BE II SEM	81.67	85.25	80	62	73.23
BE III SEM	71.8	76.47	82.19	53	69.7
BE IV SEM	75	70.59	78.08	64	70.76
BE V SEM	89	76.06	68.25	70	82
BE VI SEM	79.7	73.6	76.19	75.6	86.66
BE VII SEM	89.4	86	90.91	60	93.15
BE VIII SEM	95.45	97	100	85.71	90.41

BRANCH: Telecommunication Engineering

SEMESTER	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
BE I SEM	88.88	89.5	84.21	66.15	60.34
BE II SEM	88.88	87.5	85.96	66.15	61.1
BE III SEM	74.24	67.19	66.67	67.21	64.17
BE IV SEM	64.51	53.03	58.73	45.7	24.4
BE V SEM	79.31	67.24	60.13	77.77	78.57
BE VI SEM	85.96	88.13	83.87	75.90	64.2
BE VII SEM	95.52	89.83	96.15	90	98
BE VIII SEM	100	96.55	100	98.3	98.03

BRANCH: Information Science & Engineering
(The programme started in the year 2010)

SEMESTER	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
BE I SEM	85.9	88.14	67.21	61.42	65.7
BE II SEM	80.7	83.05	83.33	82.6	71.21
BE III SEM	67.16	67.16	79.41	53.62	75
BE IV SEM	67.16	65.67	70.1	73.82	62.12
BE V SEM		83.6	80.08	76.1	87.5
BE VI SEM		90.7	89.4	90.9	78.12
BE VII SEM			94.34	80.95	76.19
BE VIII SEM			92.45	93.65	92.18

Legend: 2011 Batch ▮ (Red)   2012 Batch ▮ (Yellow)

BRANCH: Civil Engineering
(The programme started in the year 2013)

SEMESTER	2013-2014	2014-2015	2015-2016
BE I SEM	63	46	58
BE II SEM	85	66	57
BE III SEM	NA	65	83
BE IV SEM	NA	67	64
BE V SEM	NA	NA	80
BE VI SEM	NA	NA	91.7
BE VII SEM	NA	NA	NA
BE VIII SEM	NA	NA	NA

Legend: 2013 Batch ▮ (Red)   2014 Batch ▮ (Yellow)

MCA

SEMESTER	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
MCA I	84.48	80.77	54.35	78.39	73.91
MCA II	92.98	84.62	85.71	91.42	88.64
MCA III	94.83	92.98	92.16	90	75
MCA IV	84.48	92.98	92	92.50	90.9
MCA V	96.61	100	91.22	94	95
MCA VI	100	100	100	100	100

Legend: 2011 Batch ☐   2012 Batch ☐

M. TECH. (CSE)
(The programme started in the year 2014)

SEM	2014-15	2015-16
M. Tech. I	61	64
M. Tech. II	88	93
M. Tech. III	NA	100
M. Tech. IV	NA	100

M. TECH. (ME)
(The programme started in the year 2014)

SEM	2014-15	2015-2016
M. Tech. I	75	85.71
M. Tech. II	81.25	93
M. Tech. III	NA	100
M. Tech. IV	NA	100

Legend: 2014 Batch ☐   2015 Batch ☐

Trends & interpretation: The overall trend indicates that the result show a small dip in 3rd and 4th semesters (perhaps due to lateral entry which constitutes 20% of the sanctioned intake) however the average results show a steady improving trend in subsequent higher semesters.

2.6.3 How are the teaching, learning and assessment strategies of the Institution structured to facilitate the achievement of the intended learning outcomes?

The Institution has implemented several strategies to ensure effective teaching, learning and assessment to facilitate the realization of intended learning outcomes.

Strategy of Balanced Curriculum: One of the keys to successful learning is well balanced curriculum that is aligned with the vision and mission of the Institute. Although the Institution is affiliated to the VTU and follows the

university syllabi for all its educational programmes, it explores and implements various value adding programmes along with the university prescribed curriculum to ensure that the gap in learning outcomes is bridged. Each department has been organizing a variety of activities/programmes to ensure that students gain competencies with regard to all learning outcomes (technical and professional) as stated.

Strategy for Effective Teaching-Learning Process: Faculty members have been using a variety of modes of delivery to reach all students of their classes. They, apart from traditional black board teaching, have used multi-media systems, physical and simulation models, charts and posters, hands-on experimentation, etc. to help students to understand and learn the technical concepts better. They have used modern methods of learning such as

Collaborative learning, blended learning, mini project works, assignments, partial delivery techniques, poster making, etc. to provide students a direct learning experience. All these have contributed to the effective and efficient teaching-learning process. Several value addition programmes in the form of invited lectures by experts, industrial visits, industry internships, partial delivery by industry practitioners, practical learning through mini projects, design experience through design competitions, etc. make up for the gap between the university curriculum and the expected learning outcomes.

Assessment Strategy: The Institution conducts internal assessments (IAs) using a centralized IA coordination strategy. The IA is conducted very much similar to the University examinations. Question papers are set confidentially by the course coordinators and scrutinized by the HOD. They include innovative Questions and Questions based on case study & web resources. The mixed seating arrangement, visits of flying squad, time bound evaluation, declaration and display of marks, counselling of poor performers, are all a part of assessment and evaluation strategy. The Institution also takes seminars, project presentations, performance in practical classes, etc. to assess the extent of learning of students. The students are also assessed based on their design and testing competencies demonstrated in design competitions, hackathons, etc. The feedback collected from students about the quality and extent of learning they got after participating in the value addition programmes also helps in their assessment.

All these strategies have helped imparting a deep learning experience in students and contribute to the realization of learning outcomes.

2.6.4 What are the measures/initiatives taken up by the Institution to enhance the social and economic relevance (student placements, entrepreneurship, innovation and research aptitude developed among students etc.) of the courses offered?

Student Placements:

- The College has an exclusive Placement and Training Centre to facilitate on-campus Placement opportunities to the students.

Year	No. of companies visited	No. of students attended the campus interview	No. of students selected	Percentage of students recruited
2011 – 12	53	305	268	**87.87**
2012 – 13	46	273	202	**73.99**
2013 – 14	55	305	266	**87.21**
2014 – 15	68	306	274	**89.54**
2015 – 16	75	338	303	**89.64**

- The Centre facilitates pre-placement training in aptitude & soft skills like effective communication, group discussion, body language, facing interviews, corporate etiquette, team work etc. to all the pre-final year students to enable them to acquire necessary skills to meet the current corporate requirements. The centre helps students to have sufficient opportunities to get a job/s of their choice. These activities are facilitated by Placement and Training Centre through various professional agencies. Apart from these, departments are encouraged to impart special and industry specific training, as the need may be, for the students for better career growth. The above activities are also supported by pool of alumni who interact with the students on regular intervals to educate them on industry requirements, provide career guidance, awareness on current technologies etc.

Entrepreneurship:

Entrepreneurship Development Centre of BMSIT&M has taken an initiative to meet the rising need of entrepreneurial career amongst students through various activities and promote the strong culture of entrepreneurship .The EDC has organized many events and the glimpse of few events held are as follows:

- A one day program called BIZSHARK was organized and competition was held on various aspects of entrepreneurship on 30th March, 2016.
- Prof. Rakesh Godhwani from IIM–Bengaluru delivered the talk on "How Leader's persuade action –a necessary skill for entrepreneurs" in MCA Seminar Hall on 29th February, 2014. Around 80 participants and staff attended the seminar from different branches of engineering and MCA.
- Dr Ananat Koppar, CEO, KTwo Technology Solutions delivered the talk on "Entrepreneurship Innovation and Challenges" in the MCA Seminar Hall on 8th February, 2014. 84 participants attended the seminar.
- A seminar on "Awareness on Entrepreneurship" in the Seminar Hall on 14th September, 2013. The Speaker was Mr Ramesh, Manager, Entrepreneurship Development Institute, Bengaluru Region. 67 students attended the seminar.

All these efforts have enhanced the economic & social relevance of the engineering programs.

Innovation and research aptitude:

Faculty help students to write proposals for research projects, brief them about funding agencies like KSCST, VGST, DST, etc., guide the sanctioned projects, accompany them for visit to premier research Institutes to whet their appetite for research. They are familiarized with current trends in research and innovation by encouraging them to attend guest lectures, expert talks, read research journals, browse research related websites, contribute articles to college magazines, news-letters, research journals and also present research papers in conferences. They are encouraged to consult journals like IEEE transactions while presenting seminars & project works.

Examples:
- 23(ECE-03, CSE-03, ME-12, EE-02, TCE-02 & ISE-01) students research projects funded by VGST, KSCST have been executed in the last five years.
- The Institute has a well stacked library with books and journals, e-learning resources, NPTEL lectures, general & technical magazines.
- Faculty and students of Department of ISE visited Human Brain Museum Neuro-biology Research Centre (NIMHANS) to study involvement of information science and technology in the field of medicine.
- Analysis of quantitative and qualitative data is taught through some of the engineering subjects.
- Tools for research along with validity and reliability are taught.
- A large number of seminars/workshops are organized to enlighten students about frontier research and motivate them.

2.6.5 How does the Institution collect and analyse data on student performance and learning outcomes and use it for planning and overcoming barriers of learning?

The relevant data on student learning outcomes are collected from the following:-
- Reports from the Class Committee meeting, faculty feedback, course meeting and the informal feedbacks are sent to HOD for review.
- The marks scored by students in internal assessment and university examinations reflect their performance and learning outcomes. This data is recorded and analysed by individual department. The department faculty then plan the course of action for toppers to advance further and poor scorers to improve their marks.
- A copy of the analysis is also submitted to the Principal and the matter is discussed during the meeting of the HODs. The Principal may seek an explanation from the department in case of worrisome

performance. The result analysis is also discussed during BOG meetings. Appropriate strategies are adopted to tackle the problem.

- Feedback collected from companies taking part in Campus placement drive & feedback from Alumni help a lot in assessing the student's attainment of learning outcomes. This assessment is very helpful in fine-tuning the teaching-learning & training systems.
- Remedial classes, tutorials, special classes, discussion of question from question papers of previous years, guidance regarding the technique of answering question during exams, encouraging student to make greater use of departmental and college library, counselling in cases of examination related anxiety etc. are some of the usual methods employed for overcoming the barriers of learning.
- With regard to project work, the progress is reviewed at different stages of the project completion. In each stage a committee of senior teachers assess the quality of the project and give inputs and feedback to improve the same.

2.6.6 How does the Institution monitor and ensure the achievement of learning outcomes?

The Institution monitors and ensures the achievement of learning outcomes through the following:

- Regular analysis of the performance of students in internal assessments and semester end examination helps in identifying toppers and poor performers. The two categories of students are dealt with differently by using measures tailor-made for them. Observation and evaluation of students' performance in project works and group assignments, ability in organizing co-curricular events and participation in intercollegiate competitions, etc. by their faculty members and the HoD would also help providing students with the necessary feedback so as to ensure that the stated learning outcomes are achieved.
- The attendance records of the students are regularly monitored and students with poorer attendance status are counselled, and their parents are also alerted so as to ensure that they attend classes regularly.
- The students are made to take up competency building activities in curricular, co-curricular and extra-curricular realms since their holistic development is the desired goal. NSS, UTSAHA-the cultural forum etc. help in these initiatives.
- Participation of students in the meetings of Board of Governors, Department advisory boards, and the co-curricular and cultural activities of the department/Institution etc. is hoped to bring in them a sense of ownership of the activities, impart leadership qualities, ability to work in multi-disciplinary teams, and competency to plan and execute large events/projects. Student mentoring, grievance redress,

provision of all required facilities, financial assistance by means of scholarships, incentives to achievers, health check-ups, parent-teacher interactions and counselling are some of the practices adopted that contribute to achieve learning outcomes.

2.6.7 Does the Institution and individual teachers use assessment/ evaluation outcomes as an indicator for evaluating student performance, achievement of learning objectives and planning? If 'yes' provide details on the process and cite a few examples.

Yes. The faculty members of various departments of the Institution do a proper assessment and evaluation of students' performance in internal assessment tests and University Examinations, and understand the level of course leaning outcomes they have been able to attain. The faculty council of the department deliberates this thoroughly. These levels of attainment may also be discussed during the department advisory board meeting. The Stake holders' representatives and experts present in the board can advise the Head and the faculty of the department to initiate appropriate measures to help students better attain the learning outcomes.

The college, through its departments analyses the outcomes of assessment/ evaluation and plans the teaching- learning-evaluation reforms accordingly. The individual teachers, on the basis of results obtained in the subjects taught by them, gauge the level of comprehension of the students, which helps them to take measure to make learning more interesting and student centric.

The teachers are assigned around 20 students for prcotorship and they closely watch and record data regarding the progress of each student. This makes room for adopting necessary strategies for continuous improvement of learning and learning outcomes.

CRITERION – III

RESEARCH, CONSULTANCY AND EXTENSION

3.1 Promotion of Research

3.1.1 Does the institution have recognized research centre/s of the affiliating University or any other agency/organization?

Yes. The following departments of the institution are recognized research centres of affiliating university.

Sl. No.	Department
1	Electronics and Communication Engineering
2	Computer Science Engineering
3	Mechanical Engineering
4	Electrical and Electronics Engineering
5	Telecommunication Engineering
6	Information Science and Engineering
7	Master of Computer Applications
8	Chemistry
9	Physics
10	Mathematics

3.1.2 Does the Institution have a research committee to monitor and address the issues of research? If so, what is its composition? Mention a few recommendations made by the committee for implementation and their impact.

Yes, the institution has a Research Council to monitor and address the issues of research activities. The council consists of the Chairman (BMSIT), Principal, Dean (R&D) and senior faculty members from various departments and sister institution head / his nominee as an external member. It encourages the faculty members to enrol for Ph.D. programmes in their fields of interest. They are also facilitated to apply for minor/major research projects. The constitution of the council is as below.

1	Sri K Jairaj IAS (Retd.)	Chairman
2	Dr. Mohan Babu G N	Member
3	Dr. Ravi Prakash	Secretary
4	Dr. B E Ramachandran	Member
5	Dr. Hanumantharaju	Member
6	Dr. Thippeswamy	Member
7	Dr. Dhananjaya	Member
8	Dr. C Kavitha	Member
9	Mrs. Suma Umesh	Member
10	Mr. G H Vasappa	Secretary
11	Dr. K Mallikharjuna Babu	Member

Recommendations made by the committee:
- To get all departments recognized as research centres by the affiliating university
- To identify and develop core areas of research in every department
- To establish interdisciplinary Research Clusters in the areas of (i) Nano Science and Technology, (ii) Signal processing and data analytics, and (iii) Heavy systems analysis and design, in the institution.
- To submit proposals to the funding agencies for conducting National/International conferences, seminars and workshops with the state-of-the-art technology
- To introduce sabbatical leave policy for pursuing research activities in reputed organizations
- To write high quality proposals seeking funds from external agencies
- To inculcate research and consultancy culture among the faculty.
- To introduce incentives for engaging in quality research.
- To encourage all eligible faculty members to enrol for Ph.D. programme
- Grant of special leave for research scholars to write examinations of course work.
- Sponsorship for attending conferences/workshops/seminars.

Impact:
- All eligible departments have applied to the university, for recognition as Research Centres.
- Research grants have been received from AICTE/NRB/DST/VGST
- More than twenty five research proposals were submitted to various funding agencies
- Thirty five of BMSIT&M faculty members are pursuing doctoral degree
- As many as 45 persons from other organizations are pursuing Ph.D. at BMSIT&M
- Participation of students in seminars/conferences and technical events have shown an upward trend.
- The number of publications by the faculty members in national/international journals and conferences are on the rise.
- Organizing Symposia/seminars/conferences/workshops are showing an upward trend
- Consultancy activities are taking off slowly

3.1.3 What are the measures taken by the institution to facilitate smooth progress and implementation of research schemes/projects?

The measures taken by the institution to facilitate smooth progress and implementation of research schemes/projects are:

- **Autonomy to the principal investigator**
  Principal investigator enjoys complete autonomy in implementing the sanctioned project. The concerned HOD extends full cooperation to the principal investigator whenever needed. The project's principal investigator is given full freedom in hiring research assistant/associate of his choice.

- **Timely availability/release of resources**
  The institution ensures the timely availability of resources for the execution of the project as per plan. The project facilitation processes in the institute, while being in line with the guidelines of the funding agency, are also hassle-free and researcher friendly.

- **Adequate infrastructure and human resources**

  All laboratories in the institute have adequate work space, and equipped with power supply, experimental facilities, computing facilities, internet connection (both wired and wireless), etc. Technical support staff and administrative staff extend the necessary support to the researcher on request. If exclusive human resources are needed, the principal investigator can advertise and recruit.

- **Reduced teaching load, special leave etc. to teachers**
  Faculty members who pursue research are allowed special casual leaves (SCLs)/, permitted to leave the campus for a brief period of time, deputed on official duty (OOD) and given similar other concessions whenever need arises and is justified to help them pursue research related activities. Their teaching workloads are adjusted and reduced if necessary, so as to enable them to finish the work in time.

- **Support in terms of technology and information needs**
  The departments provide facilities such as personal computer with internet connectivity, Wi-Fi, LAN, access to on-line and digital resources, e-journals etc. Faculty members are encouraged to procure various research related software, technical books, equipment, etc. to cater their needs and are financially supported too.

- **Support for becoming a life member of a professional body/Sabbatical leave**
  Every faculty member has been provided with 100% financial support to be member of any national professional association (75% support is provided in case of international professional association) of his choice in the area of their specialization. Further, the institute has recently adopted Sabbatical leave policy for faculty members to pursue their research interests in national/international institute of their choice. The institute also contemplates on providing book grant to faculty members.

- **Facilitate timely auditing and submission of utilization certificate to the funding authorities**
  The institution employs a Certified Auditor to audit and certify the utilization of the expenditure incurred on the project. The service of the institute's administrative staff is extended for the preparation and submission of utilization certificates in time.

- **Deputing faculty members for higher studies:**
  Institution has a provision for deputing a maximum of 10% of the total faculty members in a department for pursuing PhD programmes by providing them with special study leave.

3.1.4 What are the efforts made by the institution in developing scientific temper and research culture and aptitude among students?

The following initiatives have been implemented to encourage research activities amongst students.

Intercollegiate student project exhibition:
Various departments have conducted inter collegiate student project exhibition to showcase student talents and research abilities to the outside world.

Tech fests:
All departments have organized Tech-Fests to develop student research capability through activities like design competition, poster presentation, paper presentation, circuit debugging etc.

Student publications in conferences/Journals:
Institution is also encouraging students to publish their project work in conferences and journals.

Mini-projects in lower semesters:
Students are encouraged to carry out mini-projects at lower semesters under the guidance of faculty members. This would greatly motivate the research temper of students.

Student Projects Assessment and Review Committee (SPARC):
- This central committee scrutinizes all final year students' project proposals. It provides a timeline (for submission of synopsis, different stages of evaluation, etc.) which the project teams have to adhere to. With this initiative all final year projects are monitored closely.
- This would provide sufficient time for students to carry out extensive literature survey, so as to arrive at good project work.
- The committee understands the interdisciplinary nature of projects and helps establishing linkages between teams for interdisciplinary collaborative effort, if needed.

Student internships:
- Institution encourages students to do internship in industries during semester holidays.
- This would enable the student to get exposed to industry culture and recent trends.

Providing financial support to innovative student projects:
- Management has taken initiation to fund innovative projects executed by students.
- The institution facilitates students to seek sponsorship from Karnataka State Council for Science and Technology (KSCST) for executing their projects, and facilitates their implementation.

MoUs with Industry:
The institution has signed MoUs with industries/agencies to facilitate student training and placement, higher studies abroad and to sponsor Laboratories equipped with latest tools and software to encourage faculty and students to engage in research activities. Some of the examples are:
- Texas Instruments through its university program partner EdGate Technologies have set up a "System-on-Chip Laboratory".
- Institute has signed an MoU with M/s KPIT, an automotive firm, to introduce additional subjects that are beyond the curriculum of student. These subjects are extended not only to students placed in KPIT, but also to other interested students. This initiative has helped students to understand the latest automotive electronics technology.

3.1.5 Give details of the faculty involvement in active research (Guiding student research, leading Research Projects, engaged in individual/collaborative activity etc.)

The details of faculty involvement in active research such as guiding student research, leading Research Projects, engaged in individual/collaborative activity etc. are listed in the following table:

S No.	Faculty name	Department	Area of research	Title of the Research	Individual/ Collaborative
1	Dr. Narapareddy Ramarao	Electrical and Electronics Engineering	Electrical and Electronics Engineering	Bio Mediated Synthesis of some efficient Silicate Nanophosphors for electrical conductivity & white LED's	Collaborative

2	Dr. M. C. Hanumantharaju	Electronics and Communication Engineering	Big Data Based Machine Learning	Acceleration of Big Data Based Machine Learning Algorithms Using FPGA	Individual
3	Dr. M. C. Hanumantharaju		Image Processing	Design of Algorithms and Development of Reconfigurable Architectures for Histogram based Medical Image Enhancement	Individual
4	Dr. M. C. Hanumantharaju		Image Processing	An Efficient FPGA Implementation of Colour Image Enhancement Algorithm for Real-time Applications	Individual
5	Dr. M. C. Hanumantharaju		Image Processing	Novel Edge Persevering Super Resolution Algorithms for Medical Image Enhancement	Individual
6	Dr. Hariprasad SA		Embedded systems	Neural Network based Predictive Controller for Ship Navigation	Individual
7	Dr. Hariprasad SA		Antenna	Design and implementation of efficient algorithm for moving target parameter estimation in MIMO radar systems	Individual
8	Dr. Hariprasad SA		SAR Image		Individual
9	Dr Mohan Babu. G.N	Mechanical Engineering	Technology Management	Technology Management: Diffusion of modern technologies in economic sectors	Individual

10	Dr. S.Venkateswaran (Guide) Mr T. N. Praveen Kumar		Metal Foam Composites	Modelling and synthesis of Aluminium Fly-Ash Cenosphere composite.	
11	Dr. S.Venkateswaran (Guide) Mr O. Gurumurthy		Material Engineering	Metal Matrix Composite	
12	Dr. K. M. Sathish Kumar (Guide) Mr G. L. Anantha Krishna		Automotive	Study and Characterization of various parameters of eddy current braking system.	
13	Dr. K. M. Sathish Kumar (Guide) Mr Yashawantha Kumar G. A.		Smart materials	Development of finite element model and validation of a smart laminated composite.	
14	Dr. K. M. Sathish Kumar (Guide) Mr Chethan Kumar		Welding	Frictions stir welding of Aluminium and copper.	Individual
15	Dr. K. M. Sathish Kumar (Guide) Mr K. Chandrasekar Reddy		Liquid Fuels	Experimental investigation on the performance characteristics of liquid fuels blended with energetic nanoparticles	
16	Dr. N. Suresh (Guide) Mr Sundaresh		Composites	Studies on fatigue, damping, thermal and electrical properties of aluminium silicon alloy reinforced with fly ash.	
17	Dr. N. Suresh(Guide) Y. J. Jagadeesh		CFD	Numerical simulations of incompressible boundary layer close laminar to turbulent transition.	

18	Dr. Badrinarayan K (Guide) Mr M. C. Madhu		Solar	Theoretical and experimental evaluation of effectiveness of solar PV and solar thermal systems	
19	Dr. H. K. Govindaraju (Guide)		Fatigue	Evaluation of fatigue and fracture properties of Al-Ce Alloys.	
20	Dr. N. Suresh, Mr Sri Ganesh T.G.		Composite materials	Study the mechanical properties of Aluminium fly ash composites.	Individual
21	Dr. Venugopal K.A., MCE Hassan and Mr R. G. Deshpande		Machining	Machining with cryogenically treated and tempered carbide tool inserts	Collaborative
22	Mrs Suma Umesh (PI) & Dr. T. C. Balachandra (Co-PI)	Electrical and Electronics Engineering	MEMS	Simulation of Micro Gas Sensors For Detection of SF6 Leakage And Its Constituent Gases Under Partial Discharge In A Gas Insulated Switchgear.	Individual
23	Mr Banuprakash R (PI) Mr H. Ganapathy Hebbar (Co-PI)		Antennas	Performance Analysis of Beam turning techniques for Smart antennas	Individual
24	Prof. Surekha R Gondkar	Telecommu nication Engineering	DSP	Design & Development of efficient algorithm for transform based image compression	Individual
25	Dr. Manjunath T N	Information Science Engineering	Data Mining & Big Data	Big Data with agricultural & Education domain	Individual

26	Dr. Bharathi M		Sensor Networks & Medical Image Processing, IoT, Cloud Security	Health Care Applications and Security Issues	Individual
27	Dr Aravind H Bhashyam	Civil Engineering	BIM, Structural Engineering, Steel Structures, Fibre Composite, Tall Structures	BIM and Risk Analysis	Collaborative
28	Dr. Jagadish Vengala	Civil Engineering	Civil Engineering materials, Bamboo Buildings, Self-Compacting concrete	Geopolymer , Monolithic concrete structures	Collaborative
29	Aparna. K and Shivakumara. T	Master of Computer Application	Energy Management	Smart Energy System using Raspberry Pi	Individual
30	Dr. C. Kavitha	Chemistry	Nanomaterials, Raman spectroscopy	Graphene / Graphene oxide-nano particle hybrid structures for SERS based optical sensors	Individual
31	Dr. Dhananjaya N	Physics	Material science	Plant latex mediated green combustion synthesis of rare earth doped nanoaluminates: Study of structural and photo luminescent properties	Individual
				Structural and it's luminescence properties of rare earth activated Oxyhalides for display and dissymmetric applications	

32	Dr. Karabi Sikdar	Mathematics	Queuing theory	Study and development of computational methods on finite buffer discrete time queues with N threshold policy	Individual

3.1.6 Give details of workshops/ training programmes/sensitization programmes conducted/organized by the institution with focus on capacity building in terms of research and imbibing research culture among the staff and students.

The details are as below:

A. Conferences conducted:

Academic Year: 2010-2011

Sl. No.	Department organizing the conference	Name of the conference	Dates
1	Physics	Workshop on 'Advanced materials and their applications'	26-03-2011

Academic Year: 2011-2012

S No	Department organizing the conference	Name of the conference	Dates
------NIL-----			

Academic Year: 2012-2013

Sl. No.	Department organizing the conference	Name of the conference	Dates
1	Electronics and Communication Engineering	National Conference ETVDES 2013 Emerging trends in VLSI design and embedded systems.	25-10-2013
2	Computer Science Engineering	National Conference on Electronics, Computers and Computation (NCECC-2013)	18-09-2013
3	Electrical and Electronics Engineering	One Day National workshop on Technological Advances in Industrial Automation	26-04-2013
4		National Conference on Recent Trends in Power Electronic Drives	30-10-2013
5	Telecommunication Engineering	National conference on Wireless Communication and Sensor Networks	30-10-2013
6		Workshop on Mobile Communication Network & Optimization	17-12-2013
7		Workshop on Embedded system & RTOS	21-12-2013
8	Information Science Engineering	National Conference on Electronics, Computers and Computation(NCECC-2013)	10-10-2013

9	Master of Computer Applications	National Conference on Software & Information Management.	27-09-2013
10	Physics	National conference on 'Nanoscience and Nanotechnology'	11-10-2013
11	Computer Science, ISE, Maths	National Conference on "Electronics, Computers and Computation	10-10-2013

Academic Year: 2013-2014

Sl. No.	Department organizing the conference	Name of the conference	Dates
1	Electronics and Communication Engineering	Recent trends in Broad band over wire lines	28-04-2014
2	Computer Science Engineering	National conference on electronics, computers and computation.	10-10-2013
		National conference on cloud computing	28-09-2013
		National conference on software and information management	27-09-2013

Academic Year: 2014-2015

Sl. No	Department organizing the conference	Name of the conference	Dates
1	Electronics and Communication Engineering	National Conference on "Emerging Trends in Nano-Application"(NCETN-2015)	27-03-2015
2	Information Science Engineering	National Conference on Recent trends and Information technology (NCRTIT-2015)	14-02-2015
3	Civil Engineering	Sustainability & Advances in Concrete Technology-SACT-2015	25-04-2015
4	Jointly conducted with Department of Chemistry, Physics, & ECE	National Conference on "Emerging Trends in Nano Applications-NCETN-2015	27-03-2015

Academic Year: 2015-16

Sl. No	Department organizing the conference	Name of the conference	Dates
1	Mechanical Engineering	Two Day National conference on "Advanced Materials & Design"	29th and 30th July 2016
2	Electrical and Electronics Engineering/ Electronics and Communication Engineering Telecommunication Engineering	National Conference on Control, Communication and Power Systems(NC3PS-2016)	29-07-2016
3	Information Science Engineering/MCA	National Conference on Recent Trends in Information Technology -2016	21st and 22nd June 2016

B. Faculty development program (FDP) conducted:

Academic Year: 2010 -2011

Sl. No.	Department organizing the conference	Name of the development programme	Dates
1	Mathematics	Mathematical Modelling and Its Applications	13-04-2011

Academic Year: 2011 -2012

Sl. No.	Department organizing the conference	Name of the development programme	Dates
1	Electronics and Communication Engineering	Two day state level workshop on "Low power embedded systems design using MSP430"	14 and 15-03-2012

Academic Year: 2012 -2013

Sl. No.	Department organizing the conference	Name of the development programme	Dates
1	Electronics and Communication Engineering	Two days state level workshop on VLSI circuit design using Cadence tool	02 and 03-01-2013

Academic Year: 2013 -2014

Sl. No.	Department organizing the conference	Name of the development programme	Dates
1	Electronics and Communication Engineering	Texas Instruments University programme. Two day workshop on analog System design with ASLKV 2010 starter kit.	28-10-2013
2		One day Workshop on "Embedded Systems and RTOS"	21-12-2013
3		One day Workshop on " Mobile Communication networks and its Optimization"	17-12-2013
4	Mechanical Engineering	Recent Trends in Automotive Engineering	9th to 13-06-2014
5		Finite element method and its applications (FDP)	6th to 10-01-2014
6	Information Science Engineering	NS2 – Simulator	07-09-2013
7		Latex: An Introduction	7-01-2014
8		How to crack tough campus programming interviews	10-04-2014
9	Master in Computer Application	Computer Network Simulation NS-2	17-12-2013
10		Knowledge Dissemination	18-12-2013

11		Data Mining using Informatics	21-12-2013 and 22-12-2013
12		RSA & Design pattern	18-3-2014 to 22-3-2014
13	Telecommunication Engineering and Mathematics	Mobile Communication Network and Optimisation Workshop	17-12-2013
14	TCE, ECE, CSE and Mathematics	Embedded systems and RTOS Workshop	21-12-2013

Academic Year: 2014 -2015

Sl. No.	Department organizing the conference	Name of the development programme	Dates
1		FDP on Control Systems	04-06-2015
2	Telecommunication Engineering	FDP on Signals and Systems	27th to 31-01-2015
3		FDP on Outcome Based Education BMSIT	18th to 19th-09- 2014
4	Computer Science Engineering	Big data analytics	7-02-2015 21-02-2015 7-03-2015
5	Information Science Engineering	Latex: An Introduction	07-01-2014
6		How to crack tough campus programming interviews	10-04-2014
7	Masters of Computer Application	5 Days Workshop on Research Methodologies with Case Studies	23-01-2015 to 27-01-2015
8	Mechanical Engineering	Recent Trends in Automotive Engineering	9th to 13th June 2014
9		Finite Element Method and its Applications	6th to 10th Jan 2014

Academic Year: 2015-16

Sl. No	Department organizing the conference	Name of the development programme	Dates
1	Electronics and Communication Engineering	5 day workshop on Multisim, Labview and Data acquisition using Lab-view	26-07-2016 to 30-07-1016
		Workshop on 8086	6-02-2016 to 7-02-2016
		One day workshop on LATEX	1-12-2015
		FDP on Matlab Fundamentals and Simulink System and Algorithm Modelling	30-11-2015 To 4-12-2105
		Workshop on Image processing	29-08-2015

2	Computer Science Engineering	IOT hardware and software design	1-08-2016 to 5-08-2016
3	Mechanical Engineering/ Civil Engineering Deoartment.	Six Day FDP on Design aspects of Design of Fatigue & Fracture in Structures	18th to 23rd Jan 2016
4	Information Science Engineering/ Computer Science Engineering	Hadoop Ecosystem for Big Data	18th to 23rd Jan 2016

C. Sensitization programmes conducted:

Sl. No.	Title	Resource person	Dates
1	Legal Aspects of Formation and Incorporation of Companies	Mr K. Mayilsamy, Assistant Professor BMS College of Law, Bengaluru	13-08-2015
2	A Partial Delivery of Lecture for the Metallography & Material Testing Lab. entitled" Introduction to Metallography & Material Testing Laboratory"	Dr. P. G. Mukunda, Professor, Dept. of ME, NMIT, Bengaluru & Former Professor, & Head, Dept. of Metallurgy, IIT Kharagpur	17-08-2015
3	A Partial Delivery of Lecture for the Material Science & Metallurgy (MS&M) Entitled "Ferrous & Non-Ferrous Materials : Design, Processing & Selection"	Mr Madeva Nagaral, Design Engineer Configuration & Mass Properties Group Aircraft Research & Design Centre (ARDC) Hindustan Aeronautical Limited (HAL), Bengaluru	27-08-2015
4	Phyto-Remediation for Environmental Pollution	Dr. R Jayanthi, Prof. of Horticulture Division of Horticulture University of Agricultural Sciences, Gandhi Krishi Vignana Kendra(GKVK) Bengaluru-560065	1-09- 2015
5	Composite Materials: Challenges & Opportunities	Dr. Raghotham Rao, Former Scientist Regional Director (F&F), CEMILAC DRDO, Bengaluru	18-09-2015
6	Overview of Intellectual Property Rights & Initiative taken by Govt. of Karnataka on Trade Promotion & IPR	Dr. S Rama Murthy, Professor &Head-IP, Centre for Emerging Technologies, Jain University, Bengaluru & Smt. Prabhavathi Rao Program Coordinator WTO &	28-09-2015

		IPR Cell, Visvesvaraya Trade Promotion Centre Dept. of Industries & Commerce, Govt. of Karnataka	
7	Debate on "Privatisation of Engineering Education"	J. Prakash Advocate, Bengaluru.	29-09-2015
8	Automotive Pollution & Hybrid Vehicle	Mr Ravichandra Rangappa Head of the Department Faculty of Engineering Nilai University, Malaysia	14-10-2015
9	Some Research Directions in Computational Solid Mechanics	Dr. P C Panday Professor (Retired), Dept. of Civil Engineering, Indian Institute of Science (IISc.), Bengaluru & Adjunct Professor Indian Institute of Technology Bhubaneswar (IIT BBS)	18-11-2015
10	Intellectual Property Rights: Significance for Academia in Business & Research In association with Visvesvaraya Trade promotion Centre (VTPC)Dept. of commerce and Industries Govt. of Karnataka & Karnataka State Council for Science &Technology(KSCST) Indian Institute of Science, Bengaluru	Prabhavathi Rao, Program Coordinator, WTO & IPR Relay Cell, (VTPC) Dr. Rama Murthy, Professor, Post-graduate studies, Centre for emerging Technologies, Jain University, Bengaluru C. R. Pradeep Consultant and Project Coordinator, Patent Information Centre, KSCST Rakesh Prabhu Partner, ALMT Legal, Bengaluru	25-01-2016
11	Gender Equality in Institutions.	Women Empowerment Cell, BMSIT&M	20-04-2016

3.1.7 Provide details of prioritised research areas and the expertise available with the institution.

The following departments are recognized as approved research centres from Visvesvaraya Technological University, Belgaum.

Sl. No.	Department
1	Electronics and Communication Engineering
2	Computer Science Engineering

3	Mechanical Engineering
4	Electrical and Electronics Engineering
5	Telecommunication Engineering
6	Information Science and Engineering
7	Master of Computer Applications
8	Chemistry
9	Physics
10	Mathematics

Faculty recognized as research guides:

Sl. No.	Faculty Name	Designation	Department	Publications (No.)	PhD Guidance (No.)
1	Dr. Mohan Babu G. N.	Professor & Principal	Industrial Engineering	11	3
2	Dr. Hariprasad SA	HoD & Professor	Electronics & Communication Engineering	20	08
3	Dr. M. C. Hanumantharaju	Associate Professor		34	03
4	Dr. Thippeswamy G.	Professor &HoD	Computer Science and Engineering	08	5
5	Dr. H. K. Govindarajau	Professor &HoD	Mechanical Engineering	3	6
6	Dr. K. M. Sathish Kumar	Associate Professor		21	4
7	Dr. N. Suresh	Associate Professor		10	4
8	Dr. A. V. Suresh	Professor			4
9	Dr. Badrinarayan K	Professor			3
10	Dr. T. C. Balachandra	Professor	Electrical& Electronics Engineering	7	2
	Dr. Narapareddy Ramarao	Associate Professor		8	1
11	Dr. G. S. Jayadeva	Professor	Telecommunication Engineering		2
12	Dr. Manjunath T N	Professor	Information Science & Engineering	34	4
	Dr. Bharathi M A	Professor		40	5
13	Dr. Aravind H Bashyam	Professor and HoD	Civil Engineering	13	6
14	Dr. Arun Kumar B.R	Professor & Head	MCA	40	5
15	Dr. Annamma Abraham	Professor and HoD	Mathematics	13	3
16	Dr. Chethan A. S.	Associate Professor		06	1

17	Dr. Karabi Sikdar	Associate Professor		18	4
18	Dr. Dhananjaya. N	Associate Professor	Physics	30	2
19	Dr. C. Kavitha	R&D Scientist	Chemistry	17	1

Priority areas for research and Expertise:

Sl. No.	Department	Priority area/ Expertise
1	Electronics and Communication Engineering	Signal & Image Processing, Communication Networks and Nano electronics
2	Computer Science Engineering	Pattern Recognition, Machine Learning, Computer Communications, Industrial Imaging, Statistical and Computational Inverse Problems
3	Mechanical Engineering	Engineering Systems Analysis, Design, Automation and Robotics, Industrial Engineering, Technology Management, Business strategy
4	Electrical and Electronics Engineering	Energy Systems Engineering, Control Systems, Electrical Power systems Engineering
5	Telecommunication Engineering	Microelectronics (Device Modelling and low power VLSI)
6	Information Science Engineering	Data Mining, Networks, Big data analysis
7	Civil Engineering	Structures, Soil mechanics, Environmental Engg.,civil Engineering materials, Ground Improvement , BIM, Bamboo Buildings, Structural Engineering, Steel Structures, Fibre Composite, Tall Structures
8	Master of Computer Applications	Cyber Security, Game Theory, Modelling, Optimization, wireless networks and security, data science, cloud computing, optimization and image processing.
9	Basic Sciences	Nano Science and Technology, Fluid mechanics and queuing theory, Stochastic Process Modelling, Graph Theory

3.1.8 Enumerate the efforts of the institution in attracting researchers of eminence to visit the campus and interact with teachers and students?

The institution has made concerted efforts to attract researchers of eminence and academicians to visit the campus and interact with teachers as well as students. The institution regularly organizes expert lectures by eminent professors/scholars to provide opportunities for the teachers and students to interact with them. Following is the list of some eminent persons who visited the college in the last four years.

Sl. No.	Department	Name and Affiliation	Date
1	Electrical and Electronics Engineering	Dr. Rajasab, Vice-Chancellor, Tumkur University	30-10-2013
2		Mr Venugopal, Managing Director, Venjay Systems, Bengaluru.	13-11-2013 and 18-11-2013
3		Dr. E. G. Shivakumar, Associate Professor, Department of Electrical and Electronics Engineering, UVCE Bengaluru	30-10-2013
4		Sri. N Murugesan, Director General, CPRI. Bengaluru.	11-01-2014
5		Dr. Ravindra Mohre, Engineer, CPRI. Bengaluru.	13-08-2014
6		Sri. D.P. Srinivas Murthy, Asst. Exe. Engineer, KPCL, Bengaluru	07-02-2015
7		Mr Sunil T Shambhatnavar, General Manager, Advanced Electronic Systems, Bengaluru	28-03-2015
8		Dr. M G Srinivasan Hind High Vacuum India Pvt ltd. Bengaluru	21-08-2014
9		Mr Vinod Dravid Managing Director, COMSOL	17-09-2014
10		Dr M V Satyanarayana Technical Director, RIT Hassan	20-09-2014
11		Dr T Srinivas Dept. of ECE, Photonics, IISc, Bengaluru	20-09-2014
12		Sri Ravikiran Annaswamy Chair, IEEE Bengaluru Section	21-02-2014
13		Dr Siva Reddy, Treasurer, IEEE Bengaluru Section	08-08-2014
14		Dr S G Srikanteshwara Swamy Karnataka State Council for Science & Technology, IISc, Bengaluru	11-11-2013
15		Mr Mallikarjun A. Kambalayal Sunshubh Renewable & Research Centre, Hubli	06-04-2013
16	Mechanical Engineering	Shri S Nagaraj Scientist –G (Retd.) ISRO Satellite Centre, Bengaluru	10-08-2010
17		Dr. S B Kandagal Principal Research Scientist, Aerospace Department Indian Institute of Science, Bengaluru	21-09-2010
18		Dr. P G Mukunda Professor, Dept. of ME NMIT, Bengaluru & Former Professor & Head Dept. of Metallurgy, IIT- Kharagpur	11-03-2011
19		Mr Nandakumar Product Specialist –Mechanical CADD, Chennai	04-09-2011

20		Dr. Raghotham Rao Professor, Dept. of ME SJC Institute of Technology & Former Scientist G Regional Director(F&F), CEMILAC,DRDO, Bengaluru	24-02-2012
21		Mr Anil Scientist G , ADE, DRDO Ministry of Defence, Bengaluru	16-03-2013
22		Mr Sridhar R General Manager, Federal Mogul Corporation Yelahanka, Bengaluru-560064	30-08-2013
23		Mr Mohammed Raffique Gateway learning, Synergy School of Business Skill Bengaluru	04-09-2013
24		Dr M Krishna Professor and R&D Director RV College of Engineering, Bengaluru	04-09-2013
25		Prof. P Achutha Rao Former Head National Institute of Design R&D campus, Bengaluru	24-03-2014
26		Dr. Mohan Babu G.N. Professor, Dept. of IEM MSRIT, Bengaluru	11-04-2014
27		Dr Ravichandran Federal-Mogul, , Yelahanka, Bengaluru	25-09-14
28		J Prakash, Practicing Advocate Bengaluru	13-09-2014
29		Mr J R K Murthy Former Head, CIM/Technology Transfer Dept. CMTI, Bengaluru	03-02-2015
30		Smitha H S Patent Attorney, Partner-Legalese Inc., Bengaluru	14-02-2015
31		Mr SJP Naidu Federal-Mogul Power train Director, application & Engineering Federal Mogul, Bengaluru	24-03-2015
32		Dr. Ganapathi M Tech Mahindra, Bengaluru	24-04-2015
33		Mr S K M Rao Chief Executive, ,ENVICON, Bengaluru	02-05-2015
34		Dr. P C Panday Professor (Retired), Dept. of Civil Engineering, Indian Institute of Science (IISc.), Bengaluru& Adjunct Professor Indian Institute of Technology Bhubaneswar (IIT BBS)	04-05-2015

35		Prabhavathi Rao, VTPC, Govt. of Karnataka Dr. S Rama Murthy, Jain University Rakesh Prabhu, ALTM legal, Bengaluru C R Pradeep, KSCST, Bengaluru	25-01-2015
36		Mr Balakrishnan Scientist Structural Technologies division, CSIR-NAL, Bengaluru	17-03-2015
37		Er. Ajit Sabnis, Editor in chief, Build Expressions Bengaluru	31-10-2013
38		Dr. Gangadhara Bhatt, Professor, Mangalore University	8-11-2013
39		Er. S.A Reddi, Former MD, Gammon India Limited	15-02-2014
40		Dr. Madhwesh, Principal Bridge Engineer, California transportation department & Adjunct faculty state university of California, Sacremento	2-9-2014
41		Dr. C S Viswanatha(Late), former chairman Civil Aid Technoclinic , Bengaluru	15-9-2014
42		Er.Madhukar B A, MD, Potential Project Managers, Pvt Ltd	15-09-2014
43	Civil Engineering	Mr Avanidhar Kinhal, Chief Operating Officer Sycone PMC private limited	07-02-2015
44		Dr. N.Balasubramanya, Professor, Acharya Institute of Technology	28-03-2015
45		Mr. Amarnath , Research Associate, Imperial College London	16-10-2015
46		Er.Gopal Rao , Retired Engineer , Nagarjuna Sagar Dam	12-02-2016
47		Dr.Vyasa Rao , Technical Director of V2 Civil Diagnostics	19-02-2016
48		Mr.Rajath Kiran, Co Proprietor of RK Consultants	19-02-2016
49		Dr M S Amarnath , Professor Bengaluru University	4-03-2016
50		Mr..Joel Noronho, Branch Head, AECC Global, Bengaluru	17-03-2016
51		Dr. L Suresh, HOD department of CSE, CIT, Bengaluru	09-08-2012
52	Information Science Engineering	Dr. H A Sanjay, HOD department of ISE, NMIT, Bengaluru	25-9-2012
53		Mr Venkatesh, Senior Manager IBM India Pvt. Ltd., Bengaluru	23-3-2013
54		Mr Kalyan Neriyanuri, program manager of HP Software(R&D Operations),Bengaluru	10-01-2013

55		Mr Chakradhari Rowe, Edupreneur coach at GY AI , Bengaluru	20-3-2014
56		Dr. Chaitanya Kumar, Principal, HKBK, Bengaluru	26-03-2012
57		Mr Sudhirrao Rupanagudi, Managing Director, WorldServe Education	23-08- 2012.
58		Dr. S Chatterjee, Senior Scientist, Indian Institute of Astrophysics	29-08-2012
59		Suhail Ali SAP Analyst Cognizant Technology Solutions	29-04-2014
60		Dr. R. K. Kale Vice Counsellor of University of Gujarat	21-12-013
60	Electronics and Communication Engineering	Dr. Ravi Shankar Prof. & Head of PG Dept., RVCE	29-04-2014
61		Dr. H S Ganesha Bhatta, Principal of M.E.S. Teachers College, Bengaluru.	03-11-204
62		Prof. M Nagabhushan, MSRIT	03-11-2014
63		CADD for VLSI Team Cadence	02-09-2014
64		Prof. Prashanth Hebber	19-9-2014
65		Mr Nithin Borkar, Field Application Engineer, Siepel India Pvt. Ltd.	02-01-2015
66		Mr Sureshkumar, manager technical support of Benchmark electronics system pvt. ltd.	06-01- 2015
67		Dr. Ananthan B.R., Vice- chancellor, Rani Chennammma University, Belgaum	10-10-2013
68	Department of Mathematics	Dr. (Mrs) Mariamma A. Varghese, the Ex-Vice-Chancellor of SNDT Women's University, Mumbai	7-11-2013
69		Dr. Jancy James, Vice-Chancellor of Central University of Kerala	17-12-2013
70		Dr. R. K. Kale, Vice -Chancellor of the Central University of Gujarat	21-12-2013
71		Mr Ezhil Buddhan, General Manager(BSNL)	03-09-2014
72		Dr. Sujatha J, Wipro Technologies	27-01-2015
73		Mr.Vengada Rajan, Senior Scientist (F), DRDO	30-01-2015
74		Mr M. H. Kori, IETE	30-01-2015
75	Telecommunication Engineering	Mr Sasikanth Kumar, ISRO	16-05-2015
76		Dr. Radha Parikh, Visiting Professor IIT, Bombay	17-10-2015
77		Dr. Chethan Parikh, Professor IIT, Bombay	17-10-2015
78		Dr. Ashok Rao, Former CEDT, Network Head IISC Bengaluru	18-10-2015
79		Mr B. Satish Kumar, ISRO	25-05-2016
80	Computer Science Engineering	Mr Sriharsha S, Project manager, Symphony Teleca, Bengaluru	19-03-2016
81		Dr. K N Subramanya, Principal, RV college of Engineering, Bengaluru	20-11-2015

82		Dr. Ravikumar, WIPRO	21-03-2015
83		Dr. Shiva Murthy, Associate professor, VTU P.G Centre, Bengaluru	21-05-2015
84		Dr. Manjunath, Acharya IT, Bengaluru	21-02-2015
85		Dr. Satnam Singh, Data Scientist Big Data Architect, from CA Technologies.	7-2-2015
86		Mr Dharmesh Y , Exeter Software private limited, Bengaluru	13-09-2014
87		Mr Sriharsha S, Project Manager, Symphony Teleca	13-09-2014
88		Mr Manjunath H R , Product Manager The Datalifecycle Company	11-9-2014
89		Mr Nitesh Jain & Bharath Kumar, Software Engineer	28-08-2014
90		Dr. Manjunath T N, Acharya IT	22-04-2014
91		Dr. Rajasab, Vice-Chancellor, Tumkur University	30-10-2013

Researchers and eminent scientists are on the Board of Governors and interact with the policy makers of the institute providing guidance to ensure a balanced growth of academics and research. All departments have inducted top quality scientists, researchers and technologists from institutes like IISc and IIT and IIIT-B and experienced practitioners from industry in their department advisory boards (DABs) wherein direct and intense interaction between them and the faculty members take place.

Apart from regular invited talks and interactions, the institute also formally organizes interaction between industry practitioners (including R&D executives) and faculty & students as a part of Road-shows with the confederation of Indian industry, Start-up days, and Orientation programmes for fresh students.

3.1.9 What percentage of the faculty has utilized Sabbatical Leave for research activities? How has the provision contributed to improve the quality of research and imbibe research culture on the campus?

- The institution has evolved a new sabbatical policy for faculty members to conduct off-campus research activities, which is being implemented.
- Institution provides study leave for those faculty members who wish to pursue/ continue research activities outside the institute. Faculty have availed this provision to carry out his/her research work at industry premises.

3.1.10 Provide details of the initiatives taken up by the institution in creating awareness/advocating/transfer of relative findings of research of the institution and elsewhere to students and community (lab to land).

The initiatives taken up by the institution in creating awareness/advocating/transfer of relative findings of research of the institution and elsewhere to students and community (lab to land) are as follows:

- All findings and learning gained by faculty members in the course of their own as well as others' research work automatically make their way into classrooms through lectures.
- Many outcomes of research work, in-house or otherwise, have formed basis for several project works undertaken by students. The findings are either tested in a different environment or extended further.
- Students are encouraged to peruse, understand and present research papers (especially, IEEE transactions) as a requirement for presenting seminar course which is a part of their syllabus.
- All students and faculty members are provided with 24x7 access to all relevant e-journals procured through VTU consortium (earlier AICTE consortium).
- Students are encouraged to present the innovative findings of their projects in conferences/symposiums, and develop networks of researchers, scientists and technologists.
- A range of extra-curricular activities are also organized to enlighten students how research in laboratory is translated into product/service and brought to public domain. Events like Tech-Transform, Start-Up fest, Employers Meet and Road Show with Confederation of Indian Industry (CII) and departmental Tech fests contribute enormously to this effort.
- Innovation cell coordinates interdisciplinary projects and organizes idea evaluation contests.
- Students are encouraged to publish their final year project works in journals/ conferences. The institute publishes a document called 'TechSangraha' through which all students and staff are communicated about the student projects undertaken in a given academic year. Students are encouraged to publish their technical articles in institute magazines.
- Any outstanding contribution in terms of research by a faculty/student would be highlighted in the institute's quarterly newsletter 'TechSanchalana'.
- Students are encouraged to showcase their project/research works in intra-institute and inter-institute competitions/tech-fests.

3.2 Resource Mobilization for Research

3.2.1 What percentage of the total budget is earmarked for research? Give details of major heads of expenditure, financial allocation and actual utilization.

Year	2015-16		
	Allocated	Utilised	%
Total Budget	53,37,92,736	40,63,72,310	76
Research	20,00,000	77,400	4
Software /Books	59,02,000	58,54,123	99
Equipment	2,55,29,821	57,12,488	22
Buildings	24,20,95,000	149309918	62
Others	25,82,65,915	24,54,18,381	95
Seed Money	--	--	

Year	2014-15			2013-14		
	Allocated	Utilised	%	Allocated	Utilised	%
Total Budget	44,63,79,556	34,26,40,137	77	28,95,63,486	33,82,05,779	117
Research	20,00,000	3,54,912	18	9,00,000.00	2,33,875	26
Software /Books	89,30,746	44,82,360	50	52,83,000.00	30,90,345	58
Equipment	2,60,19,280	83,46,247	32	73,71,411	30,20,722	41
Buildings	14,80,00,000	969,40,627	66	9,32,00,000	12,60,29,910	135
Others	26,14,29,530	23,25,15,991	89	18,21,09,075.00	20,53,54,812	113
Seed Money	---	---		7,00,000	4,76,115	68

Year	2012-13			2011-12		
	Allocated	Utilised	%	Allocated	Utilised	%
Total Budget	26,00,95,990	20,98,00,575	81	32,82,64,180	12,40,74,019	38
Research	6,00,000	51,500	9	10,00,000	61,059	6
Software /Books	21,70,000	22,26,399	103	33,35,000	8,82,994	26
Equipment	34,18,500	28,89,342	85	84,13,330	31,08,435	37
Buildings	11,24,00,000	2,81,14,889	25	17,44,50,000	31,86,837	2
Others	14,10,07,490	17,64,66,945	125	14,00,65,850	8,57,50,603	61
Seed Money	6,00,000	51,500	9	10,00,000	61,059	6

3.2.2 Is there a provision in the institution to provide seed money to the faculty for research? If so, specify the amount disbursed and the percentage of the faculty that has availed the facility in the last four years?

- Yes, the institution provides seed money to the faculty for research and the details of last four years are as follows:
- The institute has also approved research grants for 14 proposals (total requirement Rs. 27 lakhs) submitted by faculty members, of which three have been issued sanction letters.
- The institution also reimburses the registration fees of faculty who attend seminars and conferences.

B M S INSTITUTE OF TECHNOLOGY AND MANAGEMENT
PROJECT PROPOSALS RECOMMENDED FOR IN-HOUSE FUNDING

S No.	Project Title	Name	Dept.	Original Value	Revised Cost	BMSIT Cost
1	Design and Development of rotation and scale invariant 3D models for efficient representation and accurate classification of human faces.	Srivani and Dr. Thippeswamy G	C S E	350000	140000	120000
2	Identification and classification of medicinal plants/leaves using pattern recognition and image processing techniques	Dr. Thippeswamy G, Vishaka Yadav	CSE	320000	230000	134000
3	Remote health monitoring system	Mrs. S. K. Pushpa, Ambika, Dr. Thungamani	ISE	260000	69000	69000
4	Strength and inelastic property characterization of concrete and masonry using digital image correlation technique	Mr. Manish, Dr. Arvind H Bhashyam	Civil	390000	240000	220000
5	Double combat system-prediction of floods and droughts	Mr. Anil Kumar D S	ECE	200000	75000	75000

6	Brain computer interface system for applications in assistive technologies	Mr. Saneesh Cleatus T, Vidya Devi	ECE	249500	177500	167000
7	Performance analysis of adaptive beam forming techniques for smart antennas	Mr Banuprakash R and Ganapathi Hebbar	TCE	240000	240000	30000
8	Design and development of efficient algorithm for transform based image compression	Mrs. Surekha Gondkar	TCE	247000	247000	37000
9	Development and Studies on zinc-aluminum alloy based composites	Mr. O Gurumoorthy, Dr. N Suresh	ME	300000	330000	300000
10	Design and fabrication of special purpose machine for measuring various parameters of permanent magnet eddy current braking system	Mr G L Ananthakrishna, Dr K M Sathish Kumar	ME	250000	250000	200000
11	Design and development of project based educational autonomous two wheel robot	Dr. Narapareddy Ramarao, Mr Kattimani	EEE	200000	150000	150000
12	Preparation of innovative nano-structured thin films as photo -anode material for solid state dye-sensitized solar cells	Daraukaprasad B	Physics	297000	297000	297000
13	Synthesis and characterization of magnetically recoverable nano-material for the purification of water	Bincy Rose Verghese, Dr B E Ramachandran	Chemistry	180000	180000	180000
14	Boundary layer flows and heat transfer in viscoelastic	Dr. Annamma Abraham, Dr. Joji Joseph, Srilakshmi	Maths	125000	125000	0
				3608500	2750500	1979000

3.2.3 What are the financial provisions made available to support student research projects by students?

- The institute has established state-of-the-art laboratories and provides the necessary supplies and consumables to facilitate student research projects under the supervision of faculty members.
- Management also has funded selected student projects, especially when they have innovative content and the external support was hard to come by. For example, an amount of Rs.1.25lakhs was provided to a student project 'Eco-Cart' by the management in the year 2015.
- E-journals needed to support research project work are procured from AICTE consortium/VTU consortium. Financial allocations are also made for library up-gradation to purchase reference books and obtain institutional memberships to external libraries, INFLIBNET, etc.
- To participate in EcoKart2017 racing event, BMSIT&M has sanctioned an amount of Rs. 2,00,000/-. This amount will be utilized to design and fabricate electric powered EcoKart

3.2.4 How does the various departments/units/staff of the institute interact in undertaking inter-disciplinary research? Cite examples of successful endeavours and challenges faced in organizing interdisciplinary research.

A new initiative called 'Gnanavardhan' has been realized wherein all senior professors and HODs interact on a technical/research topic presented by one of them for about 90 minutes (once in a week). These presentations are per the pre-planned schedule. This has sparked a lot of interdisciplinary thinking to approach a technical problem.

Different departments have collaborated to take the advantage of research expertise of individuals and some successful examples are as follows. The list extends the collaborative research work leading to award of Ph.D. degrees.

Sl. No.	Name of the Department	Name of faculty/student	Topic of research	Name the department with which inter-disciplinary research is carried out (ex: Civil, Mech)
1	Computer Science Engineering	Dr. Thippeswamy G. And Mrs.Vidya	Brain Computer Interface for the Detection of Human Emotions	Electronics and Communication Engineering
2	Chemistry	Dr. C. Kavitha (Scientist)	Nanomaterials, Raman spectroscopy	Civil, Mech, CS, Math, Physics

Some of the challenges faced in promoting interdisciplinary research activities are:
- Time constraints

- Mismatch in the work schedules of collaborating researchers.

3.2.5 How does the institution ensure optimal use of various equipment and research facilities of the institution by its staff and students?

- During practical classes, students are encouraged to conduct experiments individually instead of group so that each student can understand/operate the equipment.
- Sharing of the available equipment is by different departments is also in practice.
- Revision of practical exercises is done by students after the term days are over, but before the examinations start.
- Software development cell of the institute utilizes various hardware and software resources available.
- Students use the laboratory equipment to carry out their projects and preparing reports for submission.
- Staff members use the laboratory facilities for their research experiments and publication of findings.
- Laboratories like advanced materials laboratory extend services to external users also.
- Often the computer labs are also utilised by agencies like CRPF, COMEDK, KPIT and various companies to conduct online tests.

3.2.6 Has the institution received any special grants or finances from the industry or other beneficiary agency for developing research facility? If "yes" give details.

- Yes, the institution has received special grants/finances from the industry and other beneficiary agencies for developing research facilities in the institute and the details are as listed in the following table:

Sl. No.	Name of the Dept.	Name of the Funding Agency	Year of sanction
1	Mechanical Engineering	VTU-Research Grant Scheme	2010
2		Venjay Systems, Bengaluru: PLC functional kit has been procured and put to use for the purpose of research. Few final year UG projects have been executed through this.	2012-14
3	Electrical and Electronics Engineering	Naval Research Board: COMSOL Multiphysics software has been procured and put to use for research purpose. Final year students have used this software to execute UG projects and also have published research papers in Journals.	2014-15

4	Information Science Engineering	NVidia Jetson (tk1 kit) from NVIDIA	2013-14
5	Chemistry	DST-Science & Engineering Research Board (SERB)	2014
6	Physics	DST-Science & Engineering Research Board (SERB)	2014
		VGST, Karnataka Govt. under the scheme "SMYSR Programme"	

3.2.7 Enumerate the support provided to the faculty in securing research funds from various funding agencies, industry and other organisations. Provide details of on-going and completed projects and grants received during the last four years.

- The institute has an active Research Council comprising of the senior faculty member as Dean (Research) and faculty members with active research background and Doctorates. The committee collects details regarding the research grants available for various sources and provides the same to the faculty members.
- The institute has instituted a policy to provide seed money to researchers to initiate activities necessary to prepare research proposals to seek funding from external agencies.
- Facilitate/support interactions of the faculty-researcher with external renowned researchers and scientists.
- The submission of accounts and utilization certificates are facilitated smoothly on time.
- Flexi-time policy is being enunciated to help researchers to carry out research.

List of on-going and completed research projects in the institute during the last four years are shown in the section 3.3.3.

3.3 RESEARCH FACILITIES

3.3.1 What are the research facilities available to the students and research scholars within the campus?

- Institution has University-approved research centres in Mechanical Engineering, Electrical& Electronics Engineering, Electronics & Communication Engineering, Computer Science Engineering and Basic Sciences. The institute has applied (in March 2016-17) to the university seeking recognition of the remaining departments also as research centres. All these departments meet the norms specified by the University.
- More than 75 research scholars are pursuing doctoral research in these centres. About 28 of them are BMSIT&M faculty and the rest are from other colleges/organizations.

- A new Research Centre has been created to coordinate the academic and research programmes. A unit called Centre for Industry Partnership, Research and Consultancy (CIPRAC) is taking care of sponsored research programmes.
- A qualified and accomplished researcher has been appointed as the Dean (Research).
- Three clusters of research have been mooted to focus research efforts of the scholars in the institute. They are Nano science and technology, Signal processing and big data analysis and design and analysis of heavy systems.
- Advanced materials research laboratory has been established at a cost of Rs. 65 lakhs, a part of DST-SERB project, where Nano science research is being carried out.
- A budget of Rs. 20 lakhs has been earmarked and is being spent on establishing a research centre for signal processing and data analysis.
- Institute has a well stacked central library supported by individual departmental libraries.
- BMSIT&M Library is housed in a spacious building, covering a carpet area of 1492 sq. m. It has comprehensive collection of books in engineering and allied subjects catering to the needs of faculties, research scholars, staff and students.

  - ❖ Total No. volumes (for issue)   :   36215
  - ❖ Total No. volumes (for reference) :   7986
  - ❖ Total No of e-Journals   :   07 packages
  - ❖ Total No of e-books   :   457

- Institution has a Digital library. Digital Library is facilitated with,
  - ❖ Exclusive IBM M4 server and 30 number i3 systems.
  - ❖ Dspace (Institutional Repository), which helps faculties to upload articles published by them, class notes etc.,
  - ❖ The library subscribes to Print and Online journals as per AICTE norms right from the beginning. Now, the library has joined VTU Consortium for e-Resources and subscribes to e-journals and e-Books from prominent publishers like ASME, ASCE, IEEE, Springer and Elsevier.
- The library has membership with Developing Library Network (DELNET), New Delhi for resource sharing. On demand from the faculty and students, books or journals that are not available in the institute's library are procured from DELNET on charging actual cost incurred such procurement and returning the items.
- The Online Public Access Catalogue (OPAC) provided rich information to the users to access
  - ❖ Subscribed e-Journals / Open Access e-Journals
  - ❖ Subscribed e-Books / Open Access e-Books

❖ Online News papers
❖ NPTEL videos and Web courses both Online and Offline.

- Library reference section is stocked with rich collection of Treatises, Monographs, Handbooks, Year Books, General and Subject Encyclopedia, Dictionaries, etc., in Engineering and Allied subjects.
- Further complete details of library/information resources available to researchers are given in section 3.3.5.
- Seminar hall is equipped with multimedia systems.
- Wi-Fi connection within the Institution campus and in hostel premises.
- Almost all computing systems in the institute are modern with high end capability and are connected to the intra-net and internet.
- 24x7 power supply is ensured in the campus.
- The following software resources are available in various departments for supporting students' research work.

Sl. No.	Department Name	Name of the software	No. of License
1	Electronics & Communication Engineering	Lab view	50 /Robo kit 01
		ANSYS software (High Frequency Simulation Software)	05
		Mat lab	30
		CADENCE Software	20
2	Computer Science Engineering/Information Science and Engineering	1.SYSTEM SOFTWARES: (i) Desktop OS:-Windows XP, Windows VISTA, Windows 7, Windows 8, Windows 10. (ii) Server OS: Windows server2003, Windows server2008, Windows 2012.	Institutional level
		2. Application Software:- i) Oracle ii) Visual Studio.net6 iii) Ms-Office 2003,2007,2010,2013 iv) Turbo C	30 Institute Level
3	Mechanical Engineering	NISA –FEA software	Unlimited
		AutoCAD-2004	05
		Autodesk Inventor Proffessional8.0	05
		Solid Edge v19	60
		Ansys11.0-FEA software	05
		CADEM-CAM software	18
		Hypermesh & Raddious	01
		Ansys15.0-FEA software	25
		ABACUS-CFD software	05
		Hypermesh	05
		CATIA v6	15
4	Civil Engineering	AutoCADD	300
		E-Survey	10
		STAAD	205

5	Masters in Computer Application	Rational Software Architect	30
		Oracle	30
6	Chemistry	RSIQ-Raman spectroscopy software	1
7	Mathematics	Matlab	1
		Mathematika	1
		WinEdit	1
8	Electrical & Electronics Engineering	Mi-Power	5
9	Telecommunication Engineering	---	---
10	ISE	---	---
11	Physics	---	---

3.3.2 What are the institutional strategies for planning, upgrading and creating infrastructural facilities to meet the needs of researchers especially in the new and emerging areas of research?

The institutional strategies for planning, upgrading and creating infrastructural facilities to meet the needs of researchers especially in the new and emerging areas of research are:

- BMS Institute of Technology and Management adopt different strategies to promote, create and upgrade the research culture in the campus. Three fold approaches are used for this purpose.
    i) Faculty with potential for guiding research are identified and encouraged. More than 75 research scholars are pursuing doctoral research in these centres. About 28 of them are BMSIT&M faculty and the rest are from other colleges/organizations.
    ii) Research activity in emerging areas of science and technology are being encouraged in all departments. Institution has University-approved research centres in Mechanical Engineering, Electrical& Electronics Engineering, Electronics & Communication Engineering, Computer Science Engineering and Basic Sciences. The institute has now applied to the university seeking recognition of the remaining departments also as research centres. All these departments meet the norms specified by the University.
    iii) MoUs are signed with industries/research organizations for working on thrust areas of research. A unit called Centre for Industry Partnership, Research and Consultancy (CIPRAC) is taking care of sponsored research programmes. The institution is encouraging its faculty members to seek financial assistance from the government and other funding agencies which would help to improve the existing infrastructure. Also, every year the institution's Management provides budget to upgrade the infrastructural and research facility.

- Three clusters of research have been mooted to focus research efforts of the scholars in the institute. They are Nano science and technology, Signal processing and big data analysis and design and analysis of heavy systems. Faculty members depending on their specialisation and areas of interest are associated with these clusters. Efforts are being made to create right kind of ambience for research.
  - i) Advanced materials research laboratory has been established at a cost of Rs. 65 lakhs, a part of DST-SERB project, where nanoscience research is being carried out.
  - ii) A budget of Rs. 20 lakhs has been earmarked and is being spent on establishing a research centre for signal processing and data analysis.
  - iii) The cluster on heavy systems research is taking shape.
- A proposal to provide seed money for a faculty member to initiate research activities of his interest has also received in-principle approved by the Management.
- A policy on flexible time for researching faculty is being evolved.
- The institution regularly updates its strategic plans for future which is presented to the management for periodic review. It includes guidelines and action plan for the development of research/infrastructural facilities.
- The college has institutional membership to libraries of premier institutes like Indian Institute of Science (IISc), Raman Research Institute (RRI) and National Aerospace Laboratories (NAL).

3.3.3 Has the institution received any special grants or finances from the industry or other beneficiary agency for developing research facilities? If "yes", what are the instruments/ facilities created during the last four years?

Yes. The institute has received grants from leading funding agencies. Details of the same for the past four years are furnished below.

Sl. No.	Department	Name of the Faculty (PI/Co-PI)	Project Title	Period of the project	Funding Agency	Amount Sanctioned	Remarks	Instruments /facilities created
1	Electrical and Electronics Engineering	Mrs. Suma Umesh : PI Dr. T.C. Balachandra : Co-PI	Simulation of Micro Gas Sensor to detect SF6 leakage and its constituent gases under partial discharge in a GIS	2014-2105	Naval Research Board (NRB)	Rs. 5.25 Lakhs	On Going	COMSOS MultiPhysics software procured

2		Dr. T.C. Balachandra : PI	Estimation of Electrical Conductivity of Metals	2012-2013	Karnataka state Council for Science and Technology	Rs. 5000/-	Completed	
3	Electronics and Communication Engineering	Dr. Hariprasad S A:PI Krishnananda: Co-PI Anil Kumar D : Co-PI	Neural Network based Predictive Controller for Ship Navigation	2014-2015	Naval Research Board (NRB)	Rs. 19.92 Lakhs	Sanctioned	To be created
4	Mechanical Engineering	Dr. S.Venkateshwaran (PI) Mr T. N. Praveen (Co-PI)	Development and comprehensive characterization of aluminium ceramic microsphere foamed composite	2011-14	VTU, Karnataka	Rs. 6 Lakhs	Completed	
5	Telecommunication Engineering	Banuprakash R. (PI) Mr H. Ganapathy Hebbar	Performance Analysis of Beam turning techniques for Smart antennas	2015-17	BMSIT&M (in-house)	Rs.37000 /-	On going	To be created
		Prof. Surekha R Gondkar	Design & Development of efficient algorithm for transform based image compression	2015-17	BMSIT&M (in-house)	Rs.37000 /-	On going	To be created

6	Physics	Dr. Dhananjaya N	Plant latex mediated green combustion synthesis of rare earthdopedna no-aluminates: Study of structural and photolumines cent properties	2014-15	DST-Scienc e & Engine ering Resear ch Board (SERB)	Rs. 21.60 Lakhs	On going	1. High Temper ature Furnac e 2. Fourier Transfo rm Spectro meter (Yet to be procure d)
			Structural and it's luminescence properties of rare earth activated Oxyhalides for display and dosimetric applications	2014-15	VGST, Karnat aka Govt. under the schem e "SMY SR Progra mme"	Rs. 4 Lakhs	On going	1. High speed centrifu ge machin e 2. Hot air Oven 3. Magnet ic Stirrer 4.Electr ical Balanc e 5.Pellet izer 6. Person al Compu ter with printer
7	Chemistr y	Dr. C. Kavitha (Scientist)	Graphene/Gra phene oxide-nano particle hybrid structures for SERS based optical sensors	2014-17	DST-Scienc e & Engine ering Resear ch Board (SERB)	Rs. 32 Lakhs	On going	Fourier Transfo rm, Infrare d instrum ent and Raman spectro scopy

| 8 | Mathema tics | Dr.Karabi Sikdar | Study and development of computationa l methods on finite buffer discrete time queues with *N* threshold policy | 2014-17 | DST | 9.38L | On Going | |

3.3.4 What are the research facilities made available to the students and research scholars outside the campus / other research laboratories?

The research facilities made available to the students and research scholars outside the campus / other research laboratories are as follows:

- The faculty members who have registered for Ph.D. programme in institutions like NIT, IIT and various other research laboratories like NAL, GTTC, Raman institute of Physics, are encouraged to use the research facilities available there.
- Institute has signed up MoU with research organizations like National Design Research Forum, KPIT, Texas Instruments, Valluri Technology Accelerators, Steinbeis (India) Ltd. to facilitate the flow of research projects to the institute.
- Institute encourages students to participate in design competitions/exhibitions
- Accomplished researchers/scientists from renowned organizations are invited to interact with our faculty and students.
- Encouraging faculty members to present research papers in Conferences/Journals. All are provided a remote access to IEEE X-plorer.
- Institute very frequently organises industrial visits to students (faculty members also accompany them) so that they are exposed to the research challenges in industry.
- It is a policy of the institute that every faculty member should undergo industrial internship of a minimum of 10 days in a year. The institute offers to provide TA/DA for this purpose. This has helped them to know the kind of research facilities/infrastructure available there so that the institute can forge productive linkage with that company for carrying out research. The faculty internship details are as shown in the following table.

Sl. No.	Department	Number of the Faculty members	Number of the companies
1	Electronics and Communication Engineering	22	13

2	Computer Science Engineering	22	16
3	Mechanical Engineering	16	10
4	Telecommunication Engineering	13	7
5	Information Science Engineering	10	6
6	Civil Engineering	7	7
7	Master in Computer Application	9	7
8	Electrical and Electronics Engineering	11	7
9	Chemistry	3	2
10	Physics	6	5
11	Mathematics	8	3

3.3.5 Provide details on the library/information resource centre or any other facilities available specifically for the researchers?

The Details of Library/information resources and other facilities available are as follows:

1. Library infrastructure and resources:

Carpet area of library	:	1492 sq. m
Reading Space	:	640 sq. m
Total No. titles	:	11696
Total No. of volumes (for issue)	:	36215
Total No. of volumes (for reference)	:	7986
Total no. E-Journals	:	7 Packages
Number of books for SC/ST Students	:	361

2. List of e-Journal packages available

S. No.	E-Journals packages	No. of Titles
1.	IEEE & IEL online	Journals: 273 Conf. Proceedings: 6514 Standards: 3043
2.	Springer (CSE, ECE, MECH, EEE, MATHS, PHY & CHE)	680
3.	ASCE	35
4.	J-Gate Engineering & Technology	Free Full text: 4200 Indexed: 7800
5.	K-Nimbus	12000
6.	Elsevier (Science Direct)	275
7.	ASTM	Standards Annuals etc.,: 1700 Journal articles13000

3. Total No. of e-books

S. No.	e-Books	No. of e-books
1	Cambridge University Press (2009)(Perpetual access)	94
2	McGraw-Hill Access Engineering (2015-16)	363
Total		**457**

4. Total number of Newspapers and Magazines subscribed:

No. of Newspapers	Gen. Magazines	Tech. Magazines	Print Journals
11	17	14	132

5. Additional Information:

Number of library staff with degree in Library	8
Management Computerization for search	Available (http://100.127.2.254)
Indexing, issue/ return records barcoding used	Available
Provide other information, if any	OPAC under intranet
Resource sharing networks/consortia	DELNET, VTU consortium
Reprographic facilities are provided in library	Available
Digital Library	30 number i3 systems and a dedicated server.
The library has internet connectivity via Broad Band with a band width of 4 mbps and 1 mbps to librarian and staff and students respectively. The institution is provided with a total bandwidth of 60 mbps Internet facility.	

3.3.6 What are the collaborative research facilities developed / created by the research institutes in the college? For ex. Laboratories, library, instruments, computers, new technology etc.

The collaborative research facilities developed/created by the research institutes in the college are:

Department of Electronics and communication has established an industry attached laboratory with M/s Texas Instruments. Other research facilities are listed below.

SL No	Department	Items Description	Quantity
1	Electronics & Communication Engineering	MATLAB R2015b	users Licence 30 no.
2	Center for Advanced Material Research-Established jointly by Dept. of Chemistry and Dept. of Physics. The collaborating agencies are DST & VGST.	Muffle furnaces	3
		Hot-Air Oven	2
		Fume hood	1
		Remi hot plate with magnetic stirrer	4
		Microelectronic Balance	2
		Ultrasonicator	1
		Ultra Centrifuge Machine	1
		Pelletizer	1
		Computers with Printer cum scanner	2

		Raman spectrometer	1
		FT-IR (Yet to come)	1
		LCD Projector	1
3	Master in Computer Application	Department Library	200 books
		R&D Labs	2
4	Depts. of E&CE, TCE and EE&E	New R&D lab	Facilities worth Rs. 20 Lakhs are being created.

3.4 Research Publications and Awards

3.4.1 Highlight the major research achievements of the staff and students in terms of

- Patents obtained and filed (process and product)
- Original research contributing to product improvement
- Research studies or surveys benefiting the community or improving the services
- Research inputs contributing to new initiatives and social development

Patents obtained and filed:

Although the college has not obtained patents, it has faculty members on regular roll who have a large number of patents to their credit. For instance, the Dean (Research) has many national and international patents to his credit. The HOD of Chemistry has 2 patents granted to him. Other faculty members have the researchers are working towards filing patents

Patent summary of Dean Research: **Dr. Ravi (Ravinder) Prakash G**

PATENT OBTAINED:

Networks (2011 to 2015)

1. Patent 8,036,246, Packet coalescing, (with Makineni; Srihari, Minturn; Dave, Sen; Sujoy, Newell; Donald, Zhao; Li), October 11, 2011.
2. Patent 8,160,532, Community interaction using mobile communication devices, (with Vishwanathan; Kumar K., Sundar; Rangamani, Raman; Kumar, Hariharasubramani; Girish), April 17, 2012
3. Patent 8,233,894, System and method for sending mobile media content to another mobile device user, (with Vishwanathan; Kumar K., Sundar; Rangamani, Goldstein; James A.), July 31, 2012
4. Patent 8,725,777, Object recognition and localization service using RFID, (with Deking; Alois Ludwig, Pappu; Ravikanth Srinivasa), May 13, 2014 [radio-frequency identification (RFID)]

5. Patent 8,830,921, Channel assignment for wireless access networks, (with Jetcheva; Jorjeta, Gupta; Vinay, Kanodia; Sachin, Natarajan; Mohan), September 9, 2014.
6. Patent 8,868,020, Communityinteraction using mobile communication evices, (with Vishwanathan; Kumar K., Sundar; Rangamani, Raman; Kumar, Hariharasubramani; Girish), October 21, 2014
7. Patent 9,058,632, Community interaction using mobile communication devices, (with Vishwanathan; Kumar K., Sundar; Rangamani, Raman; Kumar, Hariharasubramani; Girish), June 16, 2015
8. Patent 9,129,248, Kinematic asset management, (with Reynolds; James C., Dennis; Gary), September 8, 2015
9. Patent 9,141,958, Method for providing data to a user, (with no co-author), September 22, 2015
10. Patent 9,240,947, Effective bandwidth path metric and path computation method for wireless mesh networks with wired links, (with Bellur; Bhargav Ramachandra, Singhal; Amar, Jetcheva; Jorjeta Gueorguieva), January 19, 2016

Imaging Science (2011 to 2015)

1. Patent: 8,526,751, "Managing image storage size", September 3, 2013 (with Mitchell; Joan LaVerne)
2. Patent: 8,136,721, "Enhanced check code line image capture for improved OCR", March 20, 2012 (with Journey; Jeffrey E. and Rohe; Clair F.).
3. Patent: 8,023,719, "MICR reader using phase angle extracted from frequency domain analysis", September 20, 2011 (with Zacharias; Jerry J.).
4. Patent: 7,983,984, "Electronic endorsement of check images", July 19, 2011 (with Moon; Rodney G. and Rector; Gerald C.)
5. Patent: 7,961,930, "Recursive image filtering", June 14, 2011 (no co-author)
6. Patent: 7,957,032, "Defect and maintenance detection for image capture device", June 7, 2011 (No co-author)
7. Patent: 7,956,873, "Image rotation with substantially no aliasing error", June 7, 2011 (with Rohe; Clair Frederick, and Shirley; Robert E.)
8. Patent: 7,952,775, "Grey scale image cleaning system and method", May 31, 2011 (with Kruppa; Robert W., Moon; Rodney G. and Sathe; Madhura).
9. Patent: 7,885,474, "Solution for detecting a streak in a compressed grey scale image", February 8, 2011 (with Sathe; Madhura)

CMOS Circuit Design, Layout (2011 to 2015)

1. Patent 7,867,845, Transistor gate forming methods and transistor structures, (with Tang; Sanh D., Haller; Gordon A., Raghu; Prashant), January 11, 2011.
2. Patent 7,977,236, Method of forming a transistor gate of a recessed access device, method of forming a recessed transistor gate and a non-recessed transistor gate, and method of fabricating an integrated circuit, (with Nejad; Hasan, Figura; Thomas A., Haller; Gordon A., Meldrim; John Mark, Harnish; Justin), July 12, 2011.
3. Patent 8,089,128, Transistor gate forming methods and integrated circuits, (with Ramaswamy; D. V. Nirmal), January 3, 2012.
4. Patent 8,202,806, Method to avoid threshold voltage shift in thicker dielectric films, (with Thakur; Randhir P.S., Rhodes; Howard), June 19, 2012.
5. Patent 8,349,687, Transistor gate forming methods and transistor structures, (with Tang; Sanh D., Haller; Gordon A., Raghu; Prashant), January 8, 2013.
6. Patent 8,420,170, Methods of forming glass on a substrate, (with Sandhu; Gurtej S.), April 16, 2013.
7. Patent 9,076,888, Silicided recessed silicon, (with Nejad; Hasan, Figura; Thomas A., Haller; Gordon A., Meldrim; John Mark, Harnish; Justin), July 7, 2015.

PATENT FILED:

Data Science (2011 to 2015)
1. Patent Application: 20140222823A1, "Method and Apparatus for Extracting Journey of Life Attributes of A User from User Interactions", August 7, 2014 (with Hegde; D Adusumilli; K Mitra; Kulkarni; S R)
2. Patent Application: 20140222503A1, "Dynamic Prediction of Online Shopper's Intent Using a Combination of Prediction Models", August 7, 2014 (with Vijayaraghavan; R; Adusumilli; K M; Kulkarni; S R)

* Original research contributing to product improvement:
The major contributions in R&D activities have led to original research contribution and product development. The table below gives the list of projects undertaken.

Sl. No.	Name of the Department	Name of the Faculty	Title of the project	Academic Year
1	Computer Science Engineering	Mrs.Mari Kirthima, Mrs. Vidya R, Mrs. Shruthi. J	Parent Web portal	2014-15
		Mr. Harinath	Attendance Monitoring System	2014-15

2	Chemistry	Dr. C. Kavitha	Graphene/Graphene oxide-nano particle hybrid structures for SERS based optical sensors	2014-15
3	Electrical and Electronics Engineering	Mrs Suma umesh	Simulation of Micro Gas Sensor to detect SF6 leakage and its constituent gases under partial discharge in a GIS	2014-15
4	Mechanical Engineering	Dr. S Venkateswaran	Development and comprehensive characterization of aluminium ceramic microsphere foamed composite	2011-14
5	Electronics and Communication Engineering	Dr. Hariprasad	Neural Network based Predictive Controller for Ship Navigation	2014-15

* Research studies or surveys benefiting the community or improving the services

The table shown below contains the list of projects have been developed by keeping community interest.

Sl. No.	Department	Title of the project	Area of the project Healthcare or security related
1	Electronics and Communication Engineering	Heart murmur Detection.	Health Care
2		Novel Approach on cancer detection – using GSP.	Health Care
3		Foetal Electrocardiogram Extraction from maternal cutaneous recordings using Statistical signal processing.	Health care
4		Neural Network based automated system for classification of slide images for breast cancer diagnosis	Health care
5		Autonomous intravenous infusion system & health monitoring.	Health Care
6		Feature Extraction and Classification of EEG Signals for BCI Applications	Health Care
7		Detection of Alzheimer's Disease Using EEG Signals.	Health Care
8		Detection of Tumour using Image Processing.	Health Care
9	Electrical and Electronics Engineering	Statistical Model based Image Segmentation	Health Care
10	Information Science Engineering	Health Care Applications and Security Issues	Health Care

*Research inputs contributing to new initiatives and social development

Sl. No.	Department	Title of the project	Area of the project Healthcare or security related
1	Electronics and Communication Engineering	Neural Network based automated system for classification of slide images for breast cancer diagnosis	Health care
2		Eye Voice: Eye controlled assistive technology for ALS patients	
3		Autonomous intravenous infusion system & health monitoring.	

3.4.2 Does the Institute publish or partner in publication of research journal(s)? If "yes", indicate the composition of the editorial board, publication policies and whether such publication is listed in any international database?

Institution has launched online portal to collect Final Year student project abstract of both UG and PG. A publication called TechSaaransh is brought out containing the abstracts of final year students' projects.

3.4.3 Give details of publications by the faculty and students:
*Publication per faculty
*Number of papers published by faculty and students in peer reviewed journals (national / international)
*Number of publications listed in International Database (for E.g.: Web of Science, Scopus, And Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)
*Monographs
*Chapter in Books
*Books Edited
*Books with ISBN/ISSN numbers with details of publishers
*Citation Index
*SNIP
*SJR
*Impact factor
*h-index

Publication Department wise

Sl. No.	Department	Publication Count	Publication per faculty
1	Electronics and Communication Engineering	146	1.6
2	Computer Science Engineering	135	1.4
3	Mechanical Engineering	59	0.7
4	Electrical and Electronics Engineering	51	0.9

5	Telecommunication Engineering	63	1.1
6	Information Science Engineering	111	2.3
7	Civil Engineering	25	0.6
8	Masters in Computer Applications	90	1.9
9	Mathematics	24	0.8
10	Physics	80	3.3
11	Chemistry	16	0.7

Number of papers published by faculty and students in peer reviewed journals (national / international)

Department	No of papers	National	International
Electronics & Communication Engineering	25		25
Electrical and Electronics Engineering	51		51
Information Science Engineering	85	8	77
Civil Engineering	05		05
Telecommunication Engineering	3		3
Masters in Computer Applications	31	5	26
Basic Science	106	12	107

*Number of publications listed in International Database (for E.g.: Web of Science, Scopus, And Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)

Department	No of papers
Electronics & Communication Engineering	5
Computer Science Engineering	13
Electrical and Electronics Engineering	1
Mechanical Engineering	4
Information Science Engineering	16
Telecommunication Engineering	3
Masters in Computer Applications	30
Basic Science	94

*Chapter in Books
- "Analytics in Operations in Supply Chain Management", by Mr. Nagabhushan S V, I.K. International Publishing House Pvt. Ltd., ISBN:978-93-8458-894-6
- E-Learning resource development for course Management Science –I under NPTEL by Dr. Mohanbabu G N.

*Books Edited

Sl. No.	Department	Faculty Name	Title of the book	Publisher Details
1	Mechanical Engineering	Sundaresh S	Elements Of Mechanical Engineering	Subhash Publications Avenue Road, Bengaluru
2	Masters in Computer Applications	Shivakumara T	Object oriented programming using C++	Thakur Publishers
3			Advanced Java programming	
4			Programming Using C# & .NET	
5		Nagabhushan S V	PROGRAMMING USIN JAVA	
7	Information Science Engineering	Dr. Manjunath T N	Managing and Processing Big Data in Cloud Computing	IGI Global, USA
			Need of Hadoop and Map reduce for Processing and Managing Big Data	IGI Global, UK

*Books with ISBN/ISSN numbers with details of publishers

Sl. No.	Department	Faculty Name	Title of the book	Publisher Details	ISBN No
1	Mechanical Engineering	Sundaresh S	Elements Of Mechanical Engineering 2nd Edition 2014 1st Edition 2010	Subhash Publications Avenue Road, Bengaluru	978-93-83214-49-5
2		Dr. K. M. Sathishkumar	Computer Integrated Manufacturing	Sudha Publications	
3	Masters in Computer Applications	Shivakumara T	Object oriented programming using C++	Thakur publishers	978-93-83922-23-9
4			Advanced Java programming		978-93-5163-415-7
5			Programming Using C# & .NET		978-93-5163-609-0
6		Nagabhushan S V	Programming using Java		978-89-3516-311-25
7	Information Science Engineering	Dr. Manjunath T N	Managing and Processing Big Data in Cloud Computing	IGI Global, USA	
8	ics and Communication Enginee	Dr. M. C. Hanumantharaju	VLSI Circuits	Star Tech Education Publishers, 2006	

9			Digital System Design Using VHDL, Second Edition,	Star Tech Education Publishers, 2005.	
10	Telecommunication Engineering	Prof. Ganapathy Hebbar .H	Introduction to Digital switching Systems	Elsevier Publications	978-93-5107-0290
11			Optical Fiber Communication	Elsevier Publications	978-93-5107-095-5

*Impact factor

Department	Range
ECE	1.3
CSE	3
EEE	1 to 4.85
MECH	0.6 to 0.8
ISE	1 to 6
TCE	2.47
CIVIL	--
MCA	1.213
Basic Science	Physics : 1.5 to 2.5 Chemistry: 1.8 to 3.5 Maths : --

*h-index

Department	Range
ECE	3 to 5
CSE	2 to 30
EEE	1
MECH	2
ISE	2 to 5
TCE	1 to 3
CIVIL	
MCA	5
Basic Science	up to11

3.4.4 Provide details (if any) of
*Research awards received by the faculty
*Recognition received by the faculty from reputed professional bodies and agencies, nationally and internationally
*Incentives given to faculty for receiving state, national and international recognitions for research contributions.

Research awards received by the faculty details are:

Sl. No.	Department Name	Name of the Faculty	Award Details	Name of the agency/ body	Received Date
1	Chemistry	Dr. C. Kavitha	Start Up Research – Young Scientist	DST-SERB Govt. of India	8.08.2014
2	Physics	Dr. Dhananjaya N	Summer research fellow-2014	Indian Academy of Science	31.07. 2014
3.			Best Oral Presentation award at International conference on Recent Advances in Materials Science (RAMS-2012), held on at the Atria Hotel, Palace Road. Bengaluru	Karnataka State Higher Education Council	6.08.2012 to 8.08.2012
4.			Best Poster award at National Conference on Recent Advances in Material Science	MSRIT, Bengaluru	12.12.2011 to 14.12.2012

Recognition received by the faculty from reputed professional bodies and agencies, nationally and internationally

Sl. No	Department Name	Name of the Faculty	Recognition Details	Name of the agency / Professional body	Received Date
1	Electronics and Communication	Dr. Hanumanth Raju	Senior Educator & Scholar Award	National Foundation for Entrepreneurship Development (NFED), India	5th September, 2015
2	Electrical and Electronics Engineering	Dr. T. C. Balachandra	Research Associateship	CSIR	1990-1992

3.5 Consultancy

3.5.1 Give details of the systems and strategies for establishing institute-industry interface?

The institution has established several functional units to enhance and sustain its industry interface activities (as approved by the Board of Governors). Their roles are as given below.

- Centre for Industry Partnership, Research and Consultancy (CIPRAC) to interface with industry and coordinate for signing MoUs, monitoring industry sponsored projects, and managing all transactions relating to them.

- Student Industry Internship Cell: The cell encourages students to undergo industry internships during their vacation period. The cell coordinates across all the departments and facilitates applying for and securing internships for students. Interns submit their internship reports at the end of their internships to this cell.
- Faculty Industry Internship Cell: The institute has a policy that all faculty members will undergo at least 10 days of internship in industry in a year. The institute offers to provide TA/DA for this. The coordinator of this cell monitors the industry internship undergone by the faculty members. Reports are submitted by the faculty interns to this cell.
- Students' Project Assessment and Review Committee (SPARC): The committee oversees planning, scheduling and time-phased execution of all final year students' projects, industry-based or otherwise. This ensures on-time completion of all projects and quality enhancement. It also facilitates interdisciplinary approach to solve industrial problems.
- Training and Placement Cell (TPC): Undertakes all activities to train students in professional skills and get them industry-ready. It gathers inputs from industry recruiters and passes it on to various departments so that they can train their students in those areas. It engages industry practitioners and organizes Start-up fests, Employers' days, Skill-oriented training programmes. It arranges alumni interaction programs too. It provides information about higher studies and career opportunities. The cell conducts career counselling test, awareness programs, special guest lectures on different career options (Professional Course), and competitive exams related lectures, trainings etc. especially on GATE.
- Academic Research Centre (ARC): This centre monitors all activities of the research scholars registered in the institute for their Ph.D. and M.Sc. Engg. (by Research) programmes. It interfaces with industry, if required, to facilitate carrying out of research by the scholars.
- Incubation and Entrepreneurship Development Cell: Interfaces with Start-up companies and bring the experiences of those entrepreneurs to students. Conducts several events relating to business and invites judges from industry to evaluate them and help them develop entrepreneurship skills.
- Interdisciplinary teams of faculty members often visit companies of repute to initiate collaborative activities, e.g.: Volvo Constructions, Egpt Ltd, FANUC, K2 Technologies etc.
- The institute has submitted a formal proposal to establish an incubation facility in collaboration with M/S Valluri Technology Accelerators, under Government of India's Atal Innovation Mission.

Apart from all the above, all departments organize industrial visits and to arrange guest lectures by corporate leads.

3.5.2 What is the stated policy of the institution to promote consultancy? How is the available expertise advocated and publicized?

The institution has a consultancy policy to promote the consultancy (Appendix)

The unit CIPRAC has prepared a database of technical competencies of all faculty members and keeps updating it. The centre shares this information with the industries to find a match between the consultancy requirement of companies and the competencies available in the institute. For instance, the database has been shared with M/s Valluri Technology Accelerators, from which it will choose the faculty members to train human resource of government (responsible for managing smart cities) depending on the area of training required. The information contained in the database is also available on the institution's website for industry reference. Efforts are being made to collaborate with ISRO to work on its Bhuvan Asset Mapping project. The effort is to get consultancy from remote sensing centre, a part of ISRO, in the area of wireless sensor networks, software development and Bhuvan Asset Mapping etc.

3.5.3 How does the institution encourage the staff to utilize their expertise and available facilities for consultancy services?

The institution encourages the faculty members to utilize their expertise and available facilities for consultancy services as follows:

- The college encourages the staff to utilize their expertise for consultancy services by giving them access to resources like library, internet, reprography and administrative support.
- Special casual leaves are sanctioned for such occasions, based on the merit of the case.
- The consultancy policy provides for a just share of consultancy revenues to the expert undertaking consultancy.

3.5.4 List the broad areas and major consultancy services provided by the institution and the revenue generated during the last four years.

The broad areas and major consultancy services provided by the institution and the revenue generated during the last four years are listed in the following table:

S No	Broad Area	Consultancy activity	Department /faculty	Company	Year	Revenue Generated
1	Design of database	Database Optimization	Information Science Engineering	Microsoft Technologies	2014-15	75,000/-

2	Raman spectroscopy	Started	Chemistry Dr. C. Kavitha	BMSIT&M	2014-15	50,000/-
3	Civil Engineering	Latitude, Longitude and Height above MSL @ Devanahalli Industrial Park, Karnataka	Civil Engineering/ Dr. Aravind H Bhashyam	Shell India Markets(P)Ltd Bengaluru	2015-16	10,000/-
4.	Database	Database migration to business logic	Information Science Engineering	Micro Software Technologies, Bengaluru	2015-16	75,000/-

3.5.5 What is the policy of the institution in sharing the income generated through consultancy (staff involved: Institution) and its use for institutional development?

The institution policy in sharing the income generated through consultancy is to use for the institutional development and for procuring research equipment, consumables and researchers' travel expenses.

3.6 Extension Activities and Institutional Social Responsibility (ISR)

3.6.1 How does the institution promote institution-neighbourhood-community network and student engagement, contributing to good citizenship, service orientation and holistic development of students?

The institution promotes institution-neighbourhood-community network and student engagement, contributing to good citizenship, service orientation and holistic development of students in the following ways:
Institution has National Social Service (NSS) unit, Women empowerment cell and Eco Club etc.
They are involved in the following activities.
- Annual Blood donation camps
- "The Joy of Giving week": Donation of cloths to orphanage
- Teaching visually challenged kids
- NSS Volunteers camp
- Awareness of benefits of voting

The Women Empowerment Cell of BMSIT&M has done a lot of service, for the neighbourhood of Avalahalli village.

- The women were taught the reuse of plastic bottles. They were taught to make small furniture, decorative objects etc. This was conducted in 21st, 22nd, and 23rd September 2013.
- The rural women who had passed 10th Standard were taught to use computers. They were trained in the usage of MS Office and internet. These trainings were conducted free of cost for a period of one and a half month from Dec 2014 to Jan 2015.

Eco-Club of BMSIT&M has been constituted with the following Vision and Mission.

Vision Statement: Environmental sustenance by constant dissemination of ecological and environmental knowledge to the society at large

Mission Statement: Inducing informal and formal environmental awareness programmes by Keystone Students Environmental Education Training.

3.6.2 What is the Institutional mechanism to track students' involvement in various social movements / activities which promote citizenship roles?

- Recorded in the department reports etc.
- Recorded in institutional videos, publications etc.

The Institutional mechanism to track students' involvement in various social movements / activities which promote citizenship roles are as listed below:

Tracking mechanism:
For example NSS institutional coordinator maintains a list of all students who have participated in blood donation camp. Due permission from concerned authorities is sought to take students outside the campus. All the activities are planned and executed as per planned schedule. Photographs are also taken wherever necessary. A similar procedure is followed for other social activities.

i.   Annual Alumni Meet is conducted every year, in this meet, each department get an opportunity to interact with the alumni and social responsibilities undertaken by students are recorded.

ii. The students' social responsibilities are nurtured through NSS activities. Student involvement details are recorded by Institute NSS coordinator.

3.6.3 How does the institution solicit stakeholder perception on the overall performance and quality of the institution?

The institution solicits stakeholder perception on the overall performance and quality of the institution as follows:

- The stake holders are involved from the beginning from the formulation of the Vision Mission and objectives to its attainment.

- The major stake holders of the institution comprises of students, parents, teachers, alumni, employers, supporting staff and management.
- The Parent Teachers Meeting: This biannual meeting is a platform to get the parents aspirations of their wards and to solicit the same.
- Alumni Meet: It encourages alumni to visit the Institute and participate in academic processes.
- Proctor System: Through Proctor, Institution regularly informs the progress of ward to parents and appeals their participation for improvement of performance of students.
- Employers Meet, Road Show with Confederation of Indian Industry (CII) and Town Hall meet contribute enormously to the holistic development of our students.
- BOG Meeting: the BOG meetings held 4 times a year help to elicit the perceptions of stake holders like management, industry representatives, representatives of AICTE and Government.

3.6.4 & 3.6.5 How does the institution plan and organize its extension and outreach programmes? Providing the budgetary details for last four years, list the major extension and outreach programmes and their impact on the overall development of students
How does the institution promote the participation of students and faculty in extension activities including participation in NSS, NCC, YRC and other National/ International agencies?

The institution provides budget for organising its extension and outreach programmes for overall development of students. Institution has extended financial support to carryout various events held with this support are.

- To sensitize students towards national integration, communal harmony, community work, gender issues, etc., important days, like, Independence Day, Republic Day, Youth Day, National Science Day, International Women's Day, World Environmental Day, Human Rights day, etc., are celebrated every year
- Budget requirement is given by NSS Chief Coordinator during planning phase. The same shall be incorporated in the upcoming budget.

Institute involves the faculty and students in community network. The gist of the activities that have taken place over the past four years are listed below.

- A Voluntary Blood Donation camp was held on 24th September 2012. A total of 303 units were donated by the students and staff of the college.
- Many volunteers took part in the Voluntary Blood Donation camp organized on 24th July 2013. More than 20 staff members donated blood.

- As part of "The Joy of Giving week" the NSS unit donated several cartons of clothes to an orphanage 'Anatha ShishuVihara' opposite to BMSCE on 16th October 2012 and 5th January 2013.
- Ms Smruthi VI semester TCE and Mr Rithuraj of VI semester CSE taught the visually challenged students of a school, MATHRU at 4th Phase, Yelahanka from 2010 to 2012.
- A four day Special Camp for NSS volunteers was held from 26th March 2013 to 31st March 2013 at Uratti Agrahara, H Cross, and Kolar Dist.
- A Mega Medical camp was organized to enable the villagers to avail free treatment. Free cataract operation was performed on Twenty two villagers identified during the medical camp.
- A campaign for 'Awareness of benefits of voting' was conducted in which NSS volunteers implored the general public to vote without fail for better governance.
- About 65 NSS volunteers took part in assisting the Civil Defence & Police Officials in the General Assembly Elections on 4th and 5th May 2013.
- The NSS unit has encouraged the students of Final year B.E. to pursue projects related to reduction in environmental pollution, energy conservation, and recycling of solid waste.
- The NSS unit has also encouraged the students of Final year B.E. to pursue projects which can help physically challenged people to overcome those challenges through use of technology.
- Several staff members and students have been helped in procuring blood in their hour of need by NSS volunteers and the Programme Officer.
- Voluntary Blood Donation camp was organized on 22nd September2015.
- Donation of new clothes and gifts for the children of Saraswathi orphanage were distributed on Children's day and Deepavali.
- A Special camp at Gamkarnahalli, Madhugiri Taluk, Tumkuru District, was held on 24th to 27th March 2016.
- Principal and staff members have visited 'Home of Hope' on 13th August 2016
- Free Health Check-up organized by NSS unit and Youth Red Cross Unit on 24th September 2016.

3.6.6 Give details on social surveys, research or extension work (if any) undertaken by the college to ensure social justice and empower students from under-privileged and vulnerable sections of society?

- Admission policies of the Govt. and AICTE are followed. Students under CET, J&K, NRI, SNQ, Diploma Sports and OBC quotas are admitted. The benefit to the weaker sections of society is provided as per the policies of the State government and students belonging to the SC/ST, or OBC categories are admitted as per the norms of the State Government. SC/ST students are provided with Scholarship or Fee reimbursement (Post Metric Scholarship to SC/ST's, Fee-Reimbursement to SC/ST's).
- Different categories of persons with disabilities: Differently abled students are allotted seats as per the reservation policy of the state government.
- Several women empowerment programs are also considered:
  - ❖ Economically weaker sections
  - ❖ As per state government policy, 5% of the sanctioned intake seats are allotted as Supernumerary Quota (SNQ) for financially weak but meritorious students and these students do not to pay any fees.
  - ❖ The institute's management has offer provided financial assistance concessions for students who have got into economic crisis during studies.
  - ❖ Besides, the institution supports students of this section through means cum merit scholarship (B. S. Narayan Merit Scholarship) and B M Srinivasaiah merit cum means scholarship.
  - The Minority Community:
- The institution facilitates freeships and scholarships instituted by external agencies to students of the minority community.
- The students of all religions are treated with equal care and compassion. The secular environment in the institution ensures the admission of a sizable number of students belonging to religious and linguistic minorities.

3.6.7 Reflecting on objectives and expected outcomes of the extension activities organized by the institution, comment on how they complement students" academic learning experience and specify the values and skills inculcated.

The major extension activities that impact the students such as:

- Blood Donation camps, environment awareness programs, community development programs, National Day celebrations etc., bring value addition to the holistic development of students.
- These activities will help students to imbibe values and to develop leadership, team spirit, interpersonal relations, communication, commitment to social justice and equity, empathy for others, respect for rights of others, self-awareness, sense of responsibility, etc.

- These activities will help to complement students' academic learning in the classroom, making students not only competent in their chosen domains, but also in shaping them as responsible citizens of the nation.

3.6.8 How does the institution ensure the involvement of the community in its reach out activities and contribute to the community development? Detail on the initiatives of the institution that encourage community participation in its activities?

- The institute ensures the involvement of the community by seeking necessary approvals, financial support, proactive decisions and assistance through formal correspondence with the local bodies.
- The Institution has an NSS wing and a Women Empowerment Cell. Time to time these units have organized and executed several activities in the interest of society. The main activities under these centres are listed below.

Activities done under Women Empowerment Cell:

S No.	Event Name	Resource Person	Date	Outcomes
1	A seminar on "Stress Management"	Mrs Amita Mani	25-04-2012	Seminar helped students to understand the cause of stress and the methods to overcome it.
2	A talk on "Role of women in changing the society"	Mr B Afshin	08-03-2013	Motivated women participants in the context of societal change
3	A workshop on "Open source free workshop-Git"	Mr Kaustav Das Modak	31-08-2013	Benefited female students of BMSIT&M
4	A two day workshop on " Reuse of plastic bottles"	Women empowerment cell, EDC and BMSSA	21,22-09-2013	Awareness on reuse of plastic bottles among the educated unemployed women from villages situated around BMSIT&M Participants have understood the importance of Waste management.
5	"A Computer training program"	Internal resource	27-11-2013 to 5-12-2013	Participants were able to understand and execute document handling software

6	"Self Defence Program"	Mr S V Rajendra	24-04-2015	Participants were able to understand simple defence/offence techniques.

- **Activities conducted under NSS Wing:**
  - ❖ Annual Blood donation camp
  - ❖ "The Joy of Giving week": Donation of cloths to orphanage
  - ❖ Teaching visually challenged kids
  - ❖ NSS Volunteers camp
  - ❖ Awareness of benefits of voting
  - ❖ Shramadan: Faculty members and Students joined hands in cleaning plastic waste in BMSIT&M campus.
  - ❖ Health Camp: BMSIT&M, Youth Red Cross Wing had conducted a Two Day Health Camp at Gankaranahalli Village in PavagadaTaluk, Tumkur District.
  - ❖ Donation of Computers to school for handicapped children: 14 computer systems along with software resources are provided to students/children for learning new things.

- The Women Empowerment Cell of BMSIT&M has involved itself in serving the neighbourhood Avalahalli village.
  - ❖ The women were taught the reuse of plastic bottles. They were taught to make small furniture, decorative objects etc. This was conducted in 21st, 22nd, and 23rd September 2013.
  - ❖ The rural women who had passed 10th Standard were taught to use computers. They were trained in the usage of MS Office and internet. These trainings were conducted free of cost for a period of one and a half month from Dec 2014 to Jan 2015.

3.6.9 Give details on the constructive relationships forged (if any) with other institutions of the locality for working on various outreach and extension activities.

The constructive relationships forged with other institutions of the locality are:
- Regularly provide bus service to a blind school for taking them to resorts for recreation.
- Department of chemistry: JNCASR, IISc, CENS, RRI
- Facilitated CRPF Recruitment Examination
- Pool campus placements to help neighbourhood colleges
- Facilitating COMEDK examination process
- Interfaced with media and facilitated a TV program with actor Mr Ramesh Aravind.
- Sponsored furniture and created garden for the police station, Rajanukunte.

3.6.10 Give details of awards received by the institution for extension activities and/contributions to the social/community development during the last four years.

Awards received by the institution for extension activities and/contributions to the social/community development during the last four years have been as follows:

- Best Garden Maintenance award by Horticultural department of Karnataka State Government. Community around BMSIT&M enjoy morning walk in the BMSIT&M Gardens.
- One of our students from Information Science and Engineering Department has formed NGO called MELANGE, working towards social service for weaker sections people.
- The institution in collaboration with Power Grid Corporation of India Limited (PGCIL) has organised one day program on "Technologies to Combat Corruption". PGCIL awarded the prizes to faculty and students for best performance.
- A student NGO of BMSIT&M called walk free conducts street play, campaigns, awareness creation programs to prevent child labour, women exploitation etc.,.

3.7. Collaboration

3.7.1 How does the institution collaborate and interact with research laboratories, institutes and industry for research activities. Cite examples and benefits accrued of the initiatives - collaborative research, staff exchange, sharing facilities and equipment, research scholarships etc.

The institute seeks interaction and collaboration with external research institutes and industry to promote research activities of students and faculty are as follows:

- BMSIT&M has signed up MoU with various industries for engaging in R&D activities.
- Students who are placed in KPIT are taught modules on 'Automotive Electronics' and 'Auto SAR & Infotainment' by the faculty members who have been trained by KPIT on these subjects. However, this opportunity is also being extended to unplaced students.
- Students and Faculty undergo industry internship at various organisations such as Doordarshan, Federal Mogul, BSNL, ISRO etc., internship to enhance learning in the fields of interest.
- Some students and faculty members doing research under the guidance of experts in other organizations such as NAL, CMTI, BMSCE, and IISc utilize the research facilities available there.

- Students from BMSIT&M have participated in student exchange programme under MELTON foundation and visited countries like China to research and learn about cross-cultural issues.
- BMSIT&M has shared on its website all the research facilities available in its Advanced Materials Laboratory and is engaged in providing consultancy to other institutions. It has also published that other institutions can use these facilities.
- Students and staff members outsource their research related activities like lab tests, data collection, etc., to other premier research institutes, the Principal issues the required permissions also.

3.7.2 Provide details on the MoUs/collaborative arrangements (if any) with institutions of national importance/other universities/ industries/Corporate (Corporate entities) etc. and how they have contributed to the development of the institution.

- **KPIT:** BMSIT&M has an MoU with KPIT Technologies, Pune to train the students on industry specific subjects such as Automotive Electronics (which is one of the hot topics of research today) and make them industry ready. In this direction, selected faculty members are trained on those specific courses and those courses are taught by them in turn at the institute for the benefit of the students. This MoU enables both students & faculty members to have an understanding of industry specific needs and thereby get tuned to these needs for better employment opportunities. This has substantially improved the number of students getting placement offers in Core engineering sectors.
- **Rao Advisors LLC, Bengaluru:** BMSIT&M has a MoU with M/s. Rao Advisors to guide students on their higher education options at US. This MoU enables aspiring students to have ample information and guidance on universities selection, VISA processing, funding etc.
- **VTA:** BMSIT&M has an MoU with M/s. Valluri Technology Accelerators, which in turn has collaborated with a large number of multinational companies to build Smart cities envisioned by the Government of India. Under this MoU, BMSIT&M would be a nodal centre for training human resource required for planning, operating and managing Smart Cities. This is in initial stage and progress is yet to be seen. BMSIT&M in collaboration with VTA has submitted a proposal (under Prime Minister's Atal Innovation Centres) for an incubating facility for Rs.10 Crore.
- **NDRF:** Memorandum of Understanding is signed on 17th of August 2015 between BMSIT&M and National Design and Research (NDRF). This MoU concerning Renewable Energy Systems, Under Water Vehicles, Communication associated technologies such as communication paths, Propulsions, structures, sensors, actuators and other payloads, Fatigue and fractures etc.

- **National Institute of Technology, Karnataka:** Collaborative arrangement with this institution has resulted in BMSIT&M becoming a nodal centre for facilitating conduction of experiments on-line (sitting at BMSIT&M) on the physical equipment at NITK laboratories. Faculty/staff and students of various institutions can utilize this facility.

- **Steinbeis Technology Transfer:**
  The institute has signed an MoU with Steinbeis Centre for Technology Transfer India with an objective of:
  The Centre shall work in the following areas to promote academic excellence for the Institution:
    ❖ To enhance Industry-Institute Interaction by way of organizing Industry & Students visits to the Institute and vice-versa, and seminars in various technical and management areas.
    ❖ To create own expertise in various disciplines by offering Training, Consultancy & Technology Development Services to the Industry.
    ❖ To offer short to long term courses to Industry Workmen and Executives with the objective of two-way knowledge exchange.
    ❖ To network with National & International Institutions working with the same objectives in various areas of Technology through faculty and student visits / exchanges and joint industry & R&D Projects.
    ❖ Work in the area of Entrepreneurship Development.
    ❖ Any other collaborative efforts that both parties may deem fit from time to time.

- **GE India Technology Centre:** Two students of Electrical and Electronics Engineering department completed their final year project in General Electric India Technology Centre, Bengaluru.
  The project work resulted in two publications in Electrostatic Association of America conference. The students were provided an internship for 6 months with financial assistance. The research oriented project work also contributed to another research publication by Dr. T. C. Balachandra in IEEE transactions on Electrical Insulation. This Collaborative arrangement facilitated the institution in bringing out a standard publication and provided the students an opportunity to collaborate with global research team.

- **Fedaral Mugal:** To facilitate knowledge transfer and enhance industry-institute interaction this MoU was made. As a result of this, many faculty members have undergone internship at Federal mogul.

- **M/S Edgate Technologies Pvt. Ltd:** MCU lab has been set up and put to use for the students.

- **National Education Foundation USA:** To set up a skill development centre this MoU was made.

- **MEDINI-Autodesk:** To impart training amongst student community.
- **Reliance Jio:** MoU with M/s Reliance Jio has resulted in an investment of about Rs.30 lakhs (by the company in the institute campus to establish Wi-Fi infrastructure to provide high-speed internet service.
- **ECOPARADIGM:** The purpose of this MoU is to create collaborative platform encompassing students and faculty of BMSIT&M working with municipal organizations and other government agencies in environmental/civil projects for mutual benefit culminating in providing sustainable solutions for societal change.
- **TATA ELEXI:** To enhance Placements, FDPs, Internships, Scholarships and Tech Talks this MoU was made.
- **VOLVO India:** The objective of this MoU is to setup centre of excellence for entrepreneurship and innovation.

3.7.3 Give details (if any) on the industry-institution-community interactions that have contributed to the establishment/creation/up-gradation of academic facilities, student and staff support, infrastructure facilities of the institution viz. laboratories / library/ new technology /placement services etc.

The institute has been consistently working on forging working relationships with industry, other institutions and with the community for the development of the Institution. Some of these associations have resulted in supporting research activities, student support and faculty development.

- Linkages with various Community associations have fetched several scholarships for students of backward and minority categories. Relationship with Alumni community has encouraged them to donate text books to the institute library.
- Many curricular and co-curricular events of the faculty and students are regularly supported by various sponsoring agencies. For example, industries, corporate houses, banks, etc. have sponsored a number of events like Faculty Development Programs/Workshops, The intercollegiate cultural fest – UTSHAHA etc., also good number of student internships
- Many companies have supported an international event conducted at BMSIT&M namely, TEDx-BMSIT&M which purports spread of ideas.
- Relationship with Cognizant Ltd. has resulted in the company instituting two awards, one for Best Faculty Member and another for Best Outgoing student.
- Increased association with industry and community has augmented placement activities. Relationship with KPIT has resulted in not only placement, but also training of students in modern areas of Automotive Electronics.

- Linkage with renowned academicians and industry practitioners has helped the institution to review its programmes' readiness to take lead in their areas, through Department Advisory Board meetings.
- National agencies like VGST, VTU, DST have sponsored seminars/workshops in the institute.
- Industries and corporate houses conduct regular workshops for students to enhance their employability skills, career options, etc.
- Relationship with M/s Volvo India is reflected in the latter donating a 32BHP engine to the institute.
- A working relationship with M/S Cognizant Technologies has resulted in the institution of two awards namely Cognizant Best Teacher Award and Cognizant Best Student Award.

3.7.4 Highlighting the names of eminent scientists/participants, who contributed to the events, provide details of national and international conferences organized by the college during the last four years.

The institute has organized seminars, expert talks and national conferences involving eminent academicians and industry persons. The following table has the list of eminent scientists and participants who actively participated in these programs.

Sl. No.	Conference Tile	Department	Eminent Person	Date of conference
1	National conference on 'Nanoscience and Nanotechnology'	Physics	Dr. Vijay Singh Dr. K. B. R. Varma	11.10.2013 11.10.2013
3	National Conference on Emerging Trends in VLSI design and embedded systems	Electronics and Communication Engineering	Dr. Manjappa Hosamani	25-10-2013
4	National Conference on Software and Information Management	Master in Computer Applications	Mr Vijay Singh Naval Research Board	27-10-2013
5	National conference on recent Trends in Power Electronics and Drives	Electrical and Electronics Engineering	Dr. E. G. Shivakumar	30-10-2013
6	National conference on Wireless Communication and Sensor Networks	Telecommunication Engineering	Dr. T. R Subramanya, Vice-Chancellor, Karnataka State Law University	30-10-2013
10	National conference on 'Emerging Trends in Nano Applications' (NCETN-2015)	Physics	Dr. A. R. Pani Dr. Uma V Dr. B. M. Nagabhushana Dr. C. Shivakumara Dr. Chandasree Das	27.03.2015 27.03.2015 27.03.2015 28.03.2015 28.03.2015 28.03.2015

			Dr. Kaustab Ghosh	
11	SACT	Civil Engineering	Dr Manmohan Kalgal, Ultratech Cement Dr RV Ranganath, Professor, BMSCE Dr R Nagendra, Chairman ICI Er LR Manjunatha JSW Cement Dr V Ramachandra , NITK Dr A N Vyasarao, Civil Aid	25-04-2015
12	National Conference on Recent Trends in Information Technology - 2016	Information Science Engineering	H.R. Mahadeva Swamy, CEO, Applied Inventions	21 and 22-06-2016

3.7.5 How many of the linkages/collaborations have actually resulted in formal MoUs and agreements? List out the activities and beneficiaries and cite examples (if any) of the established linkages that enhanced and/or facilitated?

The institute's close and productive interactions with various organizations have translated into several formal MoUs/agreements. They include:
Formal MoUs signed:
- **Steinbeis (India):** The institute has signed an MoU with M/s Steinbeis (India) with an objective of enabling the institute to undertake consulting projects from the former's partners across the country.
- **Reliance Jio:** MoU with M/s Reliance Jio has resulted in an investment of about Rs.30 lakhs (by the company in the institute campus to establish Wi-Fi infrastructure to provide high-speed internet service.
- **Texas Instruments:** Texas Instruments through its university program partner EdGate Technologies have set up a "System-on-Chip Laboratory" in the department of Electronics and Communication Engineering. This facility is used by students to execute projects in the related area.
- **KPIT:** BMSIT&M has an MoU with KPIT Technologies, Pune to train the students on industry specific subjects such as Automotive Electronics (which is one of the hot topics of research today) and make them industry ready. In this direction, selected faculty members are trained on those specific courses and those courses are taught by them in turn at the institute for the benefit of the students. This MoU enables both students &

faculty members to have an understanding of industry specific needs and thereby get tuned to these needs for better employment opportunities. This has substantially improved the number of students getting placement offers in Core engineering sectors.

- **Rao & Associates:**
  - ❖ An MoU was signed with M/s Rao Advisors on 24th March 2015, effective for the period from 01.04.2015 to 31.03.2016.
  - ❖ This MoU was designed to execute a counselling program for the students of BMSIT&M who wished to pursue their higher education in the United States.
  - ❖ The MoU comprised of 3 parts: (a). a 2-hour Seminar session, (b). a 3-hourWorkshop and (c) a 4-hour student clinic.
- **VTA:** BMSIT&M has a MoU with M/s. Valluri Technology Accelerators, which in turn has collaborated with a large number of multinational companies to build Smart cities envisioned by the Government of India. Under this MoU, BMSIT&M would be a nodal centre for training human resource required for planning, operating and managing Smart Cities. This is in initial stage and progress is yet to be seen.
- **NDRF:** Memorandum of Understanding is signed on 17th of August 2015 between BMSIT&M and National Design and Research (NDRF). This MoU concerning Renewable Energy Systems, Under Water Vehicles, Communication associated technologies such as communication paths, Propulsions, structures, sensors, actuators and other payloads, Fatigue and fractures etc.

MoUs under process:
- **Sasken Communication Technologies**: Discussion is under progress with M/S Sasken Communication Technologies. Objective of this MoU is to provide projects to final year ECE students under the supervision of internal and external guides. After the successful completion of the project, student may be absorbed by the company, if he satisfies their requirements.
- **ISRO**: BMSIT&M is engaging closely with ISRO to work on a consulting project called Bhuvan Asset Mapping to document the details of heritage sites in and around BMSIT&M/Bengaluru.
- **NIT-K:** Collaborative arrangement with this institution has resulted in BMSIT&M becoming a nodal centre for facilitating conduction of experiments on-line (sitting at BMSIT&M) on the physical equipment at NIT-K laboratories. Faculty/staff and students of various institutions can utilize this facility.
- **M/s Tata Elxsi:** An MoU was signed with Tata Elxsi on 10th August 2016. The main objective of this MoU is to provide a platform to build a

strong and on-going relationship between BMSIT&M and Tata Elxsi which includes the following,
  ❖ Placements for eligible students
  ❖ Technical presentations & Talks
  ❖ Scholarships
  ❖ Internship Projects for UG and PG students

General Agreements:
  Senior Industry Executives: Help the institute as members of Department Advisory Board (DAB).
  Publishers of Journals/Edited books: Faculty members are on the review panel of Board of Editors, Journal readers would benefit.
  Linkages with industry: faculty and student internships, project works, placement, industrial visits, consultancy.
  Extension: as in section 3.6.4

3.7.6 Detail on the systemic efforts of the institution in planning, establishing and implementing the initiatives of the linkages/collaborations.

  • The institute follows a systematic procedure before signing MoUs with external agencies.
  • Steps are taken to have collaborative research with R&D sections of industries and to improve industry related consultancy and project work, fieldwork.
  • Each department of the institution has utilized its already established linkages with industry and premier institutes such as IISc, NITs, and has drawn senior scientists, professors, and industry practitioners to serve on its Advisory Board.
  • To have the feel of technological development, some initiatives like faculty internship in industries has resulted in continued relationship with the companies and sometimes translated into consultancy services too.
  • Many departments have recognized research centres, which are currently fulfilling the needs of research community. As a result, joint research is happening between BMSIT&M and other institutes. Many joint publications have come-up with this initiative.
  • The holistic and integrated approach is in place and is seen through a grants fetched by faculty members to the college and many students projects being sanctioned by KSCST, BEL, NAL etc.

CRITERION - IV
INFRASTRUCTURE AND LEARNING RESOURCES

4.1 Physical Facilities

4.1.1 What is the policy of the Institution for creation and enhancement of infrastructure that facilitate effective teaching and learning?

- In line with the vision of the institution, a detailed strategic plan is prepared which is duly approved by the Board of Governors (BoG).
- A detailed annual institutional budget is prepared based on the series of strategic meetings which is reviewed periodically to meet future requirements of infrastructure as envisaged in the strategic plan to be approved by BoG set aside by the management. The standards and norms as per AICTE / VTU, with respect to laboratory equipment, built-up area, learning resources-ICT, (print and electronic and teaching learning aids) are considered during the preparation of the budget.
- After the approval of the budget in the BoG, the action plans are initiated for creation and enhancement of infrastructure. The section / departmental heads are authorized to complete the procurement process as per norms of the institution.
- The Principal and section heads are authorized to enter into MoU with the industry and research organizations in order to create industry based laboratories, courses, centers of excellence and incubation centers. These provide value addition and enhanced skill development the students.

4.1.2 Detail the facilities available for
   a. Curricular and co-curricular activities – classrooms, technology enabled learning spaces, seminar halls, tutorial spaces, laboratories, botanical garden, Animal house, specialized facilities and equipment for teaching, learning and research etc.

The Institution with a lush green campus of 18.5 acres is located in the northern part of Bengaluru close to the International Airport. The Institution has a built-up area of 49772 m^2. The three blocks that are housed in the campus are: (i) Academic Block (ii) BSN Block and (iii) New Block which has been constructed recently. The Institution has adequate infrastructure facilities and resources to conduct the curricular, co-curricular and extracurricular activities.

S No.	Facilities	Details
1	Classrooms	53 class rooms with a total area of 9284 m^2 which includes 6 tutorial rooms.
2	Technology enabled learning spaces	1 digital class room with two screens with 60 computers for concurrent learning with a floor area of 205 m^2.
3	Seminar halls	5 seminar halls each with an overall area of 708 m^2.
4	Amphitheatre	Spacious with an area of 908 m^2.
5	Tutorial spaces	6 tutorial rooms with a total area of 576 m^2.
6	Laboratories	31 laboratories with a total area of 2491 m^2.
7	Botanical garden	The campus is a home to several flora and fauna with the lawn area exceeding 3.44 acres. There are more than 300 types of trees and 170 types of herbs, shrubs, climbers which include almond trees, rain trees, bur flower trees etc. The campus also supports life forms such as birds (Jungly myna, Red whiskered bulbul, white cheeked barbet, Asian koel, Black kite etc.), butter flies, moths, potter wasps and mammals like the Bonnet Macaque. Migrant birds such as herons, egrets, black headed ibis etc. visiting the nearby "Attur lake" are seen perching on the top of the BMSIT&M tree canopy sometimes
8	Specialized facilities/equipment for teaching, learning and research	About 60% of the class rooms are provided with multimedia support to facilitate e-presentations.
9	Central library	A separate budget is provided to the central library for periodical up-gradations which includes addition of titles, volumes and monographs. The library is completely digitized, with well-equipped large spaces for reading, having facilities like DELNET, OPAC, DSPACE resource Centre, SC/ST book bank, internet, LAN, reprography, etc. and also access to e-journals.
10	Regional classes	Courses are conducted in the regional language, Kannada to facilitate non-Karnataka students to communicate effectively with local people. Courses are also conducted in English to promote effective communication. However, there is no examination for these subjects.
11	Research Labs	The institution has set up centers of excellence in the following areas: • "CENTER FOR ADVANCED MATERIAL RESEARCH" with main focus on characterization and analysis of Nano materials. • CENTRE OF EXCELLENCE ON SYSTEM ON CHIP: As a part of Texas Instruments (TI) University Program, Department of ECE has set up TI Embedded Systems Lab, TI Microcontroller Lab and TI Analog System Design Laboratory. Under this set up, Edgate Technologies Pvt. Ltd, the TI University partner has donated TI hardware for developing projects under the embedded systems and analog domains. Under this the students have developed various projects and participated in TI-Innovation Challenge India Design Contest 2015.

12	Incubation Center	• The institution provides additional infrastructure to facilitate the conduction of value added courses in collaboration with the industry. Some of them are: 'Automotive Electronics' and 'Auto SAR & Infotainment' by the faculty members who are trained by KPIT (a company having a MoU with BMSIT&M) on these courses. The institution envisages setting up a Centre of Excellence for development of Automotive Electronic Systems: (CoE-DAE). The institution has incubated start-ups like Open Cube Labs, Ventalyst India Pvt. Ltd, Rockstat with the prime focus on providing hands on experience in real time project environments.
13	Other Facilities	• State of art Board Room in Ground Floor of Academic block with all modern facilities having an area of 105m^2 • Tech Summillan room incorporating SPARC cell, EDC, Innovation Centre, CIPRAC, Internship coordination cell with an area of about 205m^2. • Hostels for both boys and girls with Wi-Fi facility • Hostels for boys situated within the campus can accommodate 498 students with Block A, Block B & Block C. The New Block C is for PIO & NRI students which can accommodate 147 students. Girl's hostel is situated in Yelahanka New Town which can accommodate 124 students. • Canteen: Canteen has an area of 554 m^2. • Bank: Allahabad Bank situated within the campus caters to the banking needs of the students and staff. • Transport: A fleet of 5 owned and 5 hired BMTC buses operate covering most parts of the city for students and staff. In addition, the institute has got 4 more Light Motor Vehicles. • Medical Facility: A Health care centre in the campus caters to the primary medical needs. A doctor is available during working hours. An ambulance is available round the clock. • The institution has uninterrupted power supply and generator to facilitate smooth operations on the campus. • Separate rest rooms for Boys and Girls. • Seminar Hall in BSN Block. • Security Systems: CCTV's etc. • Wi-Fi Facility- Internet services from Convergent, BSNL and Reliance Jio.

b. **Extracurricular activities – sports, outdoor and indoor games, gymnasium, auditorium, NSS, NCC, cultural activities, Public speaking, communication skills development, yoga, health and hygiene etc.**

- Sufficient infrastructure is present for students to engage in extracurricular activities.
- The Institution has dedicated space for outdoor and indoor sport events like badminton, volley ball, throw ball, basketball, hand ball, kho-kho, kabaddi and cricket etc.
- The institution has adequate facility for conducting indoor sports like chess, carom, table tennis, etc.
- The Institution has provided gymnasium facility with modern equipment such as multi gym, hyper-extension bench, twister, etc. with an area of 232 m^2 to encourage physical fitness among the students and the faculty.
- Amphitheatre having an area of 908 m^2 accommodates the panel discussions, indoor games like badminton, in conducting cultural activities and yoga sessions. Amphitheatre having two green rooms on either side to make arrangements during the techno-cultural fests.
- A fully functional first aid Centre cum sick room with an area 24 m^2 is available in the campus. The centre provides emergency, first aid and primary treatment. Patients are referred to nearby super specialty hospitals if required. About 150 people are availing treatment every month.

Following are some of the incentives given to sports persons:
- Payment of TA and DA to players and coaches accompanying the players.
- Refreshments for players during practice.
- Fee concession.
- Attendance given as per VTU norms.

Student participation and activities:
- Students of the Institution participate in various sports and games like Chess, Basketball, Football, Badminton, Table Tennis, Cricket, Water polo, Pole vault, Taekwondo, Volleyball, Kho-Kho, etc.
- Department of Physical Education also organizes Annual Sports event.
- Department of Physical Education also organizes sports events during Techno-cultural college fest "Utsaha" every year.

Auditorium- A separate seminar hall with seating capacity of around 150 equipped with modern cushion chairs, stage, podium, stage table, public address system is provided. The auditorium area totals around 196 m^2.
- **NSS unit** at BMSIT&M is active throughout year and has organized various programs such as blood donation camp, technical talk, medical check-up, campus cleaning program, village cleaning initiatives etc.

Public Speaking and Communication Skills- Continuous placement training is offered to equip students on Personality Development, Communication, Soft

Skills, Confidence building, Interview Skills, and Tests of Reasoning, Aptitude, by experts in the respective fields.

Yoga, health and hygiene- There is a separate committee which monitors the cleanliness and hygiene of the canteen inside the college campus. Also a coordinator continuously monitors the cleanliness of the campus. Occasionally yoga camps are also organized.

4.1.3 How does the institution plan and ensure that the available infrastructure is in line with its academic growth and is optimally utilized? Give specific examples of the facilities developed/augmented and the amount spent during the last four years (Enclose the Master Plan of the Institution / campus and indicate the existing physical infrastructure and the future planned expansions if any).

The institution plans and ensures that the available infrastructure is in line with its academic growth and is optimally utilized by adopting the following measures:

- The basic infrastructures like class room and laboratory facility, library, sports etc. are discussed in the pre-budget meetings and accordingly the budget is planned. Any change in infrastructure requirement such as additional class room requirement due to change in intake etc. will be planned in advance. Optimal utilization is also kept in mind. For example, additional labs for the courses namely the Logic Design and Analog Electronics were created to accommodate the increased intake.
- Wherever feasible laboratories across the institution are being shared for the optimal utilization. Lab occupancy table is also maintained for accountability.
- All the laboratories in the institution including shared labs are being fully occupied.
- Effective utilization of seminar hall, library, playground, parking area and canteen etc is ensured.
- A new laboratory block has been built recently with an area of 5400 m^2. This caters to accommodate the proposed expansion of intake in various engineering programmes.
- The amount spent for augmentation of facilities (mainly buildings) in the last four years is shown below:

ITEMS	Allocated/Utilised (in Lakhs)							
	2015-16		2014-15		2013-14		2012-13	
	Aallocated	Utilised	Allocated	Utilised	Allocated	Utilised	Allocated	Utilised
Building	2420	1493	1480	969	932	1260	1124	281
% utilization	61.7		65.5		135		25.0	

A few examples of the facilities developed / augmented towards effective and optimal usage of resources are as follows:

Due to the introduction of the new courses over last four years, there has been a vast expansion in the infrastructure facilities

- Two Post Graduate and one Under Graduate course are introduced.
- Keeping in mind the future expansion of intake and additional engineering programmes the laboratory block has been designed to be a seven floor building of which two are available for current use.
- An administrative block, a huge sports complex and a food court have been proposed in the master plan to cater to the future requirements.
- An additional land of about 350 m^2 has been purchased to build a hostel block for future intake of PIOs and NRIs.
- A huge cricket ground is also proposed.
- There are plans to convert some more class rooms into smart class rooms in a phased manner.
- New Wi-Fi infrastructure with enhance bandwidth from M/s Reliance Geo is proposed to be implemented.

Facilities developed in last four years:

- In last four years the Institution has developed extra class rooms, labs, tutorial rooms and seminar halls to meet the requirement of regulatory bodies and also for effective enactment of academics.
- The Institutions has strengthened the labs with regular and special purpose equipment, instruments, computers and software. Research labs have been established with latest hardware and software.
- The institution has hired BMTC buses apart from its own college buses to cater to the needs of student and faculty members.
- Two additional floors have been built on in the Ladies hostel block to cater to the needs of girl students.
- It has technologically advanced Digital Library and Departmental Libraries.
- Two/ three additional floors in BSN block have been constructed with 2500 m^2 area each and one additional floor in academic block has been constructed with 2680m^2 area.

- New hostel block with B+G+5 floors and total area is 4000m^2 has been constructed.
- It has also developed the special labs to meet the requirements of PG courses and research. A separate research lab is also in place.
- A new Basketball court has been developed to cater to sports needs
- A new lab block has been constructed to accommodate the labs
- A new Generator set has been added to ensure round the clock power facility in the campus during power cuts
- New canteen block has been constructed
- Wi-Fi facilities in the campus has been upgraded with support from Reliance Jio
- Rain water Harvesting facilities have been added to ensure utilization of rain water for various purposes.
- Lush Green Garden has been developed and is maintained on a regular basis.

4.1.4 How does the Institution ensure that the infrastructure facilities meet the requirements of students with physical disabilities?

The institution ensures that disability should not be a constraint to access and utilize the infrastructure and resources for instance
- Lift is provided in all the blocks.
- Ramp is provided in all the blocks.
- The examinations of physically challenged students are conducted on the ground floor rooms considering their convenience.
- A separate toilet for physically challenged is provided at the ground floor of the academic block.
- Wheel chair facility is made available.
- Assistance & space is provided in the library.
- Extra half an hour scribe facility is provided for physically disabled candidates when they write examinations.

4.1.5 Give details on the residential facility and various provisions available within them:
Hostel Facility available:
- Room Size – 16 m^2 with single sharing, double sharing and triple sharing.
- Single cot, study table, chair and wardrobe.
- Hot water is provided through solar systems
- Mess/ boarding facilities.
- Water coolers in all floors
- Washing machines on all floors
- Round the clock the security/CCTV, etc.
- Housekeeping

Boy's hostel:

	Single	Two sharing	Three sharing
Rooms	29	215	22
Students	29	430	66

Total students = 525

Girl's hostel:

	Two sharing	Three sharing	Four sharing
Rooms	12	25	8
Students	24	75	32

Total students = 131

- Recreational facilities, gymnasium, yoga centre, etc.
  Gym (Morning and Evening Batches), sports.
- Computer facility including access to internet in hostel through Wi-Fi (24x7) facility.
- Facilities for medical emergencies:
- Ambulance vehicle (24/7) facility.
- Health care facility in the college can be utilized by the hostilities First aid facility
- Library facility in the hostels:
- Under Process
- Internet and Wi-Fi facility:
- Wi-Fi Facility available
- Recreational facility: Common room with TV, News papers
  Constant supply of safe drinking water, power supply, 24x7 security, CCTV monitoring.

Housekeeping staff is engaged to maintain the cleanliness of the hostel. Gardening staff maintains the greenery around the hostel.

Adequate number of fully automatic washing machines in each floor is available in all hostels.

- A residential facility for the faculty and staff members has been created by purchasing 18 flats (DS MAX Apartments) in the vicinity of the college.

4.1.6 What are the provisions made available to students and staff in terms of health care on the campus and off the campus?

- A primary health care facility is present in the campus catering to the health related needs of the faculty and students with a qualified doctor visiting the health centre on daily basis.

- Round the clock ambulance facility is available in the campus in case of emergency.
- Medical insurance coverage for all the students of BMSIT&M has been made under this. It covers Rs. 50,000 on reimbursement basis and Rs. 1,00,000 on accidental death.
- Group medical schemes such as GMC and GPA policies have been covered for all the faculty of the BMSIT&M with up to Rs. 3.00 lakhs coverage for self and their family members.
- Every department has been provided with first-aid kit.
- Financial support is extended by the management to employees in case of life threatening illness.
- Medical advance for non-teaching staff is provided.

4.1.7 Give details of the Common Facilities available on the campus spaces for special units like IQAC, Grievance Redressal unit, Women's Cell, Counseling and Career Guidance, Placement Unit, Health Centre, Canteen, recreational spaces for staff and students, safe drinking water facility, auditorium, etc.

Common facility	Description
IQAC	IQAC is actively working in the college to monitor the quality system. 10m^2 office space is provided for the same.
Grievance Redressal unit	Grievance committee is headed by Prof Annamma Abraham. A grievance received in letter are reviewed initially and a committee is set up by the Principal which conducts further enquiry into the grievance received and submits a report to the Principal. Based on the report received, Principal addresses the grievance
Women empowerment cell	The centre for women empowerment was established in the year 2010. The cell is headed by Prof. C.S. Mala. It was established for the holistic development and empowerment of women. Workshops, lectures and training programmes were conducted for women.
Career guidance& Counselling	An MoU is made with M/S Rao advisors for counselling the students to pursue the higher education in other countries. Under this, seminar workshops and interactive sessions are conducted by them.
Placement and Training Cell	Placement Cell at BMSIT&M was established in the year 2004, to initiate industry institute interaction activities with an initial aim to provide placement opportunities to the first batch of students. More than 1500 offers were made to the students for the last 5 years. Activities included in the cell are student training, bridge course and alumni mentoring.
First Aid cum health centre	A fully functional first aid cum sick room is available in the campus. The centre provides emergency, first aid and primary treatment. Patients are referred to nearby super specialty hospitals if required.
Canteen	The canteen facilities provided to cater to the needs of the employees and students and located in a convenient place in the campus. It caters to all sections of students with a variety of food at reasonable rates. There is a constant monitoring by the members of the canteen committee on the maintenance, cleanliness and the quality of food.

Recreation space	Covered area of 232 m^2 gymnasium is used for recreation space for all the staff and students in addition to amphitheater, sports ground, etc.
Safe drinking water facility	24X7 purified water facility is provided on the campus at strategic locations (each floor of the both BSN and academic block) to ensure safe drinking water. Minimum of two drinking water dispensers have been provided in each floor of both the academic and BSN blocks.
Auditorium	A full-fledged seminar hall with audio and visual arrangement with a seating capacity of around 150 and four more seminar halls with a capacity of about 100 plus in other departments. There is also an open air auditorium present in the campus.
Melton Foundation	Melton Foundation is a non-profit organization that aims at achieving global citizenship through powerful actions. It is based in 5 countries namely India, China, Chile, USA and Germany from which approximately 20 students are selected each year. BMS Institute of Technology & Management is one of the two institutions associated with Melton foundation in India.
National service scheme	The NSS unit of the college was formed in the year 2004-05. The committee is headed by Principal, who is assisted by the Programme Officer and representatives from all the departments. The office bearers and the student volunteers have been working sincerely for helping weaker sections of society
Red cross	The red cross unit of BMSIT&M was started in the year 2015 and BMSIT&M youth red cross wing is coordinated by red cross programme officer under guidance of Principal

4.2   Library as a Learning Resource

4.2.1. Does the library have an Advisory Committee? Specify the composition of such a committee. What significant initiatives have been implemented by the committee to render the library, student/user friendly?

Yes. The Advisory Committee periodically meets to discuss various issues related to library facilities and services and advises suitable solutions for better functioning. It acts as an internal auditor to ensure   quality services.

Head of the institution can procure books up to a budget of Rs. 50,000/- . For procurements beyond this, approval of management/chairman is needed.

To make the library user friendly, the committee meets regularly and discusses proposed policies, budget- specific issues and advises to the library. Then committee studies the library needs and issues of its maintenance and considers the suggestions made by users and handles grievances reported if any.

Library Committee Members:

Sl. No.	Members	Designation
1	Chairman	HOD, Mechanical
2	Member-Convenor	Librarian
3	Member	AO
4	Mrs. Chethana & Dr. Y. Suresh, CSE	Faculty representatives from

5	Mrs. Shanthi, ISE	various Departments.
6	Mrs. Chandraprabha & Mrs. Shashikala, ECE	
7	Mrs. Tejaswini, ME	
8	Mrs. Shilpa, EEE	
9	Mrs. Archana, CIVIL	
10	Mrs. Sumathi, TCE	
11	Mrs. Drakshaveni, MCA	
12	Dr. Dhananjaya, Physics	
13	Mrs. Bincy Rose Verghese, Chemistry	
14	Dr. Chetan, A S, Mathematics	

Significant Implementations:

1. Migration from Libsoft 5.0 Access backend version to internationally acclaimed, Open Source, feature rich, web based Integrated Library Management Software.
   - Presently upgraded to version 3.18.
   - The Library OPAC is accessible by users using any device that supports browsing with in the campus (Intranet) on the institution's Wi-Fi network.
   - Email alerts on transactions
   - SMS alert on transactions (under process)
2. Establishment of Digital Library.
   - Established a Digital Library with exclusive IBM M4 server and 30 number i3 systems.
   - Dspace (Institutional Repository) is installed which helps faculty upload articles published by them, class notes etc.,
   - Students can download old question papers of the university on to their devices within the college premises.

Library Automation:
   - From day one the library was automated using Libsoft software version 5.0
   - In the year 2013 the institute migrated from legacy software to KOHA (ILS)
   - Internationally acclaimed KOHA (Integrated Library System) is being used for the house-keeping activities of the library.
   - At present it is upgraded to version 3.22. The software supports Z39.50 communication protocol, Search and Retrieve through URL (SRU), Discovery Tools and send e-Mails on every transaction to users. Users are also sent with notices on overdue, advance, and intimation on arrival of reserved items.
   - The library OPAC is available for browsing within campus Wi-Fi network on any device that supports browsing.
   - The Library Web page could be accessed on http://100.127.2.254

Organisation of Knowledge:
- For convenience of the users, the books & interrelated subjects are systematically arranged on modular book stacks using Dewey Decimal Classification (DDC) Scheme 22/ed.
- Open access system is followed which allows users to have direct access to the book shelf where they can locate the books of their interest without any difficulty.
- Location of books is made easy with the help of
  - Bay Index, Shelf List, Row Guide - provided on each rack.
- Help on demand is also provided to locate the items of interest to the users.

Borrowers Privilege:
- At the beginning of the year, Library Borrower's Card is issued to each student, which enables them to have access to the library. An in-house designed utility is used to print Borrowers Card in bulk.

Sl. No.	Category	Privilege	Retention period	Overdue Penalty	Items
1.	General Students (UG)	3	2 Weeks	Rs. 1/- per day / per item	Books, Journals / Magazines, CD / DVD / Floppy
2.	SC / ST Students	Gen + 2	2 Weeks / Per Semester	As above	+ SC/ST Books
3.	Book Bank Category	Gen + 2	2 Weeks / Per Semester	As above	+ Book Bank Books.
4.	Students (PG)	3+1(book bank)	2 Weeks	As above	PG + Gen. Category.
5.	Faculty	7	1 month	Nil	Any item except Book Bank / SC-ST
6.	Non-Teaching Staff	2	2 Weeks	Nil	Any item except Book Bank / SC-ST

- Book Bank facility is provided on receipt of One-time, Non-Refundable Deposit of Rs.400/- per student. It helps them plan their study and borrow such books that they require for the entire semester. Books to the Book Bank Scheme are provided from the available stock and would be procured on demand if not available.
- Students can reserve books when all copies of the books their interests are under circulation. Intimation is automatically sent to the students on arrival of reserved items.
- Library circulation facility is provided to students even after the issue of Hall Tickets till the completion of University Examinations.
- For security reasons, the user has to deposit his/her belongings in the property counter, before getting access to the book-shelf.

- The Library Services are provided by 9 dedicated library professionals. 8 persons have Master Degree in Library and Information Science and 1 person has Diploma in Library and Information Science. The library has one attendant.
- Open access facility has been extended for the students in the library wherein the students have access to choose and borrow the books of their interest.

Computational Facilities:

- The Library totally has 28 computers with Internet connection. There is a dedicated IBM M4 series Server in the library which caters to KOHA and Dspace applications.
- Apart from this, three computers are kept to search the Online Public Access Catalogue. Four computers are used by the library staff for circulation, accessioning, cataloguing, periodicals maintenance, requisition, budgeting & acquisition, usage & reading analysis, bar coding generation, report generation, searching etc.
- The library has internet connectivity via Broad Band with a band width of 4 mbps and 1 mbps for the librarian and staff and students respectively. The institution is provided with a total internet bandwidth of 110 Mbps.
- Dspace digital library software is used for Institutional Repositories, where faculty is given the rights like uploading syllabus, Lesson Modules, Teachers publications, etc.

4.2.2. Provide details of the following:

Total area of the library (in Sq. Mts.)	1492 m^2
Total seating capacity	247
Working hours	
On working days	
Circulation Section	Mon-Fri 8:30am to 4:30pm
	Sat - 8:30am to 1:30pm
Reference Section	Mon-Fri 8:30am to 8:30pm
	Sat - 8:30am to 4:30pm
On holidays:	Sundays & Holidays remains closed
Before examination, during examination season	
Circulation Section	Mon-Fri 8:30am to 4:30pm
	Sat 8:30am to 1:30pm
Reference Section	Mon-Fri 8:30am to 8:30pm
	Sat 8:30am to 4:30pm
	Sundays & General Holidays: 9.30am to 1.00 pm

During Vacation	
Circulation Section	Mon-Fri 8:30am to 4:30pm
	Sat 8:30am to 1:30pm
Reference Section	Mon-Fri 8:30am to 8:30pm
	Sat 8:30am to 4:30pm

*Layout of the library (individual reading carrels, lounge area for browsing and relaxed reading, IT zone for accessing e-resources

Ground Floor:
- Stack Room, Circulation Counter, Processing Section, Server Room, Reprographic Section, Librarian Chamber.

Reference Section:
- Reference Stack and Reading Area, Digital Library , Discussion Rooms (2), Periodical Display Cum Storage Racks, Bound Volumes / Project and Seminars Room, Newspaper Reading section, Personal Books Reading Section.

4.2.3. How does the library ensure purchase and use of current titles, print and e-journals and other reading materials? Specify the amount spent on procuring new books, journals and e-resources during the last four years.

- A circular is sent to all the heads of the department to recommend of new titles / editions (books and journals) required for teaching, learning, research and projects undertaken before the commencement of the semester, well in advance.
- All steps will be taken to add titles and volumes as per the AICTE norms every year. Shortfall with respect to number of titles and volumes will be informed to concerned HODs well in advance to ensure that adequate recommendations are received to fill the gap if any.
- Right from the beginning e-Resources (e-Journals and e-Books) are subscribed as per the AICTE norms.

Academic Year	Books	Qty	Amount (in Rs)	Total Amount spent (Rs)
2015-16	Text books	903	3,82,868/-	3,82,868/-
	Reference Books	193		
	Journals/ Periodicals	132		
	e-resources	7 Packages	8,46,000 /-	8,46,000/-
	e-books	1 Package		
2014-15	Text books	892	6,23,517/-	31,51,782/-
	Reference Books	472		
	Journals/ Periodicals	102	5,36,546/-	
	e-resources	7 Packages	18,37,794/-	
	e-books	1 Package	1,53,925/-	

2013-14	Text books	3389	18,58,316/-	41,72,138/-
	Reference Books	390		
	Journals/ Periodicals	96	6,65,177/-	
	e-resources	6 Packages	1505425/-	
	e-books	1 Package	1,43,220/-	
2012-13	Text books	1355	6,69,419/-	22,75,829/-
	Reference Books	376		
	Journals/ Periodicals	101	4,38,152/-	
	e-resources	7 Packages	10,53,953/-	
	e-books	1 Package	1,14,305/-	

4.2.4. Provide details on the ICT and other tools deployed to provide maximum access to the library collection?

- The web page can be accessed on http://100.127.2.254
- The Online Public Access Catalogue (OPAC) provides rich information to the users about the library timings and links to access :
  - ❖ Subscribed e-Journals / Open Access e-Journals
  - ❖ Subscribed e-Books / Open Access e-Books
  - ❖ Online News papers
  - ❖ NPTEL videos and Web courses both Online and Offline.
  - ❖ Institutional Repositories – Time-Table, Lesson Plans, Class Notes, and Articles published by faculties, Old VTU Question Papers.
  - ❖ New Arrivals list etc.
- OPAC helps new users to register themselves to avail library services.
- Once registered, one can login with username and password to check:
  - ❖ What one has borrowed; when the items are due, how much one has paid to the library towards penalty, Book Bank fee etc.,
  - ❖ Update his / her profile on change of address, contact phone or email etc.
  - ❖ Access search history, lists created, comments made, tags attached.
  - ❖ Though online suggestion or recommendation facility is available, recommendations are received in print form for documentary purpose.
- Federated search facility is provided by J-Gate and Knimbus.com
- At present remote access to e-Resources subscribed under VTU is provided for packages like
  - ❖ IEEE
  - ❖ Springer
  - ❖ Taylor and Francis, Cr.Net, ASCE etc.
- A Digital Library is established with 30 i3 systems and a dedicated server. The server is loaded with Ubuntu Server (version 12.04). All other systems are loaded with latest Ubuntu Desktop Operating System to avoid menaces such as virus, malware, etc.

S No	Details	
1.	OPAC	Yes, Library users can access the OPAC, institutional repositories and digital library 24/7 from anywhere in the campus with any device that supports Wi-Fi connectivity through this IP address http://100.127.2.254
2.	Electronic Resource Management package for e-journals	No
3.	Federated searching tools to search articles in multiple databases	J-gate
4.	Library Website	Yes
5.	In-house/remote access to e-publications	Yes
6.	Library automation	Yes
7.	Total number of computers for public access	28
8.	Total numbers of printers for public access	01
9.	Internet band width/ speed	40 Mbps
10.	Institutional Repository	Yes
11.	Content management system for e-learning	No
12.	Participation in Resource sharing networks/consortia (like Inflibnet)	DELNET

4.2.5. Provide details on the following items:

- Average number of walk-ins   : 190
- Average number of books issued/returned   : 134
- Ratio of library books to students enrolled   : 19 books per student
- Average number of books added during last three years   :

Year	Titles	Volumes
2012-13	441	1731
2013-14	981	3770
2014-15	584	1634
2015-16	439	1096

- Average number of e-resources downloaded/printed :

Year	e-resources downloaded/ printed
2012-13	2576
2013-14	6861
2014-15	11684
2015-16	Requisition is made with publisher to provide data

- Number of information literacy trainings organized : Literacy training is being organized by the librarian regularly.

- Details of "weeding out" of books and other materials : Nil

4.2.6. Give details of the specialized services provided by the library

- The Library Reference Section has a seating capacity of 247. It is stocked with rich collection of Treatises, Monographs, Handbooks, Year Books, General and Subject Encyclopedia, Dictionaries, etc., in Engineering and Allied subjects.
- Reference books are for using in the library premises only. On demand and in case of urgency reference books are issued for overnight which must be returned next day.by 8:30 a.m.
- The library has a state-of-the-art photocopying machine which has an auto feeder, duplex printing, scanning, photocopying and network printing support.
- The library charges a very nominal amount of 75 paise per side /A4 size for 10 & above copies for the students. It also, caters to the official printing needs of all the departments in the campus.
- The library has membership with Developing Library Network (DELNET), New Delhi for resource sharing. On demand from the faculty and students, books or journals that are not available in the library, are procured from DELNET on charging actual cost incurred such procurement and returning the items.
- The library subscribes to Print and Online journals as per AICTE norms right from the beginning. Now, the library has joined VTU Consortium for e-Resources and subscribes to e-journals and e-Books from prominent publishers like IEEE, Springer and Elsevier.
- Now, remote access to e-Resources is provided through www.knimbus.com, where registered faculty and students can access e-Resources anywhere outside the college campus.
- Manuscripts   :No
- Reference   :Yes
- Reprography   :Yes
- ILL (Inter Library Loan Service)   :Yes (Delnet)
- Information deployment and notification   :Yes
- Download   :Yes
- Printing   :Yes
- Reading list/ Bibliography compilation   : No
- In-house/remote access to e-resources   :Yes (IEEE-IEL Online, K-Nimbus)
- User Orientation and awareness   : Yes
- Assistance in searching Databases   : Yes
- INFLIBNET/IUC facilities   : No

4.2.7. Enumerate on the support provided by the Library staff to the students and teachers of the college.

- The library organizes User Education Programs for the effective use of resources made available to students and faculties.
- At the beginning of the academic year, Library Orientation Programs are arranged for introducing the library resources and services available for students.
- In additions to scheduled training programs, help will be extended by the library staff as and when the demand is received.
- Scanning of students' and faculty members' academic documents is done free of cost.
- The library has in house-binding facility where library staff are trained to do simple stitch binding as most of the titles now-a-days are of paperback editions rather than hardbound library editions.
- The library provides spiral bind service also for official documents.

The services provided are listed in the table below:

Sl.No.	Particular
1.	Lending
2.	Book Bank
3.	SC/ST Book Bank
4.	Resource sharing (DELNET)
5.	e-books
6.	e-Journals
7.	Institutional membership
8.	Reprography (State-of the art Network Printing Scanning, Photocopying Machine)
9.	Digital Library: NPTEL Videos and Web Courses (Exclusive server with 30 systems, software Koha.) including institutional repository.
10.	Newspaper clipping
11.	New arrivals
12.	Reference & Referral service
13.	Dictionary service
14.	Scanning
15.	Barcode printers and scanners
16.	Spiral binding
17.	Lamination
18.	Support for e-journal access; Support in location of title; Support for copying/Xerox; Advance booking of titles; Additional book provided on request.

4.2.8. What are the special facilities offered by the library to the Visually/physically challenged persons? Give details

- Currently the institution does not have any visually challenged person. However for the physically challenged persons lifts are provided to access the library.
- Ramp is also provided to enter the library facility.

4.2.9. Does the library get the feedback from its users? If yes, how is it analyzed and used for improving the library services. (What strategies are deployed by the Library to collect feedback from users? How is the feedback analyzed and used for further improvement of the library services?)

- Feedback from students and faculty with respect to the quality of library services is obtained once in a year.
- Important and feasible suggestions made by the stakeholders are considered for the improvement of the library services.
- The following services were introduced based on the direct and indirect feedback received:
  a. Addition of new editions of books recommended by the students and staff members
  b. Extended library reference section service from 4.30pm to 8.30 pm
  c. Library Reference section kept open during internal and university examinations as follows

    ❖ Week days from 8.30 am to 8.30pm
    ❖ Sundays & General Holidays from 9.30am to 1.00 pm
    ❖ Changed books stack layout in reference section on request by the faculty for the effective use of natural light and air circulation.
    ❖ Direct access to book shelves.

4.3 IT Infrastructure

4.3.1. Give details on the computing facility available (hardware and software) at the institution.

- Number of computers with Configuration (provide actual number with exact configuration of each available system)

Sl. No.	Make/Model	Configuration	Quantity
1	HP Prodesk 400 G2	Intel core i7 4790 3.6GHz,4 GB DDR3 Ram, Intel H81 Chipset, 1TB Hard disk, DVD writer, USB Keyboard, Mouse, HP 21.5" LED Monitor	100 nos.
2	Lenovo think canter M73	Intel Core i7 4770 3.1 GHz, 4 GB DDR3 Ram, Intel H81 Chipset, 1TB Hard disk, DVD writer, Lenovo USB Keyboard, Mouse, Lenovo 22" LED Monitor	100 nos.
3	HP Compaq 6200 Pro MT	Intel Core i5 2500 3.30 GHz, 4GB DDR3, 500GB HDD,DVD writer, HP PS/2 Keyboard, HP PS/2 Optical Mouse, Compaq 20" LED Monitors	76 nos.
4	HP Compaq 6200 Pro MT	Intel Core i5 2500 3.30 GHz, 4GB DDR3, 500GB HDD,DVD writer, Nvidia quadro 600graphics card, HP PS/2	34 nos.

		Keyboard, HP PS/2 Optical Mouse, Compaq 20" LED Monitors	
5.	HP Compaq Elite 8000 CMT	Intel Core2quad q9500 processor,2 GB DDR3,320 GB Hard disk, DVD Writer, NVidia quadro FX 850, HP Keyboard ,Mouse HP 18.5" TFT Monitor	160 nos.
6	HP DX 2080	Intel Core2duo 2.20 GHz, 1 GB DDR2 Ram, 160 GB HDD, DVD Reader, HP Keyboard, Mouse, HP 15" LCD Square .	80 nos.
7	IBM Think enter	Intel PIV HT 3.06 GHz, 512 DDR2 Ram, 80 GB HDD, CDROM Drive, IBM PS/2 Keyboard, USB Mouse, IBM 15" CRT Monitor	131 nos.
9	HCL	Intel PIV 3 GHz, 1 GB DDR1 , 40 GB, CD-ROM, HCL Keyboard, Mouse, 15" CRT Monitor	4 nos.
10	IBM Think centre	Intel P1V 2.8 GHz, 1 GB DDR2 Ram, 40 GB HDD, CDROM Drive, IBM PS/2 Keyboard, USB Mouse, IBM 15" CRT Monitor.	45 nos.
11	Bengaluru Systems	Intel PIV 2.4 GHz, 1GB DDR1, 40 GB HDD, CDROM Drive, IBM PS/2 Keyboard, USB Mouse, IBM 15" CRT Monitor.	20 no's

Total Number of Systems = 750

➨**Computer-student ratio:** 1:3.5 (for UG) and 1:2 (for PG)

➨**Stand-alone facility: ─**
➨**LAN facility:**

Sl. No	Department	Labs/others	Network equipment	Network points / nodes
1	Computer Science and Engineering	Charles Babbage	2 no's	36 nos.
2	Computer Science and Engineering	Alan Turning	2 nos.	36 nos.
3	Computer Science and Engineering	Von numen	2 nos.	36 nos.
4	Computer Science and Engineering	Aryabhatta	5 no's	60 nos.
5	Computer Science and Engineering	Incubation centre	1 no.	17 nos.
6	Computer Science and Engineering	Faculties	1 no.	3 nos.
7	Information Science & Eng.	Lab1	2 nos.	36 nos.
8	MCA	Lab1	2 nos.	36 nos.
9	MCA	Lab2	2 nos.	36 nos.
10	MCA	R&D Lab	2 nos.	31 nos.
11	MCA	Faculty	-	7 nos.
12	Library	Digital Class room	1 nos.	30 nos.
13	Library	Issue section	1 no	11 nos.
14	Basic Science	Faculties	1 no.	11 nos.
15	Telecommunication Engineering	Digital class room	3 nos.	60 nos.
16	Telecommunication Engineering	4th Floor	1 no	6 nos.
17	Electronics and communication Engg.	HDL/VLSI	2 nos.	30

18	Electronics and communication Engg.	MC/DSP	2 nos.	30 nos.
19	Electronics and communication Engg.	Microprocessor	2 nos.	30 nos.
20	Electrical & Electronics Engineering	Lab1	1 no.	16 nos.
21	Electrical & Electronics Engineering	Lab2 – 4th floor	1 no.	6 nos.
22	Mechanical Engineering	CAED Lab	4 nos.	60 nos.
23	Mechanical Engineering	CAMD	3 nos.	30 nos.
24	Mechanical Engineering	PG Lab	-	18 nos.
25	Mechanical Engineering	CIM& Automation	1 nos.	22 nos.
26	Administration	Admin	1 no.	9 points
27	Accounts	Accounts	1 no.	10 points
28	Principal office		1 no.	2 point
29	Hostel	Accts		1 no.

Wi-Fi facility

Sl.No.	Block/Floor	Devices
1	BSN – Under ground	2 nos.
2.	BSN – Ground floor	4 nos.
3	BSN –1st Floor	2 nos.
4	BSN – 2nd floor	2 nos.
5	BSN- 3rd floor	2 nos.
6	BSN- 4th Floor	2 nos.
7	BSN- 5th floor	2 nos.
8	Main-Ground floor	4 nos.
9	Main- 1st Floor	2 nos.
10	Main-2nd floor	2 nos.
11	Main – 3rd floor	2 nos.
12	Main – Principal	1 no.
13	Canteen	1 no.
14	Hostel – A –block	19 nos.
15	Hostel – B – Block	16 nos.

Licensed software

Sl. No.	Software Description	Department
1	Windows 10, 200 FTE Count	Campus License
2	Windows 8.1	Campus License
3	Windows 7 Professional	Campus License
4	Windows Server 2012	Campus License
5	Windows Server 2008	Campus License
6	Windows Server 2003	Campus License
7	Ms office 2013	Campus License
8	Ms office 2010	Campus License
9	Ms office 2007	Campus License
10	Visual studio .Net 6	CSE
11	Oracle 10G	CSE
12	IBM Rational suite Enterprise	MCA
13	Mi-Power, 1 No	EEE
14	Comsol – Multiphysics, 1 No	EEE
15	E surveying (10 No's)	Civil

16	Autodesk inventor prof.	ME
17	AutoCAD 2004 edu	ME
18	Nisa	ME
19	CADM	ME
20	Ansys 10	ME
21	Solidedge ver18	ME
22	CADM, 15 Nos.	ME
23	Hypermesh Raidloss	ME
24	Ansys 15.0	ME
25	Labview 2015	Institute
26	Cadence VLSI design tool	ECE
27	MSP 430 Kits	ECE
28	Ansys HFSS	Institute
29	Wi-Com T antenna	Institute
30	Kel U Micro vision v 4	ECE
31	MSP Kits 430F5229	ECE
32	MSP Kits 430G26	ECE
33	MSP Kits EZ430RF2500	ECE
34	Intel Galileo gen 2	Institute
35	ARM Processor ARM 7	ECE
36	Mat Lab with packages	Institute
37	DSP Kit with ccs studio	ECE
38	Wolfram Mathemathica	Maths
39	Mat Lab	Maths
40	MacAfee Antivirus	Maths
41	Win edit	Maths

Number of nodes/ computers with Internet facility:
Wi-Fi Solution – Complete indoor
Technology Partner – Motorola and Rad Max
- More than 180 numbers of Access Points are spread through the campus including the hostels
- Total users on board – 2600
- Concurrent Users – 300-500
- Authentication System - 24 online AAA servers with 1000 active users license which includes all teaching, non-teaching and technical staff and students accessing internet through the Wi-Fi network.

Bandwidth per User:
HOD's - 4Mbps download.
Teaching, Non-teaching and Technical Staff - 2mbps download.
Students – 1Mbps download.

4.3.2 Detail on the computer and internet facility made available to the faculty and students on the campus and off-campus?

- Total users on board – 2600
- Concurrent Users – 300-500

- Computers with internet facility for the faculty on campus– 77 Nos.
- Computers with internet facility for the students on campus– 673 Nos.
- Computers with internet facility for the faculty & students off campus– Ladies Hostel
- 24 online AAA servers with 1000 active users license which includes all teaching, non-teaching and technical staff and students accessing internet through the Wi-Fi network.
- Loan facility has been provided to faculty for purchase of laptops.
- New Wi-Fi infrastructure with enhance bandwidth from M/s Reliance Jio is being implemented.

4.3.3 What are the institutional plans and strategies for deploying and upgrading the IT infrastructure and associated facilities?

- The institution has the following plans to upgrade the IT infrastructure and associated facilities:
  - ❖ To strengthen existing Wi-Fi and broad band facility through increasing band width.
  - ❖ To increase number of class rooms with LCD projectors and smart boards for effective teaching for all the departments.
  - ❖ Acquiring proprietary software and accessing open source software to enhance the advanced knowledge in IT.
- To strengthen computing facility with increasing number of computers in the campus
- Effective utilization of ICT for effective teaching.
- Build automated systems for administration and academic (similar to ERP)
- Integrate the institute's academic resources with National of Learning resources

4.3.4 Provide details on the provision made in the annual budget for procurement, upgrade, deployment and maintenance of the computers and their accessories in the institution (Year wise for last four years)

Provision is made in the annual budget for procurement, upgrading, deployment and maintenance of the computers and their accessories as indicated below

YEARS	2015-2016 (in lakhs)		2014-2015 (in lakhs)		2013-2014 (in lakhs)		2012-2013 (in lakhs)	
Deployment and maintenance of computers/Upgrading of software	Allocated	Utilized	Allocated	Utilized	Allocated	Utilized	Allocated	Utilized
	90	55	115	64	42	13	59	50
% utilization	61.1		55.6		30.9		84.7	

- Computer labs are maintained in good condition with the assistance of full-time technicians.
- The college always prefers to purchase branded computers and accessories. Maintenance of such branded equipment is done by the company during the warranty period. When the warranty period is over, the college maintains the equipment on its own.
- Uninterrupted Power Supply (UPS) facility has been provided in all the laboratories having computer connectivity.
- Institute has got in-house network maintenance staff, electrical maintenance engineer and electricians for the necessary support.
- 24 x 7 power supply

4.3.5 How does the institution facilitate extensive use of ICT resources including development and use of computer-aided teaching/ learning materials by its staff and students?

- The institution facilitates extensive use of ICT resources including development and use of computer-aided teaching/ learning materials by its staff and students by providing the following facilities in the college:
  - ❖ The projector is being used for some of the subjects /seminars/workshops.
  - ❖ Usage of smart board.
  - ❖ The webinar facility is provided.
  - ❖ Access to the EDUSAT facility for students.
- Access to online courses such as OCW/NPTEL/courses/ EDX/ YouTube.
- E-resources and recorded lectures can be accessed through the Wi-Fi connection using any laptop, desktop, mobile, Internet lab or digital library.
- Access to VTU video CD's
- Accessing e-journals for research/projects.
- DSpace (Institutional Repository) is installed which helps faculties upload articles published by them class notes etc.
- The library has membership with Developing Library Network (DELNET), New Delhi for resource sharing. On demand from the faculty and students, books or journals that are not available in the library, are procured from DELNET on charging actual cost incurred such procurement and returning the items.

4.3.6 Elaborate giving suitable examples on how the learning activities and technologies deployed (access to on-line teaching- learning resources, independent learning, ICT enabled classrooms/learning spaces etc.) by the institution place the student at the centre of teaching-learning process and render the role of a facilitator for the teacher.

The learning activities and technologies deployed by the institution place the student at the centre of teaching-learning process and render the role of a facilitator through:

- The Online Public Access Catalogue (OPAC) provided rich information to the users above the library timings, links to access the following
    - ❖ Subscribed e-Journals / Open Access e-Journals.
    - ❖ Subscribed e-Books / Open Access e-Books.
    - ❖ Online News papers.
    - ❖ NPTEL videos and Web courses both Online and Offline.
    - ❖ Institutional Repositories – Time-Table, Lesson Plans, Class Notes, and Articles published by faculties, Old VTU Question Papers.
    - ❖ New Arrivals list etc.
- OPAC helps new users to register themselves to avail library services.
- Once registered, one can login with username and password to check:
    - ❖ What one has borrowed; when the items are due, how much one has paid to the library towards penalty, Book Bank fee etc.
    - ❖ Update his / her profile on change of address, contact phone or email etc.
    - ❖ Access search history, lists created, comments made, tags attached.
    - ❖ Though online suggestion or recommendation facility is available, recommendations are received in print form for documentary purpose.
- Federated search facility is provided by J-Gate and Knimbus.com.
- At present remote access to e-resources is subscribed under VTU is provided for packages like
    - ❖ IEEE, Springer, Taylor and FrancisCr.Net, ASCE etc.
- A Digital Library is established with 30 i3 systems and a dedicated server. The server is loaded with Ubuntu Server (version 12.04). All other systems are loaded with latest Ubuntu Desktop Operating System to avoid menaces such as virus, malware, etc.

4.3.7 Does the Institution avail of the National Knowledge Network connectivity directly or through the affiliating university? If so, what are the services availed of?

The institute offers the EDUSAT outreach program for students.
- NPTEL
- Online programme of various IITs

4.4 Maintenance of Campus Facilities

4.4.1 How does the institution ensure optimal allocation and utilization of the available financial resources for maintenance and upkeep of the following facilities (substantiate your statements by providing details of budget allocated during last four years)?

The institute sets aside budget every year for maintenance of facilities such as building, furniture, equipment, computers, vehicles, etc. Expenditure towards Maintenance and Upkeep of campus facilities during the last 4 years is given below in the table

S.No.	ITEMS	Utilised/ Allocated (in Lakhs)							
		2015-16		2014-15		2013-14		2012-13	
		utilized	allocated	utilized	allocated	utilized	allocated	utilized	allocated
1.	Building	1320	2420	780	1480	590	932	510	1124
2.	Furniture	54	100	77	92	6	11	21	52
3.	Equipment	134	279	153	260	23	74	25	34
4.	Computers	55	90	63	115	4	42	58	59
5.	Vehicles	-	-	9	25	8	25	0	15
6.	Any other	167	185	99	336	265	685	62	102

4.4.2 What are the institutional mechanisms for maintenance and upkeep of the infrastructure, facilities and equipment of the college?

- At the Institutional level, there exists an estate office which takes care of maintenance and upkeep of the infrastructural facilities of the campus. It is headed by a Campus Manager and supported by regular and outsourced maintenance staff.
- An effective complaint management system exists.
- Routine maintenance of the equipment is taken up by the lab instructors of the respective labs on regular basis. The queries for equipment which is under the warranty are attended by the company representative on call. Some equipment which is under AMC are attended to by the

respective agencies on regular basis
- The equipment maintenance is taken care by the respective departments where the equipment is housed.
- 24 hours security personnel in the college
- The college has its own generator system
- Cleanliness in the campus is maintained by the house keeping personnel
- To maintain the computer and local area network facilities' hardware and software, technicians are employed.
- In-house Electrical Engineer, Plumber is contacted at times of any emergency for any kind of electrical & plumbing issues.
- A campus manager, faculty coordinator, consultant and service staffs are there to upkeep the lush green campus neat and tidy.
- Annual maintenance for lift, generator, RO plant and photocopying machines is taken up

4.4.3 How and with what frequency does the institute take up calibration and other precision measures for the equipment/ instruments?

- The equipment is calibrated by the lab technicians (instructors and assistants) faculty members and service providers.
- The laboratory equipment is maintained by lab
- The calibration of equipment taken up at department level on yearly basis
- Calibration if done by the service providers, certificates are obtained and recorded/filed.
- The laboratory equipment are maintained and calibrated as per the budget allotted to the concerned department from the Institution Development Fund.

4.4.4 What are the major steps taken for location, upkeep and maintenance of sensitive equipment (voltage fluctuations, constant supply of water etc.)?

- Voltage fluctuations are handled by UPS. A separate space is provided for UPS with batteries wherever they are deployed
- The institution has constant supply of water both from internal bore wells as well as corporation water.
- For gardening purposes the institute uses treated water from the Sewage Treatment Plant which is located appropriately between hostel and the garden.
- During load shedding and power cuts, generator facilities are available in the college.
- Transformers, DG sets are kept away from the main academic area and

protected with fencing and always under AMC.

- Proper safety measures have been taken for installation and upkeep of the equipment.
- There is an overhead water tank with submersible water pump for constant supply of water.
- Every floor in the block has a dedicated RO water filter.

CRITERION - V

STUDENT SUPPORT AND PROGRESSION

5.1 Student Mentoring and Support

5.1.1 Does the institution publish its updated prospectus/handbook annually? If 'yes', what is the information provided to students through these documents and how does the institution ensure its commitment and accountability?

Yes. The institution publishes its prospectus and handbook every year. The prospectus contains the college profile and details such as:
- Vision, Mission and Objectives.
- Courses offered and administrative rules and regulations.
- Highlights of facilities available and best practices adopted.
  - ❖ The handbook contains the VTU rules and regulations and college rules.

The institution ensures commitment and accountability to students through:
- Transparency in admission process.
- Enhancement of facilities.
- Assessment of student progress and adopting measures towards overall development of the students.
- Good governance
- BOG meetings where student interaction and feedback is taken.
- Academic audit and monitoring.
- Feedback system.
- Proctoring system.

5.1.2 Specify the type, number and amount of institutional scholarships / freeships given to the students during the last four years and whether the financial aid was available and disbursed on time?

The institutional scholarships/freeships given to the students during the last four years is tabulated below:

Sl. No	Type of Scholarship/ freeships	No. of Students received scholarship	Academic year	Amount
1.	B S Narayan Memorial Scholarship	19	2014-15	Rs.15000/- per student Total :19x 15000/- = Rs. 2,85,000/-
		18	2013-2014	Rs.15000/- per student Total :18x 15000/- =Rs. 2,70,000/-
		--	2012-13	Nil

		17	2011-2012	Rs.15000/- per student Total :17x 15000/- =Rs. 2,55,000/-
2.	Cash Award for VTU Rank holders	01	2014-15	Rs. 2500/-
		04	2013-14	Rs. 10,000/- (for student from TCE Dept. who secured 1st rank in VTU) Rs. 7500/- Rs. 2500/- Rs. 2500/- Total: Rs.22,500/-
		04	2012-13	Rs. 7500/- per student Total: 4 x 2500=15,000/-
		--	2011-12	Nil

- Yes. The financial aid was made available and disbursed on time.

5.1.3 What percentage of students receives financial assistance from state government, Central government and other national agencies?

Students of our institute receive financial assistance from state government, central government and other national agencies as listed below:

Year	Percentage of Students who received financial assistance		
	State government	Central government	Other national agencies
2012-13	8.3%	0.5%	-
2013-14	7.4%	0.4%	-
2014-15	7.2%	0.6%	-
2015-16	7.4%	0.6%	-

Scholarship for SC/ST students from the Government

Year	Number of students	Amount in Rupees
2015-16	170	47,10,410
2014-15	156	67,22,510
2013-14	156	94,76,850
2012-13	158	75,49,440
2011-12	155	62,77,070

Scholarship for BCM students

Year	Number of Students	Amount in Rupees
2015-16	236	16,57,920
2014-15	191	32,47,990
2013-14	169	61,03,500
2012-13	184	89,970
2011-12	-	1,26,800

5.1.4 What are the specific support services/facilities available for:
Students from SC/ST, OBC and economically weaker sections

- Reservation policy in admission is followed as per Government and University norms.
- Government scholarships are available for SC/ST, OBC as well as from management for economically weaker sections.
- SC/ST students are provided with separate book bank facility.
- B S Narayan Merit cum means scholarship for economically weaker section students.
- Fee concession for SC/ST and OBC students.

Students with physical disabilities:

- The institute has provided lifts, wheel chair, restrooms and ramps for easy movement of physically challenged students.
- Separate provisions are made for them to write exams.
- Separate seating arrangement in the examination is made for scribes and grace period is also provided for the needy students as per norms.

Overseas students:

- An international hostel that can accommodate two students per room with an attached bathroom is provided.
- A separate dining hall with customised menu.
- For Afghanistan students, training on English, Physics, Chemistry, and Computers is provided for six months before the commencement of first semester in order to equip them pursuing the BE course.

Student participation in various competitions/National and International:

- Students are encouraged to participate in national/ international competitions, seminars, workshops and design contests.
- Attendance given as per VTU norms.
- Prize winners are congratulated and recognised by displaying their work in the department student notice board and college magazine MANTHANA.
- Students are trained by game specific coaches.
- Selected student projects are awarded with financial support to compete at National / International levels.
- University champions are provided with financial support.

Medical assistance to students: Health centre, Health insurance etc.:

- Medical centre with a doctor is available within the campus.
- Ambulance is available to meet medical emergencies.

- College has provided medical insurance of Rs. 50,000/- for students.
- In case of accidental death an insurance of up to Rs. 1,00,000 is provided.
- All departments have got First Aid facilities.
- In the campus, hostel and canteen, care is taken to ensure cleanliness and hygiene. Fumigation is regularly done.

Organizing coaching classes for competitive exams:

- Study materials for competitive exams are given for reference from the library.
- Placement cell organises training on aptitude and English coaching, which helps students during competitive exams.

Support for "slow learners":

Following initiatives are taken to assist the slow learners.
- **Academic monitoring**: Identification of slow learners and mentoring through class teachers and proctors.
- **Proctoring system**: Regular proctor meetings are conducted. Every proctor counsels his ward on one to one basis to identify his/her weak areas.
- **Remedial classes**: Remedial classes are arranged to clarify the doubts of students, solving previous examination question papers, assignments.

Skill development (spoken English, computer literacy, etc.):

The institute organizes Professional skill development programs and Technical skill development programs.
- Professional skill development programs are organized for first year students.
- Placement cell organizes skill and personality development training.
- Every department organizes domain specific skill development programs usually during vacations.
- Institute encourage students to organise and participate in techno-cultural fests.
- Every department organizes technical fest in the odd semester.

- Exposure of students to other institution of higher learning/ corporate/business house etc.:
- The students undertake the interim projects in industries and gain insights into the working of industry, the student also do their project works in industries as a part of their curriculum.

- The institute has MoU with leading industries to train the students in contemporary areas and in R&D work.
- Every department arrange industrial visits for the students.
- College organizes a visit to IISc on its open day.
- Students are encouraged to undergo internships in the industry during vacation.
- Experts on various subjects from the industry are invited to interact with the students.
- Students are involved in industry sponsored projects (CSE dept.).
- Pre-placement talks are arranged by industry experts (Mechanical dept.).

Publication of student magazines:

- Institute provides ample opportunities for students to involve in cultural, technical and literary activities.
- Institute publishes magazine MANTHANA annually and Newsletter TECHSANCHALANA quarterly wherein, students are members of the editorial committee.
- Every department brings out a department newsletter bi- annually.
- Institute has come up with Techsaransh, a collection of the abstracts of all final year student projects. Its aim is to empower students to identify critical real-life problems in industry and society, explore issues relating to them, approach the problem from an interdisciplinary perspective, develop creative alternative solutions, and conduct a rigorous analysis of such solutions to reach the best.
- TACO is a college newsletter that was developed with the principle of allowing students to express their thoughts and ideas with no hindrance. TACO allows students to get involved and understand what is happening in the college.

5.1.5 Describe the efforts made by the institution to facilitate entrepreneurial skills, among the students and the impact of the efforts.

The Institution organizes events to inculcate entrepreneurial skills among the students through:
- **Entrepreneurship development cell**: Entrepreneurship Development cell in the institution promotes a strong culture of entrepreneurship.
- **Techtransform (annual technical fest):** Tech Transform -2016 was held on 19th and 20th of February 2016 with the intention of orienting and motivating students to opportunities in entrepreneurship and also to understand the challenges and benefits associated with it.
- In connection to this Technical sessions from CEO'S of start-up companies were organized and technical events and competitions were conducted in parallel sessions for students to show case their skills.

- **Start-up panel discussion series:** Start-up conclave event is organized by Placement department as part of Techtransform-2016. As part of this event, CEO's of the start-ups are invited to address the issues, challenges, strategies and processes to venture a start-up and shared their experiences with the students.

Impact of efforts:

- It inculcated a sense of entrepreneurship among the student community.
- Various events that were organized under EDC have helped in developing entrepreneurship culture.
- Students were exposed to the process involved in setting up of a start-up company and product development life cycle by direct interaction with young entrepreneurs/ product manufacturers.

List of some of the events organized by EDC

Sl. No.	Event Name	Date	Experts visited
1	Business plan	3-4-2016	Mr Adi from Adsell
2	On strategy for start-ups	20-4-2016	Mr Sajju jain, Co-founder of National skill development organization
3	"How Leader 's persuade action – a necessary skill for entrepreneurs	29-2-2014	Prof. Rakesh Godhwani from IIM –Bengaluru
4	Scaling up business with internal and external focus	21-2-2014	Mr Rajinish Menon, Director, Cloud Strategy, Microsoft Corporation
5	Entrepreneurship Innovation and Challenges	8-2-2014	Dr Anant Koppar, CEO, ktwo Technology Solutions
6	Awareness on Entrepreneurship	14-9-2013	Mr Ramesh , Manager , Entrepreneurship Development Institute
7	Energy Savings, Energy Auditing and related aspects	19-2-2016	Mr Venkatesan, Managing Director of E4Energy Solutions
8	E-commerce Portal.	19-2-2016	Mr.Ramesh K, AVP of PeopleTech Group

List of entrepreneurs in last five years

Sl. No.	Name	Dept.	Organization (Founder)	Service Line	Phone.No and Email id
1	Mr. Shashank S	EEE	Ekzen Robotics Ovt .Ltd	Industrial Automation	9844282325 communication@ ekzenrobotics.com
2	Mr Sonic Prabhu desai	Mech	Co founder)Head Business and Ops @campus diaries	Inspiring student community from across campuses and different disciplines to empower entrepreneurship skills	9916474368 sonic@campusdiaries.com
3	Saurabh Jain	ECE	S Jain Gupta & co	Accounting Firm	7676202606 Saurabh@jaingupta.com
4	Nikil Pathak	TCE	Think7	Software for Automotive manufacturing	9591760165 forzenkil@gmail.com
5	Karthik Netha	Mech	Northmen Beverages Limited	Manufacturing company-Non alcoholic beverages	8147476894 dvkarthiknetha@gmail.com
6	Suraj jana	CSE	Opencube labs	Defence and space	8553236639 surajjana2@gmail.com
7	Chandan raj	CSE	Aashayein foundation Organization	NGO-Education sector	9986198806
8	Trupthi	TCE	Niche	Event mgmt..	9902101556 trupti88@yahoo.co.in
9	sandeep	TCE	Vfine modulars	Kicthen & Interior equipment's design	9008943781 Sandeepsandy75 @gmail.com
10	Jayshree	TCE	Unigroup	Advt.Comp.	Jayshree.hedge@theunigroup.com
11	Akshat	ISE	Akshat solution	Software – Education Mgmt.	7488516630 ceo@akshatsolutions.net

Entrepreneurship Initiatives

Sl. No	Event	Organization	Year	No of Participants
1	Awareness on Entrepreneurship (Mr. Ramesh EDI , Director- Regional office Bengaluru)	Entrepreneurship Development Institute, Bengaluru	2013	60
2	Entrepreneurship Development program (Deputed 7 students for the program at DSCE)	Campus diaries	2013	07
3	How Leader's persuade action (Dr, Rakesh Godwani-EDC –IIM)	IIM Bengaluru	2014	80
4	Scaling up with internal and external focus (Mr. Rajinish memnon- Director – Entrepreneurship program)	Microsoft Corporation –Entrepreneurship Division	2014	118
5	Entrepreneurship Innovation & Challenges (Dr. Anant Koppar, CEO)	KTwo Technology Solutions	2014	84
6	Financial aspects- Entrepreneurship (Mr Varun padi, CEO)	Excubator Consulting Pvt.Ltd	2015	63
7	Project management (Deputed 16 students and 1 faculty)	PMI, Bengaluru	2015	17
8	Business plan (Mr Adi , Founder)	Adshell Pvt Ltd	2016	55
9	Business strategy (Mr . Saju jain, Founder and serial entrepreneur)	Standard skill development	2016	23
10	Bizshark (Competition) (Business plan, marketing , negotiation , branding, business aptitude test)	BMSIT&M	2016	210

Beneficiaries:

The total number of students participated in 10 activities are: 717 students
Number of Entrepreneurs: 12
The number of students who are in the process of incubation: 04

5.1.6   Enumerate   the   policies   and   strategies   of   the   institution   which promote participation of students in extracurricular and co- curricular activities   such   as   sports,   games,   Quiz   competitions,   debate   and discussions, cultural activities etc.

Additional academic support, flexibility in examinations:
- Students are encouraged to participate in all sports/cultural/extracurricular activities as per the college norms.
- Students who participate in co-curricular/extracurricular activities are provided with extra classes/laboratories.

Special dietary requirements, sports uniform and materials:
- Dietary requirements are provided to students representing the institution.
- Players representing the institution are provided with uniforms for their respective sport events.
- Travelling and daily allowances are provided for sports persons participating in inter collegiate tournaments.
- All materials and facilities required for sports activity are provided to the college team players and extended to other students for practicing.

Policies and strategies for students participating in cultural events:
- The institution encourages students to participate in cultural events limited to a maximum of two per semester.
- Every student is given equal opportunity to take part in cultural events.

5.1.7 Enumerating on the support and guidance provided to the students in preparing for the competitive exams, give details on the number of students appeared and qualified in various competitive exams such as UGC-CSIR- NET, UGCNET, SLET, ATE / CAT / GRE /TOEFL/ GMAT/ Central/State services, Defence, Civil Services, etc.

- Support is provided at institutional level by providing required books in the library.
- The college conducts guest lectures/workshops to orient students towards pursuing higher education and to prepare them for taking GRE / TOEFL /GMAT examinations.
- Number of students appeared and qualified in various competitive exams such as CAT / GRE /TOEFL/ GMAT/ Central/State services, Defence etc.
- An MoU was signed between the institution and M/s Rao Advisors for training and preparing the students to pursue higher studies in United States.

5.1.8 What type of counselling services are made available to the students (academic, personal, career, psycho-social etc?)

Hierarchical flow diagram of proctoring system
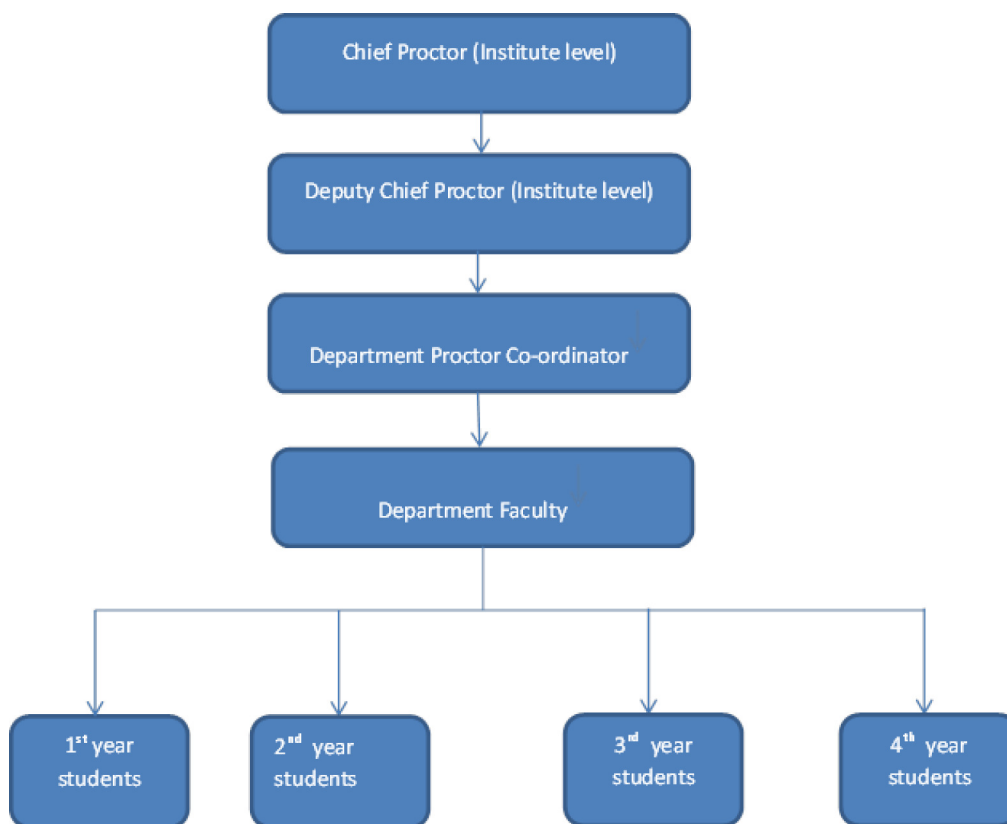
Academic Counselling:

- Academic monitoring committee monitors and counsels the students with regard to academic performance and attendance. Parent teacher meetings (PTM) are conducted periodically with the purpose of involving parents for enhancing student's performance.

Personal Counselling:

Proctoring system is established in the institute, where a proctor (respective department faculty) is assigned to each student. Objective of the proctor system is to monitor overall development of the student during his/her stay in the college. The system also aims to keep the parents/guardians informed about the academic progress of their children on a regular basis thus enabling them to guide their wards in the right direction.

- A Proctor mentors around 20 students. The proctor remains the same from the time a student admitted till he/she graduate from the institute. Students are counselled at a personal level by the proctors. A Parents Relation Cell (PRC) was established to strengthen the counselling system.

- The chief proctor of the institute will also function as the chief coordinator of the PRC.

Career Counselling:

- Placement and training cell provides coaching and career counselling to students at the institute and department level.
- Apart from placement and training cell, each department provides necessary counselling for selection, planning and preparation for their career.
- Experts from industry/academia/entrepreneurs are invited to share their experiences.

Psycho-social Counselling

- A professional counsellor has been appointed to address various psychological and personal problems of the students.
- There are committees like anti-ragging committee, grievance redress committee, anti-sexual harassment committee, women empowerment committee etc. Students can approach these committees for redress of their grievances and seek solutions for their psycho-social problems.
- Students with low esteem are identified and encouraged/ motivated thus enabling them to do better.

5.1.9 Does the institution have a structured mechanism for career guidance and placement of its students? If 'yes', detail on the services provided to help students identify job opportunities and prepare themselves for interview and the percentage of students selected during campus interviews by different employers (list the employers and the programmes).

Yes. The institution has a structured mechanism for career guidance and placement for the students.

- The placement and training cell of the institution arranges for campus placement from various reputed companies.
- Students are trained from 2nd year at department level and 3rd year at institute level so that they are well prepared to face written test and interviews in the campus selection process in the final year.

Career Guidance:

- At the department level, each proctor guides the students on career aspects.
- A career guidance cell is established in the Placement & Training department of the institute that provides inputs and guidance to the aspiring students on higher education.

- The institute has collaborated with National Tsing Hua University (NTHU) and Asia University of Taiwan, as a goodwill gesture to recommend final year students to their MS programmes.
- The students of all departments have participated in the programme on "studying abroad with scholarships".
- In view of the growing demand and interest of students to pursue their higher education, BMSIT&M has an MoU with M/s. Rao Associates, Bengaluru to provide an awareness and guidance to them on higher education opportunities in and around United States.

Training:

- The students are imparted training in aptitude and soft skills like effective communication, group discussion, body language, facing interviews, corporate etiquette, team work etc. These activities are facilitated by the Placement and Training Centre through various professional agencies.
- Every department trains their students on specific domain skills, programming skills and technical skills.

I Year

Sl. No	Course / Activity	Status of the Course	Duration	Resources
1	Kannada Language	Curricular	1 Semester	Visiting Faculty
2	Functional English (Communicate with confidence)	Curricular	1 Semester	Outsource

II, III and IV Year

Sl. No	Course / Activity	Type of the course	Level at which it is offered	Duration	Resources
1	Campus Recruitment Training	Supportive	V/VI BE and III/IV MCA	3 hours per week	In House
2	Bridge Course	Supportive	VI BE and IV MCA	1 to 2 days	In-house, Alumni, Outsourced
3	Campus Recruitment Training	Supportive	VI/VII BE and IV/V MCA	6 - 10 Days per Branch	Outsourced

- The departments are encouraged to impart special and industry specific trainings for the betterment of the students.
- NSS team and women empowerment cell provide awareness and training to the students on self-defence, fire fighting, women safety etc.

- The alumni interact with the students at regular intervals to educate them on industry requirements, provide career guidance and awareness on current technologies etc.

Training from Professional Agencies
Training of students by external professional agencies towards preparing them for life skills in general and campus recruitment in particular

Company Name	Batch	Dates	TRAINING	Days
M/s. Ethnus	2015-16	Jan and July 2015	APTITUDE AND SOFT SKILLS	6 DAYS OF APTITUDE AND 4 DAYS OF SOFT SKILLS
M/s. Innovations Unlimited		Jan and July 2015	APTITUDE AND SOFT SKILLS	
M/s. Academy for Skill and Knowledge, Bengaluru	2014-15	July 2014	SOFT SKILLS	6 DAYS PER BRANCH
M/s. Applied Management Skills and Services, Bengaluru				
M/s. Innovations Unlimited		July 2014	APTITUDE	4 DAYS PER BRANCH
M/s. Academy for Skill and Knowledge, Bengaluru	2013-14	July 2013	SOFT SKILLS	6 DAYS PER BRANCH
M/s. Applied Management Skills and Services, Bengaluru				
M/s. Innovations Unlimited		July 2013	APTITUDE	4 DAYS PER BRANCH
M/s. Academy for Skill and Knowledge, Bengaluru	2012-13	July 2012	SOFT SKILLS	4 DAYS PER BRANCH
M/s. Applied Management Skills and Services, Bengaluru		June/July 2012		
M/s. Innovations Unlimited		June/July 2012	APTITUDE	2 DAYS PER BRANCH
M/s. Academy for Skill and Knowledge, Bengaluru	2011-12	July 2011	SOFT SKILLS	4 DAYS PER BRANCH
M/s. Applied Management Skills and Services, Bengaluru		June/July 2011		
M/s. Innovations Unlimited		June/July 2011	APTITUDE	2 DAYS PER BRANCH

Placement:

- The institute has an exclusive Placement and Training Centre to facilitate on-campus Placement opportunities to the students.
- The Centre has a senior faculty member in-charge of the activities. The Centre facilitates pre-placement training in soft skills to all the registered pre-final year students to enable them to acquire necessary skills to meet the current corporate requirements.
- The centre facilitates students to have sufficient opportunities to get job/s of their choice. As many as 150+ companies have visited the campus for recruitment in the past and on an average more than 50 top and well established companies across the country visit the institute for campus recruitment. Every year, on an average, 85% of eligible and interested students from all the programs are being placed.
- Placement cell conducts various activities to make the students employable. The Placement Centre facilitates ten days of training in soft skills and aptitude, to all the registered students during their pre-final year, which is mandatory for them. In addition, students are oriented towards placement activities from their 5th semester, through sessions from the final year students. The students are given a choice of opting for two job opportunities (choice being one core & one IT Company during the recruitments), in general.
- The Percentage of eligible UG/PG students' placements for the past four passed-out batches is provided here under:

Year	2011-12	2012-13	2013-14	2014-15	2015-16
% of eligible students placed	87.87	73.99	87.21	89.54	87.65

Placement Facilities:

- There is a full-fledged placement department in the institution. It is headed by the Placement Officer (senior faculty member) and supported by experienced staff.
- It has well equipped modern communication facilities to interact with the industry and students for prompt and quick response. The department is Wi-Fi enabled.

Infrastructure & Facilities:

Sl. No.	Facilities	Quantity
1.	Placement Department	1
2.	Seminar Hall	1
3.	Placement Officer Room	1
4.	Interview & Group Discussion Rooms-Well equipped	7
5.	Reception Area	1
6.	HR Room	1

7.	Career Counselling Room	1
8.	Full Time Officer	1
9.	Non – Teaching	2
10.	Online test facilities	200 nodes

Industry-Interaction:

To make academics more relevant with the industry requirements, BMSIT&M has been signed MoUs with

- Texas Instruments
- KPIT Technologies
- Opencube Labs
- Valluri Technology Accelerators (VAT)
- Tata Elxsi Pvt.Ltd.
- Volvo India Pvt.Ltd.
- Federal-Mogul
- Steinbis Technology Transfer India
- National Educational foundtion

Guest lectures and special invitee lectures are being organized for the benefit of students from industry experts through the Placement Centre and concerned departments.

Internship opportunities have been provided by various companies viz. Aricent, Yahoo, GNostice, Abyeti Technologies, SAP Labs, Siemens, Cerner, KPIT, Samsung R&D etc.

5.1.10 Does the institution have a student grievance redress cell? If yes, list (if any) the grievances reported and redressed during the last four years.

Yes. The institution has a student grievance redress cell.

Year	Complaints Recieved	Action Taken	Impact and Observations
2012-13	Nil	Nil	No reported untoward incidence
2013-14	1	Committee formed and complaint investigated, report submitted on findings to the administration	Suitable action taken by the administration with regard to the complaint received
2014-15	Nil	Nil	No reported untoward incidence
2015-16	01	Complaint processed	Suitable action taken by the administration with regard to the complaint received

5.1.11 What are the institutional provisions for resolving issues pertaining to sexual harassment?

- The institution has an "Anti-Sexual harassment" committee, whose objective is to handle any issues pertaining to sexual harassment.

- A committee to prevent sexual harassment consisting of five members out of whom one is an NGO has been constituted in the year 2006. The function of the committee is to consider and redress the complaints of sexual harassment at work place. Two meetings are to be held per year. However the meeting may be scheduled as and when necessary.
- The following activities have been organized to bring about the awareness among the lady members of the staff and students.

Year	Measures taken to avoid any untoward incidence	Complaints received if any	Action taken, If any	Impact and observations
2012 -13	Awareness regarding committee and its members	Nil	Nil	No untoward incidence reported
2013 -14	Awareness regarding committee and its members	Nil	Nil	No reported untoward incidence
2014 -15	Awareness regarding committee and its members Seminar on "Women's safety in the work place", 6th September 2014	Nil	Nil	No reported untoward incidence

5.1.12 Is there an anti-ragging committee? How many instances (if any) have been reported during the last four years and what action has been taken on these?

Yes.

Anti-Ragging committee:

1. As per the UGC/VTU notifications anti- Ragging review committee headed by Principal and anti- Ragging monitoring committee was constituted.
2. Anti-ragging flying squads were constituted to pay surprise visit to gents and ladies hostel to prevent the menace of ragging.
3. The anti-ragging committee names and contact details are displayed on notice boards, Hostels to enable the students to contact in case of any ragging activity.
4. Anti-ragging catchphrases are displayed prominently in College premises, hostels, and buses and in canteen.
5. The squad visits to both the hostels were carried out from 1st August to 15th September every year.
6. The squad members visited the hostels in late hours and register was maintained to monitor their visit.
7. Monitoring was continuously carried out in College premises, hostels, buses and canteen.
8. In addition to above visits, deputy wardens and resident warden will be monitoring students.

9. CCTV cameras have been installed in all the floors of the hostel for monitoring.

Due to the above preventive measures taken, no ragging instance was reported either from the institute or from the hostels.

10. Institute will undertake an affidavit from students regarding anti-ragging.

11. Report of the anti – ragging committee has been sent to the Registrar, VTU.

5.1.13 Enumerate the welfare schemes made available to students by the institution.

BMSIT&M welfare committee is constituted in the institution for the welfare of students. The schemes covered under this are as follows.

1. **Medical Insurance:** Every student of the institute has been covered for a medical insurance of Rs.50,000/- which is towards hospitalization and Rs.1,00,000/- towards accidental death.
2. **Medical Centre and Doctor in Campus**: The campus has a medical centre and a doctor will be available for any emergency.
3. **24x7 Ambulance for any medical emergency**: A well-equipped ambulance with a permanent driver for medical emergency.
4. **24x7 security for campus and hostels**: The security services are outsourced to authorised service providers for campus and hostels.
5. Fee payment in instalments for needy students, education loan and fee concession are provided from the trust.
6. Concession in the fee for the children of the faculty of BMSIT&M.
7. **Scholarships**:-

Apart from the scholarships given by the Government and Private Agencies, following scholarships are being given by the Management to merit students with an amount of Rs.15, 000/- per student.

- B.S. Narayan Scholarship for meritorious students.
- B.M. Sreenivasaiah merit cum means scholarship.
- The college also gives special awards to students who secure ranks in VTU examinations.

8. **proctoring :**

Each and every student will have a proctor in the department who will be responsible for mentoring the overall progress of the student. The mentor will be responsible for interacting with the students and providing necessary support and encouragement for the enhanced performance of the student. They are also responsible for providing relevant and appropriate information to the guardians regarding their wards.

5.1.14 Does the institution have a registered Alumni Association? If 'yes', what are its activities and major contributions for institutional, academic and infrastructure development?

- Yes. The institute is having registered alumni association. BMSIT & Management Alumni Association is a registered body under the Registrar of Societies, Government of Karnataka.
- The alumni association organizes annual alumni meet with an objective of connecting passed out students.
- The alumni meet is a platform to discuss the current industrial scenarios.
- Feedback from the alumni will be collected and analysed to fill the gap between the industry expectations and the student skills to make them employable.

To have an interaction among the alumni, faculty members and students, alumni portal (https://bmsit.ac.in/alumni) was developed.

- The objective is to develop a complete database of alumni to link with the social media networks, posting of jobs and to have discussion forums.
- The institute has a well maintained alumni database which serves the purpose of having a continuous interaction with the alumni.
- Alumni are also nominated as the Members of Department Advisory Boards.
- The valuable inputs from the Alumni regarding the course enables augmenting the delivery methods.
- The alumni association conducts a series of technical talk by alumni, which brings about an awareness regarding the current trend in the Industry and the readiness expected by the final year students to get in to the industry.
- The soft skill program by the alumni results in having the right attitude, improvement in verbal & written communication, and personality development.

5.2 Student Progression

5.2.1 Provide the percentage of students progressing to higher education or employment (for the last four batches). Highlight the trends observed.

Student Progression		Percentage (%)				
		2012-16	2011-15	2010-14	2009-13	2008-12
UG to PG	ECE	5	5	5	8	11
Employed ➧Campus selection		76	67	71	43	77
➧Other than campus recruitment			3	4	2	10
UG to PG	CSE	2	4	5	8	8

Employed • Campus selection • Other than campus recruitment		58	61 0	62 4	50 13	58 3
UG to PG	EEE	6	6	2	4	7
Employed • Campus selection • Other than campus recruitment	EEE	32 18	50 8	46 6	43 5	45 3
UG to PG	ISE	4	8	6	NA	NA
Employed • Campus selection • Other than campus recruitment	ISE	41 2	68	63	NA	NA
UG to PG	ME	1	2	1	4	0
Employed • Campus selection • Other than campus recruitment	ME	16 1	31	25 4	29	38
UG to PG	TCE	3	8	9	14	6
Employed • Campus selection • Other than campus recruitment	TCE	31 3	31 8	33 9	33 10	52 7
	MCA	2013-16	2012-15	2011-14	2010-13	2009-12
PG to M.Phil.	MCA	-------	-------	-------	--------	-----
PG to Ph.D.	MCA	-------	1	-------	--------	-----
Employed • Campus selection • Other than campus recruitment	MCA	28 5	12 34	12 39	34 21	39 0

Trend Summary: the available data sample indicates that a small percentage of students are going for higher studies. Over the years, the data shows a descending trend (UG to PG).

5.2.2 Provide details of the programme wise pass percentage and completion rate for the last four years (cohort wise/batch wise as stipulated by the university)? Furnish programme-wise details in comparison with that of the previous performance of the same institution and that of the Colleges of the affiliating university within the city/district.

Item	Dept.	BATCH 2012-2016	BATCH 2011-2015	BATCH 2010-2014	BATCH 2009-2013	BATCH 2008-2012
Number of students admitted in The corresponding First Year + admitted in 2nd year via lateral entry and separate division if applicable	ECE	92+18	93+18	92+17	91+9	60+9
Number of students who have graduated in the stipulated period		100	97	93	86	63
Pass Percentage		91	87	85	86	91
Number of students admitted in The corresponding First Year + admitted in 2nd year via lateral entry and separate division if applicable	CSE	90+21	93+18	92+18	80+9	63+9
Number of students who have graduated in the stipulated period		106	105	94	78	63
Pass Percentage		88	89	85	88	90
Number of students admitted in The corresponding First Year + admitted in 2nd year via lateral entry and separate division if applicable	EEE	60+11	60+11	60+12	57+6	59+9
Number of students who have graduated in the stipulated period		66	61	65	58	62
Pass Percentage		93	86	90	92	91
Number of students admitted in The corresponding First Year + admitted in 2nd year via lateral entry and separate division if applicable	ISE	60+11	57+12	55+12	NA	NA
Number of students who have graduated in the stipulated period		57	60	54	NA	NA
Pass Percentage		81	87	81	NA	NA
Number of students admitted in The corresponding First Year + admitted in 2nd year via lateral entry and separate division if applicable	ME	64+12	67+12	60+7	60+8	59+7
Number of students who have graduated in the stipulated period		57	71	59	62	49
Pass Percentage		75	90	88	91	74
Number of students admitted in The corresponding First Year + admitted in 2nd year via lateral entry and separate division if applicable	TCE	51+12	52+12	58+12	55+6	61+8
Number of students who have graduated in the stipulated period		47	50	49	47	60

Pass Percentage		75	78	70	77	87
Item		**BATCH 2013-2016**	**BATCH 2012-2015**	**BATCH 2011-2014**	**BATCH 2010-2013**	**BATCH 2009-2012**
Number of students admitted in The corresponding First Year + admitted in 2nd year via lateral entry and separate division if applicable	MCA	46	52	60	57	56
Number of students who have graduated in the stipulated period		21	38	44	57	56
Pass Percentage		46	73	73	100	100

Programme-wise university results are compared for five batches and found that the average performance by way of result percentage is in the range of 74 - 93. When compared with similar data of a neighbouring college affiliated to the same university it varies only by ± 2%.

5.2.3 How does the institution facilitate student progression to higher level of education and/or towards employment?

The institution facilitates student progression towards higher education as well as employment.

- The placement cell organizes seminars/workshops on higher education and carrier opportunities abroad. This not only motivates students but also helps in providing first-hand information about studies abroad.
- The placement cell organizes classes to develop inter personal skills among students.
- Faculty members guide final year students in research oriented projects and also encourage them to publish papers from such work. This helps students to secure admission in reputed universities abroad.
- Library has resources such as periodicals and books on competitive examinations, employment news etc. for the use of the students. This is of enormous help to the student community in preparing for competitive exams based on which admission is granted in foreign universities.
- Any announcements in media by way of advertisements, government / private notifications related to higher studies and employment are made available to students through circulars, notice board displays and classroom interactions.
- Important concepts and tips for solving competitive examinations are also provided during regular teaching hours.
- Students are encouraged to attend internship training in industries to

have an exposure to new technologies employed in industries which would help them to make right choices.

- The institution has signed MoUs with consulting organizations engaged in assisting students seeking admission to higher education both in India and abroad.
- Faculty provide letters of recommendation to students applying abroad for higher studies.

5.2.4 Enumerate the special support provided to students who are at risk of failure and drop out?

- Special attention is given to weak students from the beginning of the semester. After analysing their 1st Internal Assessment marks, remedial classes are conducted on important topics and more number of problems are solved in the respective subjects.
- University question papers of previous years are also solved and assignments are given to them and later evaluated indicating their mistakes and guidelines to improve their performance in the University examination is given.
- Their performance in the second and third internal assessment is observed and if needed further remedial classes on selected topics for the University examination is conducted.
- Extra lab slots are provided for repeating/practising experiments.
- Students are encouraged to attend personal coaching by their respective faculty.
- Students who do not perform well are counselled.
- Parents are informed about the ward's poor performance and are also a part of the proceedings of the meeting.

5.3 Student Participation and Activities

5.3.1 List the range of sports, games, cultural and other extracurricular activities available to students. Provide details of participation and program calendar.

Following are the list of sports activities conducted in the institute.

Outdoor games	Indoor games
Cricket (Men) Athletics (Men & Women), pole vault, water polo, Cycling (Men), Football (Men & Women), Kabaddi (Men), Kho-kho (Men), Swimming (Men), Tennis (Men & Women), Volleyball (Men & Women) and throw ball	Table Tennis (Men & Women), Chess Badminton (Men & Women), Taekwondo, Basketball (Men), Gymnastics (Men & Women), Weightlifting (Men), Wrestling (Men & Women), Wrestling judo.

The table below shows the details of co-curricular activities conducted:

Activity	Date	Organized by
Invited talk to impart education in engineering and moulding engineering students to crack competitive examinations	8 /09/ 2016	IEEE Student chapter
Techkshetra 2K16-Department Fest-ECE	24/08/2016	IEEE Student chapter
Tech Transform-Biz shark Event	19th -20th February 2016	IEEE Student chapter
Techkshetra 2K15-Department Fest	30/09/ 2015	IEEE Student chapter
"Intuitive Circuit design": A technical talk by BMSIT&M-Alumni, Mr. Prachet Verma	25/04/2015	IEEE student chapter
Awareness Program for the students about NBA Accreditation:	21/02/2015	ISTE
Seminar on Community development, Child Welfare, Education and Literature	17/01/ 2015	IEEE Student chapter
A technical talk on "Basics of Discrete control systems (DCS) : Programmable Logic Controllers, Supervisory Control and Data Acquisition & Field Devices"	21/02/2015	ISTE
Elecsim – ECE Fest	26/09/ 2014	IEEE Student chapter
A one day workshop on Optical communication and networks by Photonics Lab, IISc, Bengaluru	20/09/2014	IEEE student chapter
Two Day workshop on "Product Building Using Raspberry Pie" in association with IOTA CELL Bengaluru	29/03/2014 to 30/03/2014	IEEE Student Branch
Inauguration of IEEE Student chapter	21/02/2014	IEEE student chapter
Technical talk on "GNU Compiler & Debugger" by SeaChange International & Associated with FSMK Bengaluru	15/02/2014	ISTE
Thin film solar cell and its fabrication- a technical talk from HHV, Bengaluru	21/08/2014	Akshay Urja Club.
An Industrial visit to Kolar HVDC and Kolar photovoltaic power plant	22/3/2014	Akshay Urja Club.
An industrial visit to Kolar Solar photovoltaic power plant	18/04/2013	Akshay Urja Club.
Technical talk on "Energy Audit and Conservation" by Sunshubh Renewables	6/04/2013	Akshay Urja Club.
Invited talk on Arduino and Rasberry-pi based projects	22/09/2012	ISTE Student Chapter
Technical talk on- "Role of wind energy" by PRDC Pvt Ltd	9/4/2012	Akshay Urja Club.
An industrial visit to Mahatma Gandhi Renewable energy production unit, Near GKVK, Bengaluru	02/04/2012	Akshay Urja Club.

Technical seminar on computer aided electrical drawing by Mr. Mohan Prabhu CADD expert, Bengaluru	12/11/2013	ISTE
Technical talk on Industrial Automation by Prolific Systems Pvt. Ltd.	27/09/2012	ISTE
VIDYUT – An Annual departmental Technical Festival.	15/09/2014	Department of E&EE
UTSAHA – Annual Techno-Cultural Festival	2011-12 2012-13 2013-14 2014-15	Organized by the Institution every year in the even semester

Table below shows participation and achievements of students in sports:

Activity	Date	Participants
Represented VTU in Haryana Kurushektra University wrestling competition	Jan 2015.	Vijayalakshmi S
Runners up in table tennis representing VTU Bengaluru North zone	September 2014	Vijayalakshmi S and Megana N R Gowda
Table Tennis Men team secured first place in VTU Bengaluru North zone in Inter Zone Collegiate Table Tennis tournament. The team included one of the student from E&EE dept.	6th to 8th March 2013	Manish Deshpande
Table Tennis Women team secured third place in VTU Bengaluru North zone in Inter Zone Collegiate Table Tennis tournament. The team included one of the student from E&EE department	6th to 8th March 2013	K Lavanya S Rao
Course on "Learn to Swim and Karnataka Swimming Association"	Feb – 2013	Vishal Ajjampur Cleared the course
Karnataka Men's Water polo Team, 66th senior national Aquatic Championship, Pune	Oct – 2012	Vishal Ajjampur Finished at 6th place

5.3.2 Furnish the details of major student achievements in co-curricular, extracurricular and cultural activities at different levels: University / State / Zonal / National / International, etc. for the previous four years.

Table below shows major student achievements in co-curricular activities and extracurricular activities:

Activity	Year/Date	Students achieved
Winners of WIPRO Earthian award 2014	2014-15	B Susruth Reddy, Kshitij Ballal, Anusha Sridharan, Aman Sachan, Mariam Tahoora and Anjali Sivadas
Third place in the first ever quiz BEST 2014 (Bharath Electronics Student's Trophy) organized by BEL.	19/11/2014	Aranya Khinvasara and Aniruddha Bharadwaj

Karnataka Sangeetha Nrithya Academy's Scholarship by the Govt. of Karnataka	2014-15	Aniruddha Bharadwaj
Best outgoing student award by Cognizant Technology Solutions Pvt. Ltd.	2014-15	Fiona Ann Rose
Best outgoing sportsman award	2014-15	Vishal Ajjampur
Best project work for the project titled "Magnetically Levitated Vertical-Axis Wind Turbine" by Rotary Bengaluru Udyog and Standard International Precision Engineers Pvt. Ltd., Bengaluru.	02/05/2015	Mohit Bisht, Srijan Srivastava, Ajay Kumar, Vibhuti Bhushan
Third prize for the project titled "Magnetically Levitated Vertical-Axis Wind Turbine" in PROJECT EXPO – 2015.	2015	Mohit Bisht, Srijan Srivastava, Ajay Kumar, Vibhuti Bhushan
Published a paper titled "Magnetically Levitated Vertical-Axis Wind Turbine" in the First National Conference on Green Computing Technology , Bengaluru.	07/05/2015	Mohit Bisht, Srijan Srivastava, Ajay Kumar, Vibhuti Bhushan
Best paper award for the paper titled " Design and Development of Piezo Based Smart System" in the First National Conference on Green Computing Technology , Bengaluru.	07/05/2015	Vishal Ajjampur, Yaman Chaturvedi, Sandeep Kumar
Published a paper titled "Distribution Transformers Protection Using Artificial Intelligence" in the National Conference on Global Trends in Electrical Engineering, Bengaluru.	17/04/2015	Sandeep R Patil, Shimit Mondle
Published a paper titled "MEMS Based Surface Acoustic Wave Sensor to Detect Greenhouse Gases" in National Conference on Emerging Trends in Nano Applications, Bengaluru.	March 27-28, 2015	Anusha C S, Cini M Mohan, Ranjani K, Soundarya M Sagar
First Prize at the 'Climate Change Educational Program–2013' Quiz organized by the Divecha Centre for Climate Change at Indian Institute of Science (IISc).	2013	Aranya Khinvasara and Aniruddha Bharadwaj
Presented a paper titled "Bescom the best Discom" conducted by IEEE Bengaluru Sector (IEEE BRV VARDHAN 2013 UG/PG PAPER CONTEST)	25/10/2013	Fiona AnnRose Joseph and Arvind B
Best Student Award by ISTE Karnataka	2012	Prachet Verma
Paper presented titled "Sophisticated Pulse Sensor for Non-Invasive Health Monitoring Systems – A Life Saving Device" in IJACECT	2012	Prachet Verma Singh, Anirudh, N Joshi
Best paper Award for the paper titled "Monitoring System – A Life Saving Devics ", in ICRTET	2012	Prachet Verma Singh, Anirudh, N Joshi

5.3.3 How does the college seek and use data and feedback from its graduates and employers to improve the performance and quality of the institutional provisions?

- The institute collects feedback from its graduates through graduate survey.
- The employer's survey is carried out to understand the performance and quality of our graduates. The inputs given by the employer is considered for further improvement and also preparation of Vision and Mission statements.
- The alumni of each department are invited to guide their juniors on campus, about the industry expectations. This enhances employability.
- Institute organizes alumni meet annually and collects the feedback about industry needs as well as institutional provisions.
- The feedback through annual employers' meet brings forth the current trends and their expectations in industry.

5.3.4 How does the college involve and encourage students to publish materials like catalogues, wall magazines, college magazine, and other material? List the publications/ materials brought out by the students during the previous four academic sessions.

- College brings out its annual techno cultural magazine "MANTHANA". Students are part of the editorial committee. Students are encouraged to write and publish articles of their interest.
- Students are encouraged to design quarterly newsletter "TECHSANCHALANA" with one student as editorial committee member.
- Students' projects abstracts are published in "TECHSARANSH" annually.
- For techno-cultural college fest "UTHSAHA" attractive posters prepared by students which is ably facilitated by institute.
- Students are encouraged to present and publish their project work in various national and international conferences and journals.
- TACO is a college newsletter that was developed with the principle of allowing students to express their thoughts and ideas with no hindrance. TACO allows students to get involved and understand what is happening in the college.

5.3.5 Does the college have a Student Council or any similar body? Give details on its selection, constitution, activities and funding.

No student council in the college.

5.3.6 Give details of various academic and administrative bodies that have student representatives on them.

Institute has student representatives in academic/administrative bodies.
- Department advisory board (DAB).

- Alumni student coordinator acts as an interface between alumni and the administration.
- Student representatives are invited for BOG meetings.
- Student chapters
- NSS
- News letter
- Website designing
- College magazine
- Department magazines
- Hostel day
- Seminars
- Tech fests
- Conferences/ workshops.
- Canteen Committee.

5.3.7 How does the institution network and collaborate with the Alumni and former faculty of the Institution.

- The institution network and collaborate with the Alumni and former faculty of the Institution through:
- Alumni association registered under Government of Karnataka.
- Organizing institute level alumni meet annually (during last week of January). The achievers among the old students of the institute are honoured in the meetings.
- Inviting alumni to conduct few talks, and train students ahead of placements.
- Alumni are invited to college as resource persons for guest lectures, seminars/workshops, and judges for competitions, cultural programmes and sports.
- Former faculty are part of joint publications of research work.

CRITERION - VI
GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 Institutional Vision and Leadership

6.1.1 State the vision and mission of the Institution and enumerate on how the mission statement defines the institution's distinctive characteristics in terms of addressing the needs of the society, the students it seeks to serve, institution's traditions and value orientations, vision for the future, etc.?

VISION

To emerge as one of the finest technical institutions of higher learning, to develop engineering professionals who are technically competent, ethical and environment friendly for betterment of the society.

MISSION

Accomplish stimulating learning environment through high quality academic instruction, innovation and industry-institute interface.

The mission statement of the institute spells out the way in which it wants to realize its vision of producing such engineers who are valuable to the society and industry. As per its mission, the institute strives to create a stimulating learning environment for all by ensuring high quality academic and research inputs, encouraging innovative efforts and keeping current with industry and societal needs.

- All educational programs of the institute are closely guided by the stated program outcomes. All effort is made to ensure that the graduating engineers of the programs possess the competencies defined in the program outcomes, which reflect the societal and industrial needs.
- Although the institute is a university affiliated institute, teachers are encouraged to go beyond the university syllabus and enlighten students on the contemporary developments in technology and business management. A good number of value addition programmes are conducted to fill the gap found in University syllabus.
- While traditional methods of teaching like chalk and talk, and use of multi-media are the backbone of instruction delivery methods, modern methods like flipped classes, collaborative learning, etc. are also used.
- A variety of co-curricular and extra-curricular activities are facilitated for students to develop a holistic personality impregnated with entrepreneurship, ethical behaviour, environmental and societal concerns.

- The teachers are encouraged to engage in high quality research, wide publications and innovative activities. They are encouraged and supported to enhance their interaction with the industry.
- The institution's governance has created and maintained a cordial atmosphere wherein the teachers are highly respected and provided with almost all facilities enjoyed in Government institutes, and sometimes even more.
- The Board of Governors (BoG) has institutionalized ethical practices in all its transactions which serve as guiding principles for all its employees and students.

All the above components of the institute's mission statement show the institution's distinctive characteristics in terms of addressing the needs of the society and students, and reflect the institution's traditions and value orientations, and vision for the future.

6.1.2 What is the role of top management, Principal and Faculty in design and implementation of its quality policy and plans?

- The Board of Governors (BoG) comprised of the Trustees, Chairman, representatives from the institutes of national importance, University, AICTE, DTE, industry and the Principal sets a policy environment where the quality of education is paramount.
- The Principal and the Heads of the Departments' council guide the internal quality assurance cell (IQAC) of the institute to operationalize the policy guidelines with the cooperation of all the concerned. The IQAC (with selected senior faculty members as members) specifies the criteria and sub-criteria purported to assess the extent of quality assurance by the institution.
- The Principal, in consultation with the HoDs prepares the institutional calendar of events keeping in mind the University prescriptions. Faculty council of every department, with the respective HoD as the Chairman, prepares the academic plans in terms of subject allotment, time schedules, lesson plan, work diary, etc. The faculty members and the technical support staff work as per plans to impart quality education to students.
- IQAC periodically collects information on various quality parameters relating to academic and non-academic activities, analyses the data, interprets the findings and provides feedback to the concerned departments about the gap between plans and actual implementation. Reports of these gaps also reviewed by the HoDs' Council and the Principal. Suitable actions are initiated to correct the deviations and ensure quality is adhered to in education provided.

6.1.3 What is the involvement of the leadership in ensuring?

- **The policy statements and action plans for fulfilment of the stated mission**

  The BoG provides a policy framework for the institute, within which the institute plans and implements action plans to achieve its strategic objectives. The BoG which meets once in three months reviews the extent of attainment of strategic objectives of the institute and appropriately advises the Principal, AO or any other functionary as may be deemed necessary, for the fulfilment of institute's stated mission. The observations and suggestions of the BoG are considered/ implemented to ensure that the institution does not deviate from its stated mission. Substantial autonomy in administration is provided to the institutional leadership i.e., the Principal, AO, and the HoDs/Sections to bring about improvements in the system. The institute leadership involves all faculty members while devising and implementing action plans to realize the institution's mission.

- **Formulation of action plans for all operations and incorporation of the same into the institutional strategic plan.**

  The strategic plan prepared by the institution is reviewed and approved by the BoG. The institutional leadership ensures that these short-term plans are consistent with the strategic plan which is in line with the institute's mission. The progress due to the implementation of short-term and medium-term action plans are presented before the BoG. Thus, under the guidelines of the management, action plans for all operations are prepared by the institution with the involvement of all faculty members including the Principal and the Administrative Officer (AO).

- **Interaction with stakeholders**
  - ❖ The management considers viewpoints of all the stakeholders such as employees, students, parents, alumni, academia, industry, etc., before making related policy decisions. The student representatives are always invited to express/share their feelings and experiences with the members of the BoG.
  - ❖ The Principal regularly conducts town-hall meetings with staff members to hear the opinions and suggestions of the employees of the institution and with the student community to know their special requirements/problems.
  - ❖ The institute conducts Alumni meet and Employers' meet to interact with them and take their inputs to improve its education programmes. Representatives of the Alumni and employer communities are also included in the advisory boards of all

departments for continuous feedback and suggestions for improvement.

❖ The views of parents are obtained through parent-teacher meetings; the views of students are captured through meeting with proctors, etc., and are conveyed to the institute's administration and the BoG.

- **Proper support for policy and planning through need analysis, research inputs and consultations with the stakeholders:**

  ❖ The institute leadership advises the HoDs to conduct in their departments, a need analysis in terms of technical and pedagogical competencies at the beginning of the academic year. This is to be done keeping in mind the strategic and medium term objectives of the department.

  ❖ Regular department level staff meetings, HODs meeting with Principal, and internal audits help the conduction of need analysis.

  ❖ The Research Council comprising of Chairman, BoG as Chairman, the Principal as member, Dean (Research) as Secretary and other members implement the research policy of the institute, and provide necessary direction and support to the research effort by faculty members and students.

  ❖ BoG, Principal and HoDs are all keen on inviting feedback/inputs from various stake holders so as to continuously improve the system. A variety of interactions (such as parent-teachers' meeting and alumni association meetings, etc.) are conducted with the stakeholders.

- **Reinforcing the culture of excellence**

  The BoG and the institutional leadership follow the practices given below to reinforce the culture of excellence:

  ❖ Treat faculty and staff members with great respect and provide them with all that is legitimately due for them.

  ❖ Depute faculty members to advanced training programmes to acquire expertise in domain, pedagogical and administrative matters.

  ❖ Extend study leave for faculty members to pursue higher education and research.

  ❖ Create ambience for research activities. Fund selected research projects of faculty members.

  ❖ Facilitate skill-oriented training for non-teaching staff members.

  ❖ Reward students' achievements through several scholarships and merit prizes.

  ❖ Provide welfare schemes such as health insurance and interest-free loans for the purchase of laptop.

- **Champion organizational change**
  - ❖ The leadership constantly advocates bringing in excellence in institutional activities. This is evidenced by the fact that the Institution invites celebrities/people of eminence/scientists/academicians/industry leaders to its campus for all functions/celebrations be it cultural, academic or technical.
  - ❖ It encourages adopting flexible approach to institutional development. Creation of ambience and building capacity for effective teaching-learning, research & consultancy, and innovation activities are major steps towards championing organizational change. Dean (R & D) of the institution interfaces with senior faculty members with research background and identifies clusters which can be focus areas for future developments.
  - ❖ The institution also works towards enhancing the measure of co-curricular and extra-curricular activities, improving the quality of cultural festivals, and encouraging the students to not only organize and participate, but also create a model example for other institutions to follow. The institution envisages a student group that can work towards this goal.

6.1.4 What are the procedures adopted by the institution to monitor and evaluate policies and plans of the institution for effective implementation and improvement from time to time?

- ❖ The BoG has given adequate autonomy to the Principal and HoDs in this regard. The institution has constituted several committees with representations from various departments to implement different policies and plans.
- ❖ Periodic review meetings are organized at various levels to monitor and evaluate the impact of policies and plans with regard to quality of education delivered, implementation of decisions of the management, improving various processes and procedures, etc.
- ❖ Regular feedback at different levels from all the stakeholders (feedback from students on faculty competencies, infrastructure, programme effectiveness, etc.) also helps in this regard.

6.1.5   Give details of the academic leadership provided to the faculty by the top management?

The three key pillars of academic leadership provided by the institution are: Transparency, Autonomy and Accountability. The Principal provides academic leadership to the faculty community through well-designed academic systems and procedures. The systems and processes are transparent and clear to all stakeholders. All reasonable information is made available to any of the stakeholders needing it. The institution has provided the Principal with adequate autonomy (academic, administrative, financial and managerial)

so that quick and effective decisions can be taken. The Principal consults the council of HoDs while making critical decisions. It would be a participatory decision making process. The HoDs who are a part of this decision making process tend to own the decisions and are responsible for implementing them. They are accountable for the outcome of the decisions.

The academic leadership is very effective as good policies exist in place. The institute has a good governance document with standard procedures specified for various academic and administrative functions. For instance, sabbatical policy, innovation policy, research seed grant policy, selection and promotion policy, Faculty development policy, procurement procedure, etc. Adherence to these practices is continuously monitored.

The faculty, who is the course coordinator, has complete autonomy on how to deliver the instructions, set question papers, evaluation methods subject to university norms. The department has the freedom to organize technical talks, faculty development programmes, workshops, seminars and conferences, technical fests and competitions. The top management does not interfere in the conduction of academic activities. The academic or administrative decisions taken by faculty members and administrative functionaries should be justifiable. This makes decision makers accountable for the autonomy vested in them and resources provided at their disposal.

6.1.6 How does the college groom leadership at various levels?

Management of the institution believes that the institution's performance and progress should not depend on any one person, but should be an outcome of contributions coming in from all its stake holders. This requires the development of leadership capabilities at all levels so that the jobs get done effectively and efficiently. Hence decentralization of power is the mantra in the institute. The Chairman of the BoG has delegated significant amount of authority with the Principal so that he in turn can delegate some of his powers to next level leaders. The authority (academic/administrative/financial/managerial) delegated to the Principal is considerable for development and smooth running of the institute.

Vice Principal is delegated the authority of the Chief Superintendent of examinations for conducting University examinations. HoDs are delegated with complete authority to ensure smooth conduct of classes, curriculum delivery, conduct of tests etc. on time according to the calendar of events. Heads of sections like placement and training, library and physical education also enjoy a lot of freedom to plan their activities and implementing them. Various committees constituted as a part of administrative system involve faculty members, and directly take care of implementation of various programs. For example, Staff selection committee will invariably have the

Heads of concerned departments and sometimes even senior professors, and these members will have a significant say in the selection process. Enquiry committee has full powers to access any information needed to complete the enquiry fairly and as per procedure, and make appropriate recommendations. Disciplinary committee can do its job without any internal or external interference whatsoever. The HoD and faculty are free to choose their equipment specifications, conduct procurement process, negotiate with vendors and recommend the purchase of the same.

Senior faculty, by virtue of their experience and wisdom are made conveners of important committees such as committee for anti-sexual harassment, anti-ragging committee, research committee, innovation centre, entrepreneurship development cell, placement & training cell, etc. AO and Registrar are empowered to ensure efficient execution of procedures related to day-to-day administration, human resource management and financial operations.

Administrative functionaries such as Principal, Vice-Principal, AO, Registrar and Heads of departments and sections regularly participate in training programmes on leadership skill development.

Student leadership is ensured through identifying an alumnus of the institution who interfaces with alumni community and gives valuable inputs for decision making by the head of the institution. Students are encouraged to plan, execute and manage all fests, cultural events, etc. to experience and imbibe leadership.

In all of the above instances, proper training, mentoring, industry-institution interfacing, faculty development programmes, workshops, skill development programmes are facilitated to the needful so that they become successful leaders in their chosen fields.

6.1.7. How does the college delegate authority and provide operational autonomy to the departments / units of the institution and work towards decentralized governance system?

While the top management approves the strategic plan and provides policy guidelines, the departments and sections are responsible for implementing the corresponding medium and short term plans to realize the strategic objectives. While all departments enjoy considerable academic, administrative and financial freedom for implementing such plans, they are encouraged to ensure that their actions are consistent with the institution's norms. Thus even with decentralization the system remains well balanced. Broadly the system works as below:

Academic Autonomy: Every department has freedom to develop its academic plans, deploy resources at their disposal, operationalize plans and control their outcomes. They prepare their academic calendar and lesson plans; refine teaching pedagogy, conduct internal examination, co-curricular and extra-curricular activities.

Administrative Autonomy: The Principal is delegated with substantial amount of authority by the BoG for effective and efficient administration. He/she represents Management. The Principal in turn shares his administrative powers with the Heads of Departments (HoDs) and sections so that they can perform freely. Their actions are guided by the standard operating procedures which is a part of Good Governance document. All aspects relating to the department faculty and staff members are dealt by the respective HoD/section.

Financial Autonomy: The Principal has financial powers to approve purchase up to Rs. 1,00,000/- per transaction which in turn will be vetted by the BoG, and cheques above Rs. 50,000/- are jointly signed by the Principal and the Chairman. The number of transactions/period is not limited. This freedom has allowed quick financial approvals for the department requirements too. The HoDs can also utilize imprest amount facility. Both nonrecurring and recurring expenditures of the department are budgeted, reviewed and approved at the beginning of the financial year by the Principal which in turn will be vetted by the BoG. They are incurred as per the approved budget.

Various sections/committees such as Department of physical education, placement and training, library, hostels committee, campus management, etc., also enjoy freedom in carrying out their tasks.

6.1.8 Does the college promote a culture of participative management? If 'yes', indicate the levels of participative management.

The BoG invites the students' representatives to share their experiences and express their opinions or suggestions so that they could be considered for the betterment of the system.

The Principal is the member secretary of the BoG and three faculty representatives are always special invitees for the BoG meeting. The BoG would include trustees, trust officials, representatives from Centres of excellence, AICTE, University, DTE, and industry. The views of all these stakeholders are considered while deliberating on policy issues.

The Principal acts as a link between BoG and the HoDs council. The HoDs council includes Principal, Vice-Principal, AO, all Heads of departments and sections. The views of all the members are given due importance while arriving at consensus on all the academic and non-academic matters discussed. Several ideas suggested by the members have been

implemented successfully, For example, Utilizing SMS service to communicate the progress of students to their parents.

The Head of the department/section consults all their staff members both in meetings and also otherwise before arriving at the action plans and involves them in their implementation. At the departmental level, the HoD holds meetings with the faculty to decide issues like syllabus delivery, assessments, organizing guest lectures, educational tours, etc. For example, Value addition courses offered by the departments.

Above these, the Principal conducts Town hall meetings separately with students, staff and other groups to listen to them and share his vision of the institute. This style of participative management is also present in deliberations of all committees, be it staff selection committee, procurement committee, or hostel committee. Wherever appropriate, students also form a part of the committee and play a key role in making decisions. For example, students are a part of hostel committee and decide on their menu, hygiene, etc.

6.2 Strategy Development and Deployment

6.2.1 Does the Institution have a formally stated quality policy? How is it developed, driven, deployed and reviewed?

- The quality policy of the institution is to sustain and enhance the overall quality through bringing about positive developments in areas of teaching and learning, research, infrastructure, student progression and governance.
- The Quality Policy is developed by IQAC in consultation with the Principal, Vice-Principal and other members of the IQAC.
- The IQAC is committed to follow the principles enunciated by NAAC for achievement of quality, its sustenance and enhancement.
- The Quality process is driven through the Principal, Vice Principal, HoDs, faculty and supporting staff. It is deployed through financial, academic and administrative operations that benefit all the stakeholders. The quality policy is reviewed from time to time based on feedback from different stakeholders and the changes are incorporated.

QUALITY POLICY
- To develop a quality system for conscious, consistent and catalytic programmed action to improve the academic and administrative performance of BMSIT&M.
- To promote BMSIT&M measures for functioning towards quality enhancement through internationalization of quality culture and institutionalization of best practices.

Development   Deployment
- Website - http://www.bmsit.in
- Institution Handbook and Calendar
- Brochures
- Display Boards
- Orientation on Inauguration day of I year students
- Review
- Interaction meetings with parents, alumni and industry experts

6.2.2   Does the Institute have a perspective plan for development? If so, give the aspects considered for inclusion in the plan.

The institution has a perspective plan for its development. The plan is done keeping in view the global changes and the emerging needs of society and students community. It is based on observations, feed-back and the suggestions made by obtained from academic peers, alumni, student-parents and other stake holders.

6.2.3 Describe the internal organizational structure and decision making processes.

The pictorial overview of the institute's organization structure is appended. The BoG is at the apex of the organization to provide the overall guidance to the Principal in all the administrative matters. The Principal is assisted by the Vice-Principal in overseeing the routine academic activities. Heads of the departments and sections with clear definition of their roles and responsibilities report to the Principal. All faculty and staff members, irrespective of cadre, in a given department will report to its Head. Principal also heads the administrative wing of the institute. He is assisted by the AO in enforcing all administrative decisions and overseeing the routine administrative (e.g. establishment, accounts, etc.) matters. The Registrar of the institute helps the Principal in taking care of matters relating to the University, AICTE, DTE, and others. Apart from the above the Heads of training & placement, IQAC, proctor system, library, sports, hostels, estate section, NSS, etc., all report to the Principal directly.

Decision making process: The decisions relating to courses (lesson plan, assessment and evaluation) are made by the respective faculty members. Decisions such as time table, schedule of co-curricular events, academic monitoring, attendance and class marks, internal administrative matters, faculty development, leave management, departmental procurement, laboratory development, research & consultancy, disciplinary measures, etc., are all taken at the department level. The decisions that affect several/all departments are discussed in the HoDs' council under the chairmanship of the Principal and a consensus is arrived at. Any proposal for the implementation

of new ideas would be put forth either to the HoD or the Principal, as the case may be. Depending on the implications, the decision would be taken at the respective levels, or if needed, it would be placed before the Management for approval. All administrative decisions are taken as per policies/procedures/norms of the institute, which are very employee friendly. The AO and the Registrar provide the necessary inputs to the Principal for making one of its kind decisions.

6.2.4 Give a broad description of the quality improvement strategies of the institution for each of the following

Teaching & Learning:
- Recruiting faculty with high academic credentials, experience and attitude, and retaining them by providing them with best service benefits (e.g. salary, welfare schemes).
- Sponsoring faculty members regularly for faculty development programmes/ workshops/conferences, etc.
- Detailed planning and close monitoring of academic plans, and acting on the feedback to close the academic gaps. Faculty members proactively prepare necessary course material and students are sensitized about the same.
- Use of enhanced ICT based teaching facilities for better delivery of learning material.
- Use of newer teaching-learning methods such as partial delivery by industry experts, flipped class, collaborative learning, industrial internship, etc.
- Deployment of proctoring system wherein student feedback about teaching learning is considered and measures are taken to improve.

Research & Development
The institution has constituted a Research Council with Chairman of BoG as the Chairman. The Dean (Research) works as member secretary of the council. The council fosters and encourages research activity by creating the right ambience for research and focusing on research capacity building.
The strategies are as follows:
- Signing up MoU with research laboratories and industry establishments (e.g. Steinbies (India) Ltd. to create scope for sponsored research.
- Encouraging faculty members to undergo industry internships to be aware of the nature and direction of technological developments & possibly research. This activity is managed by an institutional coordinator and the research council only observes this.
- Encouraging and motivating faculty members to publish their research findings in standard refereed journals with good impact factor.

- Encouraging inter-disciplinary R&D activities through establishing multidisciplinary laboratories and providing necessary resources.
- Granting study leave and sabbatical leave for faculty to pursue research, if applied for.
- Providing seed money for faculty members to initiate research projects, and full funding for select research projects.
- Providing assistance to student research projects to be exhibited in national/international forums.
- Starting PG courses and PhD programmes in the areas of competence.
- Funding seminars/workshops/ conferences.
- Recent efforts to retain staff members with good profiles who have already attained superannuation.

Community engagement
The institution envisions fulfilment of social responsibility through outreach and extension activities:

- Environment protection through better waste management, use of minimum plastic on campus, waste water recycling, rain water harvesting and solar energy harvesting.
- Educating farmers about their rights.
- Organizing walkathons to environmentally sensitive places to study the same etc.
- Conducting blood donation camps in association with Lions Club is a routine activity.
- Conducting medical/health check camps in villages.
- Conducting cleanliness drive in rural areas through NSS.
- Visiting nearby Government school and teach children the use of Computers, etc.
- Donating specially designed Trash bins for use along the walk path around Puttenahalli Lake.
- Providing place for Muslim community to put up their counters in Campus area so as to facilitate their Ramzan march.

Human Resource Management
Faculty and students are important stakeholders and also constitute institute's human resource. Some of the quality improvement strategies for the management of HR are:

- Plan in advance the HR requirements; advertise widely in newspapers to recruit from a large pool of talents.
- Have eminent and highly qualified person on the faculty selection committee.
- Retain good faculty members through excellent compensation and welfare measures.

- Administrative staff retention through skill development programs.
- Encouraging merited students through incentives.
- Recognizing the efforts of the employee and granting timely increments and promotions.
- Recommending faculty and staff for rewards/recognition based on loyalty to the institution, teaching performance, contributions to the institution etc.

Industry interaction

Quality of industry interaction is enhanced through the following:

- Industrial MoUs, industrial visits, industrial internships for faculty and students.
- Partial lecture delivery sessions from industry experts.
- Institutional memberships in Confederation of Indian Industry (CII), Operations Research Society of India (ORSI), German Chambers of Industry and Commerce (GCIC).
- Individual memberships in various professional bodies.
- Conduction of BMSIT&M-CII Road show, Employers day, Start-up fests, Entrepreneurial events with a direct involvement of industry.
- Conduction of Workshops, conferences, guest lectures involving industry experts.
- Concerted effort towards organizing visits to large projects (hydro-electric/thermal power generation, Nano-fabrication labs etc.
- Collaborative research.

6.2.5 How does the Head of the institution ensure that adequate information (from feedback and personal contacts etc.) is available for the top management and the stakeholders, to review the activities of the institution?

Various stakeholders come in direct and indirect contact with the Head of the institution on a daily basis. They may include students, faculty and staff, employers, alumni, parents, funding agencies, regulatory bodies, community around the institute, media, etc. Thus a large amount of informational inputs reaches the Principal. The information relevant to policy making are appropriately analysed and made available to the top management regularly. Meeting with the Chairman and BoG meetings are generally during appraisal. Besides, the Chairman conducts meetings with faculty.

The strategic plan of the institute developed by the institute faculty and staff, based on the SWOC analysis (that considers inputs from all stakeholders), is presented by the Head of the Institution to the top management for approval. This document appraises top management about the path being charted by the institution. Once approved, it becomes a guiding document for all activities of

the institute, and master document for stakeholders to review institute's progress.

The formal and informal meetings are conducted by the Principal, BoG to get a glimpse of student feedback, HoDs performance appraisal, and visitors' comments, etc. This is conveyed to the top management by the Principal.
Information on special official letters, requests, proposals, and reports from any quarter, and the institute's responses are conveyed to the top management regularly.

6.2.6 How does the management encourage and support involvement of the staff in improving the effectiveness and efficiency of the institutional processes?

The management encourages and supports involvement of the staff in improving the effectiveness and efficiency of the institutional processes in the following manner:

- The Trustees and the Chairman address the staff members frequently on important occasions such as institute cultural festivals, BoG meetings, Town hall meetings, etc. This motivates the employees to improve their productivity.
- The inspirational words by the top management represented by the Chairman in closed door meetings with the senior faculty of the institution regarding avoidance of mediocrity and standing out with a flair of excellence motivates the employees to improve their performance.
- The Management has instituted a number of welfare measures for employees which inspire them to show better commitment to their profession.
- The Management maintains transparency and fair mindedness through a common HR policy for the employees. This helps in improving the effectiveness of the staff.
- The Management has been proactive in establishing state-of-the-art laboratories, and other infrastructure to ensure institutional processes can be carried out effectively and efficiently.
- Management encourages administrative functionaries, faculty and staff members to undergo continuous competency development programmes.
- The institution has put in place an IQAC which will not only keep track of all the institutional processes but also improves its effectiveness and efficiency.

6.2.7 Enumerate the resolutions made by the Management Council in the last year and the status of implementation of such resolutions.

The resolutions made by the Management Council in the last year and the status of implementation of such resolutions are as listed in the table.

Sl. No.	Resolutions made by the Management	Status of Implementation
1.	Provide financial assistance to obtain life membership of Professional societies to all the faculty members	Implemented
2.	Internship for faculty members in Industries/Research Organizations	Implemented
3.	Establishment of: 1. Students' Project Assessment and Review Committee, 2. Innovation Centre 3. Centre for Industry Partnership, Research and Consultancy 4. Research Council	Implemented
4.	Sabbatical leave for faculty members	Adopted
5.	Signing up of MoUs with NDRF and Steinbies (India)	Completed
6.	Conducting Road-show in association with the Confederation of Indian Industry (CII)	Done
7.	Conduction of TechTransform 2016 to infuse Start-up and entrepreneurial culture among student	Done
8.	Imparting Professional Training for Placement from 3rd Semester	Implemented
9.	Construction of First floor on the Lab block	Almost complete
10.	Construction of New Workshop building	Under process

6.2.8 Does the affiliating university make a provision for according the status of autonomy to an affiliated institution? If 'yes', what are the efforts made by the institution in obtaining autonomy?

Yes.
As an established affiliated institution, with fourteen years of existence and an impressive growth record, the institution stands poised to become autonomous. The efforts made by the institution in obtaining autonomy are as follows:

- The entire educational and administrative process in the institute are being seen from a holistic perspective keeping in mind the level of maturity to be possessed by an institution to become autonomous.
- All the processes are being clearly refined and documented to build a good governance document which would guide the institutional activities, once approved by the BoG.
- Teachers are being encouraged to be more original and innovative while thinking about curriculum, delivering instructions, and assessing and evaluating the performance of students. They are now capable of identifying the shortcomings/limitations of University syllabi and able to make up for the same through valued added classes/programmes.

- Measures are being initiated to further enrich the values, ethics, integrity and commitment of staff members to be self-motivating and self—directing.
- Being an affiliated institution now, efforts are underway to obtain permanent affiliation from the University for all the departments, which is a significant step towards obtaining autonomy.
- The institution is in the process of getting accredited by National accreditation bodies which in turn would strengthen its case to obtain autonomy status.
- The institution supports and encourages its senior faculty members to take up responsibilities at the University level/other autonomous institutions such as Board of Examiners (BoE), Board of Studies (BoS), Member of Academic Senate etc. This is another stepping stone towards autonomy.

6.2.9 How does the Institution ensure that grievances / complaints are promptly attended to and resolved effectively? Is there a mechanism to analyse the nature of grievances for promoting better stakeholder relationship?

In order to address grievances/complaints for promoting better stakeholder relationship, the institution has in place committees/systems such as:

- Grievance redress committee
- Anti-ragging committee
- Anti-sexual harassment committee
- Women's empowerment cell
- Proctoring system
- Canteen committee
- Hostel committee
- Parent-Teacher Relationship Cell

Most complaints received are minor and are usually oral in nature. They are addressed by the respective committees carefully and the matter is appraised to the Head of the institution.

6.2.10 During the last four years, have there been any instances of court cases filed by and against the institute? Provide details on the issues and decisions of the courts on these?

1. Sree Ramana – Hostel, relating to arrears
2. Sree Ramana – Hostel, relating to gratuity
3. Sudha Shekar – SDA, Dept. of administration, relating to gratuity
   All the cases are in process.

6.2.11 Does the Institution have a mechanism for analysing student feedback on institutional performance? If 'yes', what was the outcome and response of the institution to such an effort?

Yes. The institution has a mechanism for analysing student feedback on institutional performance. For example, the student feedback on infrastructural facilities such as canteen, vehicle parking, adequate drinking water facility, placement, transport, administration, etc., are collected once in a year. The latest feedback report relating to 2015-16 is given below.

Sl. No.	Area of being rated	Excellent	Good	Average	Poor	Very poor	Score %
1	How would you like to rate the overall ambience of the Campus	408	584	170	49	40	80.32
2	Please Rate the Cleanliness and Hygiene of the Canteen	356	537	202	84	72	76.32
3	Please Rate Quality of food served in the canteen	244	408	314	146	139	67.55
4	Maintenance and Adequacy of Laboratory Equipment	344	649	177	38	43	79.39
5	Adequacy of books and Journals in the Library	389	599	170	52	41	79.87
6	How Do You rate Reading Room facility in the Library	410	592	169	43	37	80.7
7	How would you rate the Class Rooms with respect to Ventilation and Cleanliness	406	558	188	53	46	79.58
8	Adequacy of Class Rooms	439	611	136	29	36	82.19
9	Banking Facility and its service	353	598	166	67	67	77.63
10	Encouragement for Innovative Student activity (like hobby club)	329	506	212	95	109	73.61
11	Responsiveness & Assistance with regard to Placements	379	647	151	34	40	80.64
12	Responsiveness of people in accounts section	385	627	161	37	41	80.43
13	Responsiveness of people in admission section	380	635	171	21	44	80.56

14	Responsiveness of people in Library staff	404	616	149	35	47	80.7
15	Responsiveness of people in Security	412	611	152	32	44	81.02
16	Opportunity for participating in sports	346	545	216	61	83	76.15
17	Opportunity for participating in cultural events	343	534	221	75	78	75.81
18	Administrative Office-Responsiveness of quires	369	612	182	43	45	79.46
19	Administrative Office-Display of information on notice board (exam schedule etc.)	373	630	170	35	43	80.06
20	Administrative Office-Issue of admission tickets	371	658	153	29	40	80.64
21	Administrative Office-Declaration of results on time	381	648	149	29	44	80.67
22	Administrative Office-Issue of marks cards on time	383	637	161	26	44	80.61
	Total	**8204**	**13042**	**3940**	**1113**	**1223**	**78.81**

6.3 Faculty Empowerment Strategies

6.3.1 What are the efforts made by the institution to enhance the professional development of its teaching and non-teaching staff?

The efforts made by the institution to enhance the professional development of its teaching and non-teaching staff are as follows:

- The faculty members are regularly deputed to national and international conferences, workshops and faculty development programmes to keep themselves abreast with latest developments in science and technology. They themselves organize such programmes too. The books they recommend would be procured to the library. Library subscribes to AICTE/VTU consortium to access e-journals and is open beyond the working hours.

- The institution plans to provide residential accommodation for employees near the institution so that they can fully utilize the facilities available in the campus. Such facilities have proven advantageous as far as faculty progress in research and consultancy is concerned.

- The institution has adopted sabbatical leave policy for faculty who have completed a decade of service in the Institution on Management and leadership for carrying out research work.
- Advanced training programmes on management & leadership are organized for the benefit of faculty administrative functionaries (HoDs) wherein trainers are invited from reputed administrative training organizations.
- Faculty members undergo industrial internship to get first hand exposure to industrial environment.
- Non-teaching staff members are deputed for skill development training programmes.
- The institution not only encourages the faculty to become members of professional bodies but also supports with financial assistance for membership.
- Both teaching and non-teaching staff have access to the library which is equipped with a large number of books, periodicals, research journals, newspapers, internet facility and e-resources so that the staff can make use of it for their professional development. In addition, facility for getting reprints of research papers/books through DELNET is made available.

6.3.2 What are the strategies adopted by the institution for faculty empowerment through training, retraining and motivating the employees for the roles and responsibility they perform?

The strategies adopted by the institution for faculty empowerment are as follows:

Training

The strategies adopted by the institution to empower its faculty include: (i) Organizing competency development programmes, skill development workshops, and leadership development programmes; (ii) Deputing them to participate in conferences/workshops, etc. those organized by outside agencies; (iii) Supporting their effort to organize national/international conference/symposiums; (iv) Deputing them to undergo industry internships and take part in industrial visits; (v) Financially supporting select research projects; (vi) encourage them to serve as resource persons in FDPs and session chairs in conferences; and (vii) financially supporting them to be life members of professional associations.

Retraining

The institution appreciates the fact that retention of the skills learnt in a programme fades with time. Therefore, the institution retrains staff members not only to hone the skills but also learn retention techniques.

For example, teaching faculty members are retrained in pedagogy and accreditation processes repeatedly to cope up with the changes demanded by the stakeholders. For instance, two trainers from Malaysia were invited to conduct two-day training programme for all faculty members on outcome based education, collaborative teaching-learning, flipped classes, etc. Non-teaching staff members are retrained in the use of equipment and servicing to meet the challenges in technology change.

Motivating

The faculty members are motivated to acquire higher qualifications like Ph.D. and M.Sc. (Engineering). Study leave is granted if they seek the same. Faculty members are motivated through providing them with special casual leave: (i) when they are to write University exams to register for research programmes; (ii) write course exams of their research programmes; (iii, deliver technical talks and chair the sessions of national/international conference. They are motivated to publish their findings in refereed journals, writing proposals to fetch the grants from MHRD, and involve in consultancy work etc. Distinct responsibilities are given to both senior and junior faculty members in various committees so that they enjoy discharging them.

6.3.3 Provide details on the performance appraisal system of the staff to evaluate and ensure that information on multiple activities is appropriately captured and considered for better appraisal.

The institution has adopted a faculty performance based appraisal system (PBAS) in line with the recommendations of the AICTE. The system is designed to capture objective information on multiple activities and weighted appropriately to arrive at a composite index of performance. The performances of faculty members in different cadres are appraised using variants of the PBAS. The information relating to the following multiple activities are captured by the PBAS system for appraisal:
- Feedback from students on faculty member's teaching performance
- The University results in the courses handled
- Conferences/FDP/workshops participated in
- Research publications and Book/chapter authorship
- Innovative and consulting effort demonstrated
- Department responsibility shouldered
- Institutional responsibility shouldered

Appraisal of non-teaching staff members is carried out based on the traits expected to perform their jobs effectively. The appraisal system captures the following:
- Involvement in laboratory courses and maintenance of laboratory equipment's/components etc.
- Servicing capability

- Courses/short-term training programmes/workshops attended
- Attitude, shouldering administrative works, discipline, etc.

The performance appraisal system is linked with the salary increment.

6.3.4 What is the outcome of the review of the performance appraisal reports by the management and the major decisions taken? How are they communicated to the appropriate stakeholders?

The composite scores obtained by faculty members as computed by the PBAS are examined by the Principal. The faculty members are expected to score a minimum score of 60%. The scores obtained by faculty members along with remarks by the Principal are communicated to them confidentially to the faculty members through their Heads of the respective departments. If there are any faculty members with lesser score than 60, they will be counselled by the Principal. Usually this number would be very negligible. The summary of this process would be presented to the Board of Governors meeting.

- The annual performance review of staff members through appraisals enables the institution to measure the competencies of its human resources.
- Staff members who have performed their assigned roles efficiently are considered for shouldering the higher responsibilities.
- The shortcomings of the staff as revealed by their appraisals are reviewed by top management along with Principal, AO and respective HoD.
- For improvement, information is conveyed to the concerned staff members, remedial action is initiated and appropriate support is provided for such staff members.

6.3.5. What are the welfare schemes available for teaching and non-teaching staff? What percentage of staff have availed the benefit of such schemes in the last four years?

The following welfare schemes are available for the benefit of staff members and many of them are benefited in the last four years:

Year wise Table

Sl. No.	Welfare measure	% of staff members availed the benefit (2015-16)	Remarks
1.	Interest free loan for purchase of laptops	5	
2.	Festival Advance for nonteaching staff	68	
3.	Earned leave encashment	76	
4.	Loan facility from BMS employees credit cooperative society	35	
5.	Medical insurance of Rs. 2 lakhs for self and family (premium paid by Management)	25	

6.	Medical facility for self and family at concessional rate	46	
7.	Concessional college fee for children of BMSIT&M employees to study in any institution of BMSET	5	
8.	Reimbursement of school fee for one child of a non-teaching employee with a maximum limit of Rs. 10,000 per year	45	
9.	Convenient transport through institute's Transportation facility	95	
10.	Plus small courtesies like distributing sweets to all employees during festivals like Deepavali.	100	
11.	Financial support to employees in special cases of medical emergency and critical illness	1	

6.3.6 What are the measures taken by the Institution for attracting and retaining eminent faculty?

The measures taken by the Institution for attracting and retaining eminent faculty are:

- Proper planning is done with respect to human resource requirement of the institution in terms of number, specialization, qualification & experience, and attitude.
- Advertising widely is done in national media and also on institution's website. Vacancies are open for both internal and external candidates.
- Compensation is paid completely as per AICTE guidelines published from time to time. Regular increments, merit-based promotional opportunities, study leave facility, infrastructural support; uniform HR policies and transparent administration are other attractions for potential candidates to seek employment at BMSIT&M and existing employees to develop strong belongingness to the institute.
- The opportunity to continuously improve domain and pedagogic competencies of faculty members, and to enhance their qualifications and advance professionally.
- Employee welfare measures instituted are almost on par with government employees.
- Leave and financial support is provided to participate and present papers in the national and international conferences.
- The institution makes cautious efforts towards capacity building and ambience creation to carry out academic activity with a strong focus on continuous student centric learning.

6.4 Financial Management and Resource Mobilization

6.4.1 What is the institutional mechanism to monitor effective and efficient use of available financial resources?

- The institution has a practice of budgeting for all expenses and following the budget allocation restrictions strictly for spending under different heads so that correct and efficient use of financial resources is made.
- The budgeting process starts at the department level and all departments discuss the justification for their budget provisions with the Principal, AO and Accounts Superintendent. The institute-level budget is prepared with a consolidation of approved departmental budgets and is discussed with the Chief Finance Officer of the Trust. On consensus, the budget is placed before the Chairman for approval in principle. The final budget is placed before the Board of Governors for approval. Copies of the approved budget are distributed to all the departments/sections.
- All departments prepare the action plan for the implementation of the budget in the month of April-May so as to make necessary preparation for next academic year.
- Each department comprises of two components: Non-recurring and Recurring
- **Non-recurring:** Generally, vendors have to register with BMSET before participating in any supply. For any purchase against non-recurring head, the departmental purchase committee finalizes the specifications of the equipment to be procured and shortlists prospective vendors after analysing their capabilities. Due process of calling for quotations/tenders, opening of quotations and recording the minutes by committee, preparation of comparative statement, finalization of supplier and recommendations to place the purchase order, etc. followed. Based on the recommendations of purchase committee, selected vendor is issued a purchase order. For other purchases such as books for library, stationery, etc., a "Procurement Committee" is constituted to do the needful.
- **Recurring:** Under the Head of recurring expenditure, departments can procure the materials and supplies required by them (with the approval of the Principal) if they are unique to their department. However, if the item is standard, procurement is done at the institutional level the items are distributed to the user departments.
- Once the goods and supplies are supplied, the quality and quantity is verified against the purchase order by the concerned department, the item is taken to stock, the process information is certified, and the bills are sent for approval for payment. All payments are scrutinized by the accounts department of the institute. The Accounts department is

headed by a superintendent and is supervised by the Principal. The Chief Finance Officer scrutinizes all financial transactions.

- Financial audits are carried out twice a year by internal and once by external auditors and the reports is submitted to the Chief Finance Officer and the BoG.
- Grants obtained from external agencies like UGC, VGST, DST are utilized and audited according to the rules and regulations of these agencies. Stock registers are maintained for the same. Separate accounts that are audited by an external auditor are maintained for all sponsored projects.

6.4.2 What are the institutional mechanisms for internal and external audit? When was the last audit done and what are the major audit objections? Provide the details on compliance.

The internal audit of the institutional finances is conducted twice a year by the accounts department headed by the accounts manager and a qualified chartered accountant. External audit is statutory and performed once in a year. In total, every year auditing is done three times.
The institution has a mechanism for internal and external audit and the details are as follows:

- The internal and external audits have been done on time and are up to date.
- There were no significant objections raised by the auditors.

6.4.3 What are the major sources of institutional receipts/funding and how is the deficit managed? Provide audited income and expenditure statement of academic and administrative activities of the previous four years and the reserve fund/corpus available with Institutions, if any.

The major sources of institutional receipts/funding are
- Fee collected from students
- Funds received from various agencies towards research projects and consultancy
- Funds received from the Trust

The deficit is managed by the Trust by taking administrative decision on case to case merit basis. Income and expenditure statement for last four years:

Table: Income and Expenditure Statement over the last four years

Year	Income	Expenditure
2011-12	Rs. 10,18,99,706	Rs. 11,05,18,613
2012-13	Rs. 11,99,56,318	Rs. 13,79,94,138
2013-14	Rs. 13,06,32,888	Rs. 17,69,14,175
2014-15	Rs. 13,98,23,005	Rs. 22,31,25,682

6.4.4 Give details on the efforts made by the institution in securing additional funding and the utilization of the same (if any).

- The institution, has applied for 2 (f) statuses from the UGC and reply is awaited.
- The institution keeps submitting research proposals to various government/non-governmental agencies such as DRDO, DST, VTU, VGST and KSCST, seeking funds. It has also received funds from some of them.
- Recently, the institution has started to provide consultancy services to industries too.

The funds received are well utilized for the purpose for which it was provided.

6.5 Internal Quality Assurance System (IQAS)

6.5.1   Internal Quality Assurance Cell (IQAC)
a. Has the institution established an Internal Quality Assurance Cell (IQAC)?   If 'yes', what is the institutional policy with regard to quality assurance and how has it contributed in institutionalizing the quality assurance processes?

Yes. The institution till now has been adopting various measures to assess the quality of teaching learning process and attainment of objectives, vision, and mission.   The institution, having realized the importance of planning, implementing, improving and sustaining quality in all activities at all levels, and need for institutionalizing the quality assurance process, established Internal Quality Assurance Cell recently.   The institution has established IQAC.

The institutional QA policy: The cell develops quality benchmarks and parameters against which institution can plan its academic and administrative activities, keep monitoring the levels of attainment of these benchmarks, provide feedback for closing quality gaps and thus improving the effectiveness and efficiency of academic programmes.

- The institutional policy with regard to quality assurance is to sustain and enhance quality in all areas of academics and administration so that the vision and mission of the college are translated to reality.
- This policy has contributed to quality assurance through initiation of activities based on the changing needs of higher education like faculty improvement, curriculum enrichment, research up gradation, ICT based infrastructure, staff welfare schemes, environmental awareness and best practices.
- The IQAC is the nodal centre for implementation of the Quality Policy of the Institute and work for quality enhancement and sustenance by

developing a system for conscious, consistent and catalytic improvement in the performance of the Institute.

- The IQAC is constituted under the chairmanship of Principal and consists of Coordinator, heads of the departments, various NBA/NAAC/ISO coordinators and faculty representatives.

Members of IQAC:

S. No.	Category	Status
1.	Principal	Chairman
2.	Vice Principal, AO, Registrar, Placement Officer	Member
3.	Four teachers from different departments and levels	Members
4.	Director (Administration) from Management	Member
5.	One senior faculty member from each department nominated by Principal	Members
6.	One student and one Alumnus	Members
7.	One Employer	Member
8.	One senior teacher as coordinator	Secretary

b. How many decisions of the IQAC have been approved by the management/authorities for implementation and how many of them were actually implemented?

IQAC is operated and controlled at the institute level with regular updates to the management. As IQAC is established to plan, improve and sustain quality, and the vision of the institute is to grow as a high quality technological institute, decisions of the IQAC would be given due importance both by institution administration as well as Management.

All activities relating to planning and assuring quality in engineering programmes were an integral part of the institute. They were routinely carried out by the departments and centrally coordinated by Academic monitoring committee. However, the activities are now consciously placed under the IQAC which has a mandate to comprehensively address all quality issues and also to help the institute to sustain quality improvements. Some of the major decisions of the present IQAC which were approved by the management/authorities and also being implemented are:

- Strengthening the proctoring system
- Appointment of professional counsellor for students
- Development of Good governance document
- Furnishing Seminar Hall - II

c. Does the IQAC have external members on its committee? If so, mention any significant contribution made by them.

No. At present there is no external member on the IQAC. However, the institution plans to include external members in the near future.

d. How do students and alumni contribute to the effective functioning of the IQAC?

- There are student and alumni representatives in IQAC. They give their opinions regarding academic quality issues, improvements possible in teaching-learning processes, and infrastructural facilities, etc.
- Students contribute their opinion on the quality of academic and non-academic infrastructure in the survey conducted once a year, which becomes a valuable input for quality improvement
- Alumni of the institute give their inputs during annual alumni meets, or through institute's social media pages (like Facebook)
- The alumni representatives give their perspectives on issues like promotion of research culture, industry-academia interactions, consultancy opportunities, etc.

e. How does the IQAC communicate and engage staff from different constituents of the institution?

- The IQAC is composed of members from different stakeholder sections like faculty, students, parents, alumni, administration staff and management as well as external members.
- The decisions made by this core committee are communicated to stakeholders through circulars, notice boards, college website, newsletter, etc.
- The IQAC has set the parameters on which academic activities of all departments would be assessed. It collects data on them from each department. The feedback on the academic progress would be shared with the departments and their action plans to improve the situation would be overseen by the IQAC. Thus all departments and constituents of the institution have close liaison with the IQAC.

6.5.2 Does the institution have an integrated framework for Quality assurance of the academic and administrative activities? If 'yes', give details on its operationalization.

Yes.
Until recently, the academic quality assurance committee, namely Academic Monitoring Committee was responsible for monitoring academic activities. Now the IQAC itself is responsible for Total Quality Assurance. It has developed a comprehensive framework taking cue from the NAAC and NBA documents. The framework has identified the quality benchmarks and parameters which are used for operationalization of academic and non-academic activities. Principal being the Head of the committee ensures that all departments comply with the expectations of the IQAC.

6.5.3 Does the institution provide training to its staff for effective implementation of the quality assurance procedures? If 'yes', give details enumerating its impact.

Yes. Quality Assurance framework of the IQAC has several parameters relating to academic and non-academic activities. To meet the requirements of these parameters, faculty and staff members undergo training programmes regularly. The institution organizes guest lectures/seminars/workshops/training programmes/internships for its faculty and non-teaching staff members. The faculty members are sensitized with regard to new teaching methodologies, importance of research and research methodologies, intellectual property rights, industry interactions, etc. while non-teaching staff are provided orientation in better office procedures, accounting systems, data operating skills, etc. These trainings have helped the employees in becoming better at facing new challenges at workplace arising due to changing global requirements and also to stay current with the quality expectations of stakeholders.

Some examples are:

- Training in implementing Outcome Based Education for all faculty members
- Senior faculty members and Section heads were sent for World Summit on Accreditation, New Delhi on March 18-20, 2016
- Faculty members were deputed for the International Conference on Transformation in Engineering Education (ICTIEE), held at BMS College of Engineering in Jan 2015.
- Two renowned trainers from Malaysia conducted a workshop for all faculty members on OBE, Collaborative learning, flipped classes, etc.

6.5.4 Does the institution undertake Academic Audit or other external review of the academic provisions? If 'yes', how are the outcomes used to improve the institutional activities?

Yes.
- The institution is affiliated to VTU which has a set mechanism to audit the academic working of the institution. The university sends a team of experts called Local Inspection Committee (LIC) to conduct academic audit every year for continuing affiliation to educational programmes.
- The committee minutely observes the working of the institution in all its aspects, comments on the performance and suggests important changes required. A similar inspection also takes place when a new course is introduced.
- The committee from the Director of Technical Education also visits the institution to examine the academic and laboratory infrastructure.

- Two experts with a lot of experience in academics and administration from renowned institutions, i.e., Principal of RV College of Engg., Bengaluru and former Principal of MS Ramaiah Institute of Technology, Bengaluru have evaluated the academic processes and provided inputs for improve institutional activities.
- These inputs from the VTU's Local Inquiry Committee, Committee from the Director of Technical Education, and external evaluators are well taken by the institute and the processes are being improved and documented effectively.

6.5.5 How is the internal quality assurance mechanisms aligned with the requirements of the relevant external quality assurance agencies/regulatory authorities?

- The institution is affiliated to VTU which is the external regulatory agency. As an institution seeking affiliation renewals on a periodic basis (yearly), and recognition to its R&D centres, the institution complies with all the requirements of the University.
- The institution aligns itself with the quality related requirements of AICTE/MHRD.
- For example, the faculty members are deputed for Orientation Programmes and Refresher Courses as per AICTE regulations for faculty promotion.
- Armed with a quality policy, the integrated quality framework through explicit support from the management, conducts sensitization/training/workshops, recommends initiating new courses, infrastructural improvement, etc.

6.5.6 What institutional mechanisms are in place to continuously review the teaching learning process? Give details of its structure, methodologies of operations and outcome?

- All faculty members prepare academic documents (with regard to the courses they handle) such as lesson plan, work diary, etc., well before the commencement of semester. As the semester work progresses, the academic monitoring committee periodically reviews the portioned completed, number of classes held, work diaries, test performance of students, etc. Apart from these, the HoDs review the progress of academics on a continuous basis.
- The results of University examinations are also analysed to ascertain the quality of teaching learning that has taken place in the previous semester.
- The student feedback on the course coordinator's competencies in delivering the course is also collected twice in a semester. This provides valuable inputs about the quality of delivery of instructions,

and helps the higher authorities to rectify problems, if any, by counselling the concerned faculty member. All courses, both theory, practical and project work are brought under this feedback system.

- The Principal of the institution holds Town Hall meetings with various groups/classes of students to know first-hand, the academic and non-academic issues bothering students.
- The Chairman, and also the BoG review the teaching learning processes when they interact with the students.
- The outcome of these types of continuous review has resulted in taking corrective measures and improving the teaching pedagogy, using technology intensively for teaching and making teaching more and more student-centric

6.5.7 How does the institution communicate its quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders?

The institution communicates its quality assurance policies, mechanisms and outcomes to its various stakeholders through:

- Staff and HoDs council meetings
- Alumni association meetings,
- Parent Teacher Meetings (PTM)
- Institution website
- Internal Circulars
- Institution Newsletter
- College annual magazine
- Newspapers
- Notice boards, etc.

CRITERION – VII
INNOVATIONS AND BEST PRACTICES

7.1 ENVIRONMENTAL CONSCIOUSNESS

7.1.1 Does the Institute conduct a Green Audit of its campus and facilities?

- The insitution has an excellent green cover with great landscape. It has established environment-friendly systems such as rain water harvesting, solar heating systems, waste water treatment plant and practices such as recycling, minimum plastic usage, etc.
- The Mysore Horticultural Society (R) conducts an audit of green cover in the campus and its quality. The assessment includes evaluation based on terms of number and variety of trees.The institution has won the prestigious 'Best Ornamental Garden' award successively for the last three years.
- The institution has conducted energy audit to conserve energy and enhance energy economy. Measures related to, reduced paper usage, waste management and general environmental awareness are taken.
- The institute has constituted a garden development and maintenance unit with 23 members which includes a campus manager, a faculty coordinator and garden maintenance personnel.

7.1.2 What are the initiatives taken by the institute to make the campus eco-friendly?

*Energy conservation

- Classrooms, corridors and laboratories are well-ventilated, naturally-lit, reducing the dependence on artificial lighting or fans. The use of air-conditioners is also minimal and is restricted to only those rooms where it is absolutely essential.
- People are encouraged to use the stairs in place of elevators (lifts) whenever feasible. Students and faculty members are encouraged to switch off electrical appliances when not in use in the class rooms and laboratories.
- Purchase of eco-friendly energy-star computers, replacing the CRT monitors with LCD/LED monitors are some more measures towards energy conservation. The institute will gradually switch over to CFL/LED bulbs for lighting.
- Hostel blocks are provided with switches outside rooms so that electrical energy is not wasted.
- Efforts are made to maintain the campus a minimum-plastic zone

- The institution has a building maintenance committee which attends to leakage of water through taps, pipes, drains, etc. immediately thereby conserving water.
- Students and staff are sensitized towards saving water and using it economically.

* Use of renewable energy
- The hostel blocks of the institution currently use solar water heating system to meet most of their warm water requirements.
- In parking areas solar lamps are being used.
- Preliminary discussions are going on to install roof-top solar power generation unit for electrical power generation. A consultant's proposal is being examined for implementation.

* Water harvesting
- The institute has a rain water harvesting system within the campus.
- The hostels are also built with rain water harvesting systems
- Sewage Treatment Plant with 2.5 lakh litres treating capacity has been functional for several years. Treated water is being used for meeting the complete requirements of watering lawns, plants and landscaping of the entire campus.

* Check dam construction: NOT Applicable

* Efforts for Carbon neutrality
- The institute has a good green cover across the campus, creating a pleasant feel, regardless of temperature outside the campus.
- The institute makes significant efforts for carbon neutrality by restriction of vehicular traffic within the campus and providing specific parking lots for students and staff at the entrance of the campus.
- To reduce the effect of pollution inside the campus, the institute maintains lush greenery
- The chemicals used in laboratories are carefully drained out after proper treatment(Neutralization).
- All bio-degradable waste (Vegetable waste/kitchen waste, garden trimmings, fallen leaves and flowers) is converted into usable manure in compost pits, located in the campus. Composting is cost effective solution to bio-garbage disposal and also provide quality manure for the green cover of the campus.

* Plantation
- The institution has around 50% of greenery.
- The campus has approximately 2500 tress and saplings spanning across 300 varieties.

- Campus is interspersed with medicinal plants, bio-diesel plants, indoor plants, flowering shrubs, creepers, flowering trees, fruit bearing plants, sacred plants, Mexican grass, etc.
- The Institution received the "Best Ornamental Garden" award by Mysore Horticulture Society continuously for the last three years (2013 – 2016)
- Plastic cups are banned in the cafeteria and jute bags are used in the placement cell for the hospitality to the guests/visitors
- The NSS volunteers clean the garden and plant saplings in the campus. Occasionally all students and staff engage in 'Shramadaan' event and clean the campus of garbage/plastic
- Special guests and dignitaries who visit the campus on important occasions also plant saplings.
- Saplings of plants are given as gifts to the guests to promote environmental awareness and thereby encouraging people to make our surroundings green.

* Hazardous waste management

- To ensure "Zero Plastic" campus, "Shramadaan day" was observed to create awareness about the ill effects of using plastic on the environment
- Chimney is provided to control exhaust gases through fume cupboard and air water and the exhaust gases are released at a height of 30 ft. pH of solution effluent is checked and found to be between 6.5 to 7.5. To control the particle count, the effluents are diluted.
- The cafeteria in the institute is instructed to use only paper cups for serving beverages.
- Garbage segregation at source is carried out at the institute cafeteria where separate bins are installed for the collection of dry, wet garbage and plastic. Students are also advised to adhere to this norm of garbage segregation.
- The NSS volunteers of the institute also engage in activities related to environment issues.

* E-waste management

- Obsolete digital devices and other related accessories are auctioned to recyclers
- Use of pen drives, flash drives and hard disks are encouraged for e- data storage rather than the use-and-throw CDs.

7.2 INNOVATIONS

7.2.1 Give details of innovations introduced during the last four years which have created a positive impact on the functioning of the institute.

Some of the innovations introduced during the last four years which have created a positive impact on the functioning of the institute are :

- Learner centric environment is created in the classroom through various cooperative learning techniques like brain storming, group discussion etc.
- Better teaching methodologies such as blended class, collaborative learning, partial delivery of classes by industry professionals.
- Tutorial and remedial classes are conducted for slow learners and students interested in improving their performance.
- Faculty members undergo industry internships to stay current with the changing technology and business practices and adopt them in teaching learning process. A cell has been created to coordinate the same.
- In laboratories, students are encouraged to conduct open ended experiments apart from regular experiments.
- Student groups are motivated to take up innovative and interdisciplinary projects
- Intercollegiate project exhibitions are organised by students to exhibit their talents on a common platform.
- Knowledge sharing program (Gnanavardhan) is organised once in a week, wherein senior faculty members share their ideas through their interactions.
- The institution is moving towards adopting OBE approach as per the new higher education policy in the teaching learning process.
- Faculty members are encouraged to enhance and augment knowledge through ICT usage.
- In-house interdisciplinary faculty development programmes are conducted, for faculty members to enhance their knowledge across disciplines.
- Workshops, training programmes, national level seminars, screening movies, making short films, etc., have enriched the teaching-learning process.
- A one day workshop was organized by inviting Dr. Kharia Mohammed, a renowned outcome based education (OBE) practitioner and his team to educate on OBE.
- A digitalised, automated central library with plenty of print and electronic resources, internet facility, DELNET, OPAC, etc. is made available. Institutional memberships to libraries of premier institutes have been taken up.

- Students' progress to parent through SMSs twice a semester.
- Certain innovative practices like Town hall approach and clinical discussion to mentor students are adopted.
- Compilation of abstracts of students' project work for carrying forward the innovative projects in subsequent years has been made available.
- Full financial subsidy is provided to all faculty members to become life members of the National Professional Associations of their choice.
- Reciprocation of institute's e-brochure to all those surfing the institute's website and wish to know more about it.
- The institute has established an innovation cell with the objective of addressing societal problems.
- Central students' project assessment and review cell (SPARC) has been established to centrally coordinate the progress and quality of all projects of final year students.
- Adoption of GPS to all buses of the institute so as to track their movement. Parents can also get the information with respect to the location of their wards in the route on real time basis.
- Career oriented training is given to first semester students
- Research council has been formed to foster the research culture in the institution
- Facility has been provided for edusat online e- learning program
- Professional psychological counsellor has been hired to address problems of life issues and mental health conditions of students
- Library has introduced an open access system to enable students to pick up any book of their choice from the issue section.

7.3 BEST PRACTICES

7.3.1 Elaborate on any two best practices in the given format at page no. 98, which have contributed to the achievement of the Institutional Objectives and/or contributed to the Quality improvement of the core activities of the institute.

Best Practice 1

1.	Title of the Practice	Proctoring System
2.	Goal	- The goal of the proctor system is to counsel students with respect to academic and nonacademic issues and support the overall development of the student during his/her stay at the institute. - The system aims to keep the parents/guardians informed about the academic progress of their wards on a regular basis helping to guide them in the right direction.

3.	The Context	• The institution is fully aware of the fact that technical education is essential for the economic growth of the country. • Since its inception in 2002-03, the institution has been deeply committed to deliver quality technical education through creation of learner-centric environment. • Proctor system in engineering education is a process by which the personality of the student is developed to an extent where the student acquires high level of intellectual, emotional quotient with greater degree of employability, skill quotient and holistic personality. • The proctor system requires continuous interaction between student and the proctor, where they meet in the beginning of the semester to discuss the programme goals. • Analyze the performance of the previous year along with attendance details after every internal assessment. • The meeting between the proctor and the student happens before and after every internal assessment to discuss his/her performance and any other issue he/she might be facing in the semester. • The proctors encourage students to enhance their skills in extracurricular activities which help in their overall development.
4.	The practice	• The student proctoring process has been a time-tested practice in the institution which has met with enduring success and has proven to be beneficial to the overall development of the students. • A faculty member is assigned as a proctor, and allocated a set of around 20 students. • The proctor's role is to act as a guide, a mentor, a role model and a counselor for the student during his/her stay in the campus. • The proctor is the first point of contact for the student for any issues within the college when he/she needs guidance and support. • Many of the students come to the college from various parts of the country and stay away from their homes. The proctor helps such students in settling down in the campus by acting as a counselor and a guide. • During parents-teachers meeting, concerned proctors discuss the performance of the students under them, with the parents.
5.	Evidence of success	• Proctors have been able to deal with student truancy very effectively with this system. There are many incidents where the student's truancy has improved. • Students with emotional problems have been identified and successfully addressed by this system. Such students have gone on to develop a positive self-esteem, overcome their anxieties, handle their feelings better and improve their academic performance. • Students who face psycho-social problems have been enormously helped by proctoring system. The students become confident, bold youngsters who not only overcome their problems but also graduate with high marks.
6.	Problems encountered and resources required	• It requires continuous updates of the activities of the students, their marks, attendance etc. Though these can be easily obtained, the students themselves sometimes refuse to communicate with the proctor due to various academic schedules and academic deadlines. • Quite often the proctor in spite of spending considerable time and energy may not be able to unearth the information from the student who is counselled. To deal with such situations the intervention of the trained professional physiological counselors may be required.

	• Sometimes interactions with the student alone may not solve the problem and it may be required to interact with their family and friends. This demands a lot of patience and endurance from the proctor. This may necessitate specially designed training programs for proctors so that they can effectively mentor students.
7. Notes (Optional)	• Proctoring is a proven system in the institution. • The institution tries to continuously improvise the format, the feedback system and the interaction procedures to make the practice work effectively and efficiently.

Best Practice 2

1. Title of the Practice	**Techno-cultural Events:** TechTransform, Employers Meet, Road Show with Confederation of Indian Industries (CII), Start-up meet, etc.
2. Goal	• The goal of organizing such events is to bring in exposure to technology, entrepreneurship skills, appreciation for core industry growth and ability to emerge as an employer. • To familiarize students and faculty with contemporary technology skillset, business trends, opportunities and challenges. • Such events provide an opportunity for student to get first-hand experience of teamwork. They help students to develop event management, leadership and managerial skills.
3. The Context	• The institution is committed to its mission, through which it intends to achieve its vision. The mission being the accomplishment of stimulating learning environment through high quality academic instruction, innovation and industry-institute interface. The vision being the emergence as one of the finest technical institutions of higher learning, to develop engineering professionals who are technically competent, ethical and environment friendly for betterment of the society. • The institute envisions contributing high quality engineering professionals to the society/industry through inculcating in students' innovativeness and entrepreneurship. For this it engages in industry collaborations, and creates facilities like incubation centers. • Students acquire entrepreneurship/professional skills through these kinds of events/practices and become either capable of creating employment or employable graduates ready to face the challenges of a global competition.
4. The practice	• The BMS group of institutions has been associated with Melton foundation, USA. This gives a unique opportunity for students of our institution to take part in the international student exchange programme. This is an annual event where a few students get international exposure during their career as a student at BMSIT&M. • TechTransform, Alumni meet, Employers' day, Start-up Fest etc. are regularly conducted in the institution. These events expose them to the experiences of entrepreneurs, nurturing culture of entrepreneurship. They will give the students a feel of the emerging trends in industry and business, and stimulate them to seize opportunities in the business environment and create valuable enterprises.

	• Roadshow with Confederation of Indian Industry (CII) highlights the national importance of manufacturing industry and exposes the students to live industry environment thereby motivating them to take up engineering careers in core industry and contribute to growth of the nation.
5. Evidence of success	• TechTransform, Startup fests, Employers meet are much awaited events attracting students, entrepreneurs, prospective admission seekers, industry experts etc. to participate, which testifies its success. • The students are exposed to team building, finance management, interpersonal skills, decision making capabilities and societal concern. The feedback from students, industry partners and other participants has been overwhelming. Students indicated that they now have greater awareness of start-up businesses, opportunities to create enterprises, challenges to overcome, support from government and non-government agencies, etc., Start-up and industrial partners expressed that they want to be a part of such event in future too. Television channels such as Public TV and Newspapers have covered such events and disseminated them to a large audience.
6 Problems encountered and resources required	• The resource mobilization for events such as TechTransform, Employers meet, Startup meet etc. has to be partly met by sponsorship for which campaigning by the students is required. The faculty has to put in extra efforts to compensate for the inevitable loss of academic sessions for the participating students. • The start-up and industry participants are always busy and it is not easy to get them together on a single platform on the same days of event. Considerable amount of background work needs to be done and keep the programme flexible to accommodate the possible changes.
7.Notes (Optional)	• These trend-setting technical events in the institution attract CEOs, top notch scientists, management gurus and the like. • The continued efforts of the institution to create awareness among the students about legacy of BMS group of institutions are appreciated and affirmed by the public and media. The events are disseminated by electronic and print media contributing to the Indian Government's programmes such as Start-up India, Stand-up India and Make in India.

Criteria – 7: **Appendix-A**

Supporting Information

1.	**Rainwater Harvesting** BMSIT&M has 3 rainwater harvesting units with different capacities in the following blocks • Academic Block : 1.2 lakhs liters capacity • BSN Block : 75 Thousand liters capacity • Hostels : 26 Thousand liters capacity Water is treated through aerobic system and treated water is used for gardening.
2.	**Sewage Treatment Plant (STP)** STP is designed to have 2.5 lakh liters treating capacity tank and treated water is used for complete watering of the lawns, plants and landscaping of the entire campus.
3.	**Greenery** • The total greenery area in the campus is around 50% of total land area. • Appproximately 2500 Number of trees and saplings with 300 varieties including sacred plants. • Campus is interspersed with medicinal plants, Bio-diesel plants, Indoor plants, flowering shrubs, Creepers, Flowering Trees, Fruit bearing plants, sacred plants. • Received "Best Ornamental Garden" award by Mysore Horticulture Society in Jan 2014, Aug 2014, and Aug 2015.
4.	**Solar Energy** 9200 LPD solar water heating system (22 Nos.) flat plate collector with single sheet aluminum absorber extruded frame is installed in the hostel and average heat is maintained at 60 degree Celsius. Hot water storage tank is made with stainless steel of 1.6 m thick sheet, non -pressured vertical type- ISI approved thermostat
5.	**Hazardous Chemicals** Chimney is provided to control exhaust gases through fume cupboard and air and exhaust gases are released at a height of 30ft pH of the solution effluent is ensured to lie between 6.5 and 7.5.
6.	**Waste Management** All bio-degradable waste (Vegetable waste/kitchen waste, garden trimmings, fallen leaves and flowers) is converted into usable manure in compost pits located at different location in the campus. Composting is cost effective solution to garbage disposal.
7.	**Natural Lighting System** All the class rooms, laboratories, staff rooms are well ventilated and have adequate natural lighting system.

| 8. E-Waste Management
Obsolete digital devices and other related accessories are disposed through recycling agents. |
| 9. Carbon Neutrality
BMSIT&M has several plantations across the campus, hence making the weather at campus pleasant always regardless of temperature outside the campus. Our college makes significant efforts for Carbon neutrality by restriction of vehicle traffic within the campus and providing specific parking lots for students and staff. Lush greenery around the campus is maintained to reduce the effect of pollution. Planting saplings is a routine process in the institution and conscious attempts are made to grow a variety of species of trees in the campus and provide a good habitat for a variety of birds. |

Some Innovative Projects
- Design and Fabrication of a 50cc Two wheeler that runs on compressed air- KSCST
- Fabrication of smart cycle-KCSCT
- Eye Voice controlled assistive technology for ALS Patients- KCSCT
- Smart Regulator for Temperature control of oil in Hydraulic System- KCSCT
- Design and Fabrication of Commercial Utensil sterilizer- KCSCT
- Magnetically Levitated Vertical –Axis Wind Turbine
- Smart Plate for the detection of Food Quality. KCSCT
- Wireless charging of mobiles using electromagnetic waves
- Prosthetic limb control using adaptive signal processing of EMG signals- KCSCT
- Collision Avoidance device for the visually impaired-KCSCT
- Intelligent fault identification system for transmission system - KCSCT
- Fabrication of smart vehicles - KCSCT
- Implementation of PHOTOMIXER- KCSCT
- Napkin and paper destroyer- KCSCT
- Eco-Friendly CRYO-POWER cool engine- KCSCT
- RFID Beacons for vehicle tracking with crowd generated data- KCSCT
- Smart asthma inhaler- KCSCT
- Krishi-An interface for Indian farmer- KCSCT
- Design of smart home using IOT- KCSCT
- Transformer in rush current detector- KCSCT
- Automated portable dosa maker -KCSCT
- Neural network based automated system for diagnosis of CERVICAL CANCER

- Paper Battery Model –KPIT
- Eco-cart - Mechanical

EVALUATIVE REPORTS OF THE DEPARTMENTS

1. Name of the department   : **Department of Mechanical Engineering**
2. Year of Establishment   : **2002**
3. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)
   UG: B E in Mechanical Engineering, PG: M Tech in Machine Design
4. Names of Interdisciplinary courses and the departments/units involved : **Nil**
5. Annual/ semester/choice based credit system (programme wise):
   UG: semester system is followed from academic year 2002 – 2014 and Choice Based Credit System (CBCS) is followed from the academic year 2014-2015 for both UG and PG.
6. Participation of the department in the courses offered by other departments: **Nil**
7. Courses in collaboration with other universities, industries, foreign Institutions, etc. : **Nil**
8. Details of courses/programmes discontinued (if any) with reasons: Nil
9. Number of teaching posts

	Sanctioned	Filled
Professors	03	04
Associate Professors	03	03
Asst. Professors	14	14

10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.,)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. Students guided for the last 4 years
Dr. Mohan Babu G N	PhD	Principal	Industrial engineering and	29	03Guidung
Dr. HK Govindaraju	PhD	Professor	Fatigue fracture	27	05 Guiding
Dr. AV Suresh	PhD	Professor	Materials	29	04 Guiding
Dr. Badarinarayan K	PhD	Professor	Structural mechanics and fatigue fracture	30 industry	02 Guided
Dr. N Suresh	PhD	Associate Professor	Materials	30	04 Guiding
Praveen kaumar TN		Associate Professor	Materials	18	
Dr. K. M. Sathish Kumar	PhD	Associate Professor	Condition Monitoring	16	04 Guiding
O Gurumurthy	ME	Assistant professor	Production engineering	15	

KCS REDDY	MTech	Assistant professor	Industrial engineering	10	
GL Anantha Krishna	ME	Assistant professor	Design Engineering	22	
GA Yeshwanth Kumar	MTech	Assistant professor	Machine design	10	
Shripad diwakar	MTech	Assistant professor	Thermal power engineering	16	
Nithya Poornima	MTech	Assistant professor	Computer Integrated	07	
Shriganesh TG	MTech	Assistant professor	Computer Integrated	06	
Sundaresh S	MTech	Assistant professor	Product design and manufacturing	16	
Raghavendra Deshpadae	MTech	Assistant professor	Manufacturing and meaterials	20	
YJ Jagadeesh	MTech	Assistant professor	Thermal power engineering	20	
Keerthi Kumar N	MTech	Assistant professor	Thermal power engineering	08	
Madhu MC	MTech	Assistant professor	Thermal power engineering	10	
Kiran MD	MTech	Assistant professor	Machine design	07	

11. List of senior visiting faculty: **Nil**

12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty: **Nil**

13. Student -Teacher Ratio (programme wise): **17:1**

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled:

Sl. No.	Designation	Sanctioned	Filled
1	Foreman	01	01
2	Instructors	02	02
3	Assistant instructors	05	05
4	Mechanics	05	05
5	Helpers	01	01

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG.
    Ref. Q. No. 10 above

16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received: **Nil**

17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received:
    The department received a VTU research grant of Rs. 6 Lakhs for project entitled "Development and comprehensive characterization of aluminum ceramic micro sphere foamed composites".

18. Research Centre /facility recognized by the University: Yes,
      Visvesvaraya Technological University, Belgaum
19. Publications:
          *a) Publication per faculty   : **0.67**
20. Areas of consultancy and income generated   : **Nil**
21. Faculty as members in a) National committees b) International Committees
        c)Editorial Boards:
        Reviewer:
        Dr. HK Govindaraju, Prof & HOD
        Journal of Engineering Science and Technology, Malaysia, Taylors
        University
        Materials & Design, Elsevier Publisher
22. Student projects
    a) Percentage of students who have done in house projects : 95 %
    b) Percentage of students who have done projects outside the institute: 05 %

23. Awards / Recognitions received by faculty and students:

Student Rank list (last four years)			
Sl.no.	Student name with USN	Rank	Year
1	Ms.Mary Abraham Ernackle, 1BY04ME018	1st	2008
2	Mr. Hemanth Kumar, 1BY09ME403	10th	2012
3	Mr. Kanishk Bhadani, 1BY09ME021	8th	2013

24. List of eminent academicians and scientists / visitors to the department

August 2015- July 2016		
Sl. No.	Date	Title & Resource person
01	29-09-2015	J. Prakash, Advocate, Bengaluru: Debate on "Privatization of Engineering Education"
02	14-10-2015	Mr. Ravichandra Rangappa, Head of the Department Faculty of Engineering, Nilai University, Malaysia: Automotive Pollution & Hybrid Vehicle
03	0 1-09-2015	Dr. R Jayanthi, Professor of Horticulture, Division of Horticulture University of Agricultural Sciences, Gandhi Krishi Vignana Kendra(GKVK), Bengaluru-560065: Phyto-Remediation for Environmental Pollution.
04	28-09-2015	Dr. S Rama Murthy, Professor & Head-IP, Center for Emerging Technologies, Jain University, Bengaluru & Smt. Prabhavathi Rao Program Coordinator WTO & IPR Cell Visvesvaraya trade promotion Centre, Dept. of Industries & Commerce, Govt. of Karnataka: Overview of Intellectual Property Rights & Initiative taken by Govt. of Karnataka on Trade Promotion & IPR.
05	18 -11-2015	Dr. P C Panday, Professor (Retired), Dept. of Civil Engineering, Indian Institute of Science (IISc.), Bengaluru& Adjunct Professor Indian Institute of Technology Bhubaneswar (IIT BBS): "Some research Directions in Computational Solid Mechanics".

06	13-08-2015	Mr. K.Mayilsamy, Assistant Professor, BMS College of Law, Bengaluru: "Legal Aspects of Formation and Incorporation of Companies".
07	04-05-2016	Dr. P C Panday, Professor (Retired), Dept. of Civil Engineering, Indian Institute of Science (IISc.), Bengaluru& Adjunct Professor Indian Institute of Technology Bhubaneswar (IIT BBS): " Basic Procedures in FEM".
08	01-04-2016	Ms. Nishanka Bharti, Divya Jyothi Jagrati Sansthan, Bengaluru: "Natural Resource Management and Environmental Protection".
09	22-04-2016	Dr. M N Bheemesh, Senior Advisor, ALMT legal, Bengaluru, "Legal aspects of Intellectual Property Rights".
10	25-01-2015	Prabhavathi Rao, VTPC, Govt. of Karnataka, Dr. S Rama Murthy, Jain University, Rakesh Prabhu, ALTM legal, Bengaluru, C R Pradeep, KSCST, Begaluru: "Intellectual Property Rights: Significance for Academia in Business & Research".
11	17-03-2015	Mr. Balakrishnan, Scientist, Structural Technologies division, CSIR-NAL, Bengaluru: "Vibration Analysis using Finite Element Method".
12	29-08-2015	Nagmani Krishnamurthy, Educational Psychologist, Director of Balavikasa, Yelahanka, bengaluru-64: "Youth-the Power in the community".
13	13-08-2015	Mr. K Mayilsamy, Assistant Professor, BMS College of Law Bengaluru: "Legal aspects of Formation and Incorporation of Companies"
14	17-08-2015	Dr. P G Mukunda, Professor, Dept. of ME, NMIT, Bengaluru & Former Professor & Head, Dept. of Metallurgy, IIT- Kharagpur: "Introduction to Metallography & Material Testing Laboratory".
15	27-08-2015	Mr. Mahadeva Nagaral, Design Engineer, Configuration & Mass Property Group, ARDC, HAL, Bengaluru: "Ferrous & Non-Ferrous Materials: Design, Processing & Selection".

25. Seminars/ Conferences/Workshops organized & the source of funding:
   The department has organized following conferences, funded by Management.

   i.   Organized National Conference on Nano Science and Technology (2013-14)
   ii. Organized national conference on Advances in Materials and design (2-15-16)

26. Student profile programme/course wise:

Name of the Course/programme (refer question no. 4)	Applications received	Selected	Enrolled		Pass percentage
			*M	*F	
Mechanical Engineering	--	Allotted through CET COMED– K Management	59 58 59 58	01 02 01 02	2012 -100% 2013- 100% 2014 — 96.67% 2015 — 97.26%

*M = Male   *F = Female

27.   Diversity of Students:

Year /Batch	% of students from the same state	% of students from other States	% of students from abroad
2013-14	69.5	28.9	1.4
2014-15	65.7	31.5	2.6
2.15-16	70.6	26.6	2.6

28.   How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.?
         GATE qualified   : 2013-14   02
                                      : 2012-13   01

29.   Student progression:

Student progression	Against % enrolled
UG to PG	NA
PG to M.Phil.	NA
PG to Ph.D.	NA
Ph.D. to Post-Doctoral	NA
Employed • Campus selection	2014-15 placed 29 2013-14 placed 33 2012-13 placed 17
• Other than campus recruitment	NA
Entrepreneurship/Self-employment	NIL

30.   Details of Infrastructural facilities
         a) Library (Departmental level)

         Number of UG Books   : 721
         Number of PG books   : 110
         Project reports   : 14 Batches
         Seminar reports   : 3 Batches
         b) Internet facilities for Staff & Students:
         The internet services provided by M/s Convergent Communication Ltd & M/s. BSNL, has a bandwidth of 60 Mbps (4 Mbps for HODs, 2 Mbps for staff & 1 Mbps for students) with 54 access points. The facilities are extended to most computing labs, department sections and secured e-mail access is provided to all staff and students.

         c) Class rooms with ICT facility   yes   : **05**
         d) Laboratories with ICT facility: yes,   All   laboratories   in   the

department have wi-fi connectivity and some class rooms have LCD projector as a part of the ICT facility.

31. Number of students receiving financial assistance from college, university, government or other agencies

Year	SC/ST	Category
2015-16	14	45
2014-15	05	04
2013-14	05	--
2012-13	05	--

32. Details on student enrichment programmes (special lectures / workshops/seminar) with external experts:

Work shop organized

1. Dr.N.Suresh organized a seminar under the aegis of SAE India BMSIT Collegiate Club by Mr.Kalyan Kumar of Abhiyantata Technologies. on 21st August 2015.
2. The Faculty members were invited to Audit the workshop on Automobile Mechanics and IC Engines conducted as a part of PRAVEGA- 2015 at IISc, Bengaluru.
3. A workshop was organized on "Overview of Intelligent Design Processes in Passenger Car Industry" by Mr.Kalayankumar of Abhiyantara Technologies, Bengaluru on 21st August 2015.
4. Organized one day hands on training work shop on IC engines in association with Aravind motors, Bengluru.

Lecture programmes conducted:

August 2015- July 2016		
Sl.No.	Date	Title & Resource person
01	29-09-2015	J. Prakash, Advocate, Bengaluru: "Debate on "Privatization of Engineering Education"
02	14ˉ10-2015	Mr. Ravichandra Rangappa, Head of the Department Faculty of Engineering, Nilai University, Malaysia: "Automotive Pollution & Hybrid Vehicle".
03	01-09-2015	Dr. R Jayanthi, Professor of Horticulture, Division of Horticulture University of Agricultural Sciences, Gandhi Krishi Vignana Kendra(GKVK), Bengaluru-560065. : "Phyto-Remediation for Environmental Pollution"
04	28-09-2015	Dr. S Rama Murthy, Professor & Head-IP, Center for Emerging Technologies, Jain University, Bengaluru & Smt. Prabhavathi Rao Program Coordinator WTO & IPR Cell Visvesvaraya trade promotion Centre, Dept. of Industries & Commerce, Govt. of Karnataka : "Overview of Intellectual Property Rights & Initiative taken by Govt. of Karnataka on Trade Promotion & IPR".
05	18-11-2015	Dr. P C Pandey, Professor (Retired), Dept. of Civil Engineering, Indian Institute of Science (IISc.), Bengaluru& Adjunct Professor, Indian Institute of Technology Bhubaneswar (IIT BBS): "Some Research Directions in Computational Solid Mechanics".

06	13-08-2015	Mr. K.Mayilsamy,Assistant Professor, BMS College of Law, Bengaluru: "Legal Aspects of Formation and Incorporation of Companies".
07	04-05-2016	Dr. P C Pandey, Basic Procedures in FEM, Professor (Retired), Dept. of Civil Engineering, Indian Institute of Science (IISc.), Bengaluru& Adjunct Professor, Indian Institute of Technology Bhubaneswar (IIT BBS): "Basic Procedures in FEM".
08	01-04-2016	Ms. Nishanka Bharti, Divya Jyothi Jagrati Sansthan, Bengaluru: "Natural Resource Management and Environmental Protection".
09	22-04-2016	Dr. M N Bheemesh, Senior Advisor, ALMT legal, Bengaluru: "Legal aspects of Intellectual Property Rights".
10	25-01-2015	Prabhavathi Rao, VTPC, Govt. of Karnataka, Dr. S Rama Murthy, Jain University, Rakesh Prabhu, ALTM legal, Bengaluru, C R Pradeep, KSCST, Begaluru: "Intellectual Property Rights: Significance for Academia in Business & Research".
11	17-03-2015	Mr. Balakrishnan, Scientist, Structural Technologies devision CSIR-NAL, Bengaluru: "Vibration Analysis using Finite Element Method".
12	29-08-2015	Nagmani Krishnamurthy, Educational Psychologist, Director of Balavikasa, Yelahanka, Bengaluru: "Youth-the Power in the Community".
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15	27-08-2015	Mr. Mahadeva Nagaral, Design Engineer, Configuration & Mass Property Group ARDC, HAL, Bengaluru: "Ferrous & Non-Ferrous Materials: Design, Processing & Selection".

33. Teaching methods adopted to improve student learning:
Quiz, Videos, Flip classes, Seminars, Partial delivery of courses by industrial experts.

34. Participation in Institutional Social Responsibility (ISR) and Extension Activities:

Sports and NSS

35. SWOC analysis of the department and Future plans

Strengths: Good infrastructure, Good faculty strength, Trained supporting staff, Budget allocation

Weakness: Lack of control over course content being a Non autonomous/affiliate engineering college and extensive use use ICT.

Opportunity: To become a autonomous college and promote industry institute interaction.

Challenges: Adopting to technology changes, facing competition due to entry of foreign universities and efforts towards increase of core mechanical engineering placements.

1. Name of the department   : **Electronics and Communication Engineering (ECE)**
2. Year of Establishment: **2002-03**
3. Names of Programmes/Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.): **UG: B E in Electronics & Communication Engineering**
Research Centre for Ph. D recognized by VTU, Belagavi
4. Names of Interdisciplinary courses and the departments/units involved: **Nil**
5. Annual/ semester/choice based credit system (programme wise)

Programme	System	Year
B. E. in ECE	Semester	2002 -2014
B. E. in ECE	Choice Based Credit System (CBCS)	2014-2015 Onwards

6. Participation of the department in the courses offered by other departments:

Course	Department	Year
Java	CSE	2014-15

7. Courses in collaboration with other universities, industries, foreign institutions, etc.

Programme	Course Offered	Industry Collaboration
ECE	Automotive Electronics	KPIT Technologies Ltd.
ECE	AUTOSAR	KPIT Technologies Ltd.

8. Details of courses/programmes discontinued (if any) with reasons: **Nil**
9. Number of teaching posts

Designation	Sanctioned	Filled
Professors	02	01
Associate Professors	04	04
Asst. Professors	18	18

10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt./Ph.D. / M. Phil. etc.,)

Sl. No.	Faculty Name	Qualification	Designation	Specialization (Area of Interest)	Experience(years)	No. of Ph.D Students for last 4 years
1.	Dr. M. C. Hanumantharaju	B. E(ECE), M. Tech (DCN), Ph. D (VLSI)	Professor & HoD	VLSI Signal and Image Processing	15	05
2.	Prof. Ambika R.	B. E(ECE), M.E(EC), (Ph. D)	Associate Professor	Network Security & Communication	18	-

3.	Prof. Saneesh C. T.	AMIE, M. Tech (DE), (Ph. D)	Associate Professor	Digital Electronics	12	-
4.	Dr. Seema Singh	B. Tech (ECE), M. Tech(ECE), Ph. D	Associate Professor	Neural Network & Control Systems	14	-
5.	Dr. A Shobha Rani	B. E(ECE), M. Tech (DEC), Ph. D	Associate Professor	Digital Electronics and Network Security	15	-
6.	Prof. Vidya Devi M	BE(ECE), M. Tech (VLSI), (Ph. D)	Assistant Professor	VLSI & Embedded	13	-
7.	Prof. Anil Kumar D	BE(ECE), M. Tech(VLSI), (Ph. D)	Assistant Professor	VLSI & Embedded	14	-
8.	Prof. Mamatha K.R	BE(ECE), M. Tech(DCN), (Ph. D)	Assistant Professor	Digital Communication and Networks	14	-
9.	Prof. Hamsavahini R.	BE(ECE), M. Tech(MET), (Ph. D)	Assistant Professor	VLSI & Nanotechnology	11	-
10.	Prof. Rashmi N.	BE (ECE), M. Tech(DCN), (Ph.D)	Assistant Professor	Wireless Communication	10	-
11.	Prof. Jagannath K. B.	BE(ECE), M. Tech(VLSI), (Ph.D)	Assistant Professor	VLSI & Embedded	7.5	-
12.	Prof. Chandra Prabha	B. E(ECE), M. Tech(DECS)	Assistant Professor	Digital Electronics	8.5	-
13.	Prof. Shashikala J	B. E(ECE), M. Tech (CN)	Assistant Professor	Network Security	08	-
14.	Prof. Lakshmi Sagar. H. S	B. E(ECE), M. Tech (VLSI), Ph. D	Assistant Professor	VLSI & Embedded	05	-
15.	Prof. Sabina R.	BE(ECE), M. Tech (VLSI), Ph. D	Assistant Professor	VLSI & Nanotechnology	11	-
16.	Prof. Asha G.H.	BE(ECE), M. Tech(DCN)	Assistant Professor	Digital Communication Networks	05	-

17.	Prof. Shivarudraiah.	BE(ECE), M. Tech (VLSI)	Assistant Professor	VLSI & Embedded	5.5	-
18.	Prof. Suryakanth.	BE(ECE), M. Tech(VLSI)	Assistant Professor	VLSI & Embedded	7.5	-
19.	Prof. Thyagaraj T	BE(ECE), M. Tech(PE), (Ph. D)	Assistant Professor	Image Processing and RF Microwaves	05	-
20.	Prof. Vinutha. B	BE(ECE), M. Tech (DEC)	Assistant Professor	Digital Electronics & Communication	05	-
21.	Prof. Shilpa H	BE(ECE), M. Tech(CN)	Assistant Professor	Digital Electronics	4.6	-
22.	Prof. Deepa Reddy	BE(ECE), M. Tech (DCN), (Ph. D)	Assistant Professor	Wireless Communication	12	-
23.	Prof. Ravindra Asundi	BE(ECE), M. E(EC), (Ph. D)	Assistant Professor	Neural Networks and Software Systems	15	-

11. List of senior visiting faculty: **Nil**

12. Percentage of lectures delivered and practical classes handled (programme wise) by Temporary faculty: **Nil**

13. Student -Teacher Ratio (programme wise): **The student-teacher ratio of the ECE Programme is: 15.42:1 (Average STR for three assessment years)**

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled

Technical Staff	Sanctioned	Filled
Instructor	02	02
Asst. Instructor	04	04
Mechanic	01	01

15. Qualifications of teaching faculty with D. Sc/ D. Litt/ Ph.D/ M.Phil/PG: **Ref. Q. No. 10**

16. Number of faculty with on-going projects from a) National b) International funding agencies c) grants received (TEQUIP):
(a) National funding agencies: Project has been sanctioned under Naval Research Board (NRB), Government of India, Ministry of Defence.

Title	Neural Network based Predictive Controller for Ship Navigation
Project No.	NRB-351/MAR/14-15
Cost	Rs.19,09,000/-(Nineteen lakhs and nine thousand only)
Duration of the project	02 years
Principal Investigator	Prof. Anil Kumar D
Co-Principal Investigator	Dr. M. C. Hanumantharaju

(b) International funding agencies: **Nil**

(c) Grants received (TEQUIP): **Nil**

17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, KSCST, etc. and total grants received:

Seven final year student projects fetched a total grant of Rs.35000 /- (Rs. 5000/- per project)

from KSCST during the academic years 2012-2016.

18. Research Centre /facility recognized by the University:

The department is recognized as research centre by Visvesvaraya Technological University (VTU), Belagavi, Karnataka.

19. Publications:

- Publication per faculty: **5.43**
- Number of papers published in peer reviewed journals (national / international) by faculty and students: **68**
- Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete, Dare Database -International Social Sciences Directory, EBSCO host, etc.): **25**
- **Chapter in Books**

Dr. M C Hanumantharaju has written a chapter ("Design of Reconfigurable Architectures for Steganography System") in the book titled "Handbook of Research on Applied Video Processing and Mining" published by IGI Global.

- **Books Authored**

  Dr. M. C. Hanumantharaju authored two books titled "Digital System Design using VHDL" and "VLSI Circuits" published by Star-tech Educational Publishers, Bengaluru.

- **Citation index: h-index**

Faculty Name	Citation indices	h-index	i10-index
Dr. M C Hanumantharaju	78	5	17
Dr. Seema Singh	17	3	0

- Impact Factor: **1.3**

20. Areas of consultancy, MoU and income generated: **Nil**

21. Faculty as members in a) National committees b) International Committees c) Editorial Boards: **NIL**

22. Student projects: a) Percentage of students who have done in-house projects including interdepartmental/programme

Year	Percentage of students who have done in house projects	Percentage of students who have done projects outside the institute
2013-14	100	0
2014-15	96.4	3.6
2015-16	96	4

23. Awards / Recognitions received by faculty and students
    a) Faculty:

Sl. No.	Faculty Name	Title of Awards/Recognitions	Organization
1.	Prof. M C Hanumantharaju	Senior Educator & Scholar Award	National Foundation for Entrepreneurship Development, India, on the occasion of 6th Teachers Day Celebration, 5th September, 2015
2.	Prof. Ambika R.	Best faculty for the year 2105-16	Cognizant Technology Services Ltd.

b) Students:

Sl. No.	Student Name	Title of Awards/Recognitions	Organization
1.	Ms. Sneha Das Ms. Harshitha P. V Ms. Modini Ms. Madhuri	"Project of the Year" Award 2012-13	KSCST at Angadi College of Engg, Belgaum,
2.	Mr. Amit Mutgi Ms. Rishya P Murthy Ms. Tejaswini	"Project of the Year" Award 2014-15	KSCST, Sahyadri College of Engineering and Management, Mangalore
3.	Mr. Nagaraj	TI Innovation Challenge	KPIT-SPARC Contest 2016

24. List of eminent academicians and scientists / visitors to the department

S.L.No	Date	Name & Organization
1	Aug 29, 2012	Dr. S Chatterjee, Senior Scientist, Indian Institute of Astrophysics.
2	April 29, 2014	Suhail Ali SAP Analyst Cognizant Technology Solutions.
3	Jan 19-20, 2015	Sun Softronic System, partners with NUVOTON, Taiwan.
4	Jan 12-13, 2015	Mr. Hitesh, Trainee Engineer, ARK Techno Solutions
5	March 19,2016	Dr. Kesavaraju, Scientist, ISRO, Bengaluru
6	April 27, 2016	Dr. K. S. Guruprasad, Reva University
7	March 2, 2016	Prof. M. S. Sreenivas, Dept. of ECE, MSRIT, Bengaluru

25. Seminars/ Conferences/Workshops organized & the source of funding a) National

Sl No	Name of the workshop	Dates
1	Analog Communication Devices	Oct. 25-29, 2014
2	VLSI Circuit Design using Cadence Tools	Jan 2-3, 2014
3	Advanced Controllers on MSP 430	July 7-11, 2014

4	Embedded RTOS NUVOTAN CORTEX MO PLATFORM	Nov 3-5, 2014
5	Advanced RF Communication	Sept. 25-29, 2014
6	Robotics	Jan. 12-13, 2015
7	ARM Processor	Jan 19-20, 2015
8	Introduction to MATLAB and SIMULINK	Nov. 31 to Dec. 4, 2015.

a) **National Conference**:
The department organized National Conference on "Emerging Trends in VLSI Design and Embedded Systems (ETVDES)" on 25th October 2013.

b) **International: NIL**

26. Student profile programme/course wise

Name Of the course	Academic year	Applications Received	Selected	Enrolled		Pass Percentage
				M	F	
Electronics & Communication Engineering	2011-15	Admissions through KEA/ COMEDK/ Management	111	80	31	98
	2010-14		109	70	39	94
	2009-13		100	77	23	89
	2008-12		70	52	18	64

Give data in above format

Year of Entry	Male	Female	Total Entry	Year of Passing	Pass %
2011-12	80	31	111	2014	98
2010-11	70	39	109	2013	94
2009-10	77	23	100	2012	89
2008-09	52	18	70	2011	64

27. Diversity of Students:

Name of the Course (ECE)	% of students from the same state	% of students from other States	% of students from abroad
2013	80	20	-
2014	82	17	1
2015	81	18	2

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defence services, etc.

Total number of students who cleared national and state competitive examinations:

29. Student progression

Student progression	Against % Enrolled
UG to PG	10%
PG to M.Phil.	Nil

PG to Ph.D.	Nil
Ph.D. to Post-Doctoral	Nil

Employed		
Year	Campus selection (out of eligible candidates)	Other than campus recruitment
2011-15	**69%**	31%
2010-14	**75%**	25%
2009-13	**43%**	57%
Entrepreneurship/Self-employment		Nil

30.   Details of Infrastructural facilities
a) Library: Department of ECE library has:
   Titles: **370**, Volumes: **395**, Amount Invested in Rs. (Till date): **91,767**
b)   Internet facility through Wi-Fi and LAN for Staff & Students with separate user login
   512 Kbps for students, 2MB for staff, 4MB for HOD
c) Class rooms
All class rooms have an area of 104 sq. meters and provided with ICT Facility
d) Laboratories
Programming laboratories: Cadence, Keil Microvision, Xilinx, etc.
Hardware laboratories: Micro-strip Antenna, OFC, DSO, etc.
R&D laboratory: Equipped with FSS, Wi-com, My-DAC, My-RIO, Matlab, Labview, etc.
31. Number of students receiving financial assistance from college, university, government or other agencies.

Type \ Year		Government	Other agencies
	BSN Scholarship	SC/ST	Jindal/ Community Scholarship
2012-13	3	06	-
2013-14	3	16	-
2014-15	4	25	-
2015-16	5	34	-

32. Details on student enrichment programmes (special lectures / workshops /seminar) with external experts for past 4 years.

Sl No.	Name of the student enrichment programme	Dates
1	Antennas: A glimpse	March 26, 2012
2	Advance FPGA design and its application in Image Processing	Aug 23, 2012
3	Embedded systems and RTOS	Dec 21, 2013
4	Recent Trends in Broadband Wireline	April 29, 2014
5	Contributions of Maulana Abul Kalam Azad to the Indian Education System	Nov, 2014
6	Oscillators and Wave Shaping Circuits	Nov. 3, 2014

33. Teaching methods adopted to improve student learning Various Teaching Methods adopted to improve student learning are as follows
    (a) Real world examples through case studies, industrial visits, demonstrating practical aspects through videos, writing a brief summary of research papers etc.
    (b) Collaborative learning technique, mainly think pair share technique for tough subjects such as problem and program oriented subjects
    (c) Massive Open Online Course (MOOC's) certification courses for few additional courses which are not there in University curriculum
    (d) Blended classes in addition to conventional teaching, especially for the topics to enhance clarity in some tough subjects
    (e) Open ended experiments /mini projects for every laboratory to improve practical skills (design and analysis skills), encompassing all subject experiments.
    (f) Trouble shooting and analyze the bugs of a circuit/program – to improve the quality of laboratory experiments
    (g) Design contests /poster presentation/paper publications on real time problems to encourage bright students
    (i) Remedial classes, notes, solved previous question papers/proctor system to assist weak students.
    (j) Quiz, and Seminars

34. Participation in Institutional Social Responsibility (ISR) and Extension activities
    (a) Our students actively participated in creating awareness program on eco-green by celebrating green Diwali, the objective is to avoid burning the crackers under Nature club.
    (b) They have involved in attending NSS camp
    (c) Mélange, a student group donate books to the Govt. school kids, cloths to slum people etc.
    (d) Shramadhan: Plastic-free Campus
    (e) Blood Donation and Medical and Health Awareness Camp: NSS

35. SWOC analysis of the department and Future plans

STRENGTH
   • High Student Quality (Input at I year level)
   • Young, dedicated and qualified faculty
   • Modern teaching learning methods
   • Adopted OBE Teaching-Learning Method
   • State-of- the art lab/library facilities
   • Excellent Placements

WEAKNESS
- Lack of Industry Institute Interaction
- Lack of industry sponsored laboratories
- Quality of Research publications

OPPORTUNITY
- Bengaluru is a city with ample number of PSU and Research labs
- Bengaluru is hub of Industries where Industry Institute Interaction can be explored
- Option for MoU with leading universities and industries.
- Scope for consultancy work
- Scope for enhancing faculty competency

CHALLENGES
- Balancing Academics, Research and Departmental work
- Affiliated status is hindering the growth.
- Entry of foreign universities

Future Plans
- Initiation in consultancy work
- Offer new programmes in collaboration with other Universities/Industries
- Quality of research publications
- Strengthen the Industry-institute interaction

1. Name of the department: **COMPUTER SCIENCE & ENGINEERING**
2. Year of Establishment: **2002-03**
3. Names of Programmes / Courses offered (UG, PG, M.Phil. Ph.D. Integrated Masters; Integrated Ph.D., etc.): **UG: B E in Computer Science & Engineering, PG: M Tech in Computer Science & Engineering**
4. Names of Interdisciplinary courses and the departments/units involved: NIL
5. Annual/ semester/choice based credit system (programme wise):
   For UG semester system is followed from academic year 2002 – 2014 and Choice Based Credit System (CBCS) is followed from academic year 2014-2015 onwards. For PG semester system is followed from academic year 2014.
6. Participation of the department in the courses offered by other departments: **NIL**
7. Courses in collaboration with other universities, industries, foreign institutions, etc. : **NIL**
8. Details of courses/Programmes discontinued (if any) with reasons: **NIL**
9. Number of teaching posts:

Designation	Sanctioned	Filled
Professors	03	03
Associate Professors	05	03
Asst. Professors	18	18

10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt./Ph.D. / M. Phil. etc,)

Sl. No.	Faculty Name	Qualification	Designation	Specialization (Area of Interest)	Experience(years)	No. of Ph.D Students for last 4 years
1.	Dr. Thippeswamy.G	BE (CSE), M.E (CSE), Ph.D	Professor & HOD	Image Processing and Pattern Recognition	23	-
2.	Dr.Ravi(Ravinder)Prakash G	B.Tech(ECE), M.Tech(ECE) Ph.D Post Doc	Senior Professor & Dean (R&D)	Statistical and Computational Inverse problems	33	01
3.	Dr. Anil G. N.	BE(CSE) M.Tech(CNE), DSc	Associate Professor	CNE	23	-
4.	Prof. Hemamalini	BE(CSE), M.Tech (CSE), (PhD)	Associate Professor	CSE	21	-

5.	Prof. Bharathi. R	BE (CSE) MTech (VLSI & Embedded system), (PhD)	Associate Professor	VLSI & Embedded system	16	-
6.	Prof. Bharathi.M A	BE (CSE), M.Tech (CSE), Ph.D	Associate Professor	Wireless Sensor Networks,	20	-
7.	Prof. Vishaka Yadav	BE (CSE), MBA (Systems)	Assistant Professor	Information System	14	
8.	Prof. M. s Muneshwara	BE (ISE), M.Tech (CSE)	Assistant Professor	CSE	10	-
9.	Prof. R. Anand	BE(CSE), M.Tech (CSE)	Assistant Professor	CSE	10	-
10	Prof. G. Y. Durgadevi	B. Tech (CSE), M.Tech (CNE)	Assistant Professor	CNE	12	-
11	Pro. Shruthi. J	BE(CSE), M.Tech	Assistant Professor	CNE	8	
12	Prof. Jagadeesh. P	BE (ISE), Mtech (CSE), (PhD)	Assistant Professor	CSE	14	-
13	Prof.Durgabhavani.A	B.Tech(CSE), M.Tech(CSE)	Assistant Professor	CSE	12	-
14	Prof.Rajesh.N.V	BE(ISE), M.Tech(CSE)	Assistant Professor	CSE	10	-
15	Prof. Chethana.C	BE (CSE), M.Tech (CSE)	Assistant Professor	CSE	13	-
16	Prof. Ambika. G. N	BE (CSE), M. Tech (CSE)	Assistant Professor	CSE	6	-
17	Prof. Vidya. R Pai	BE (CSE), M.Tech (CNE)	Assistant Professor	CNE	15	-
18	Prof. A. Mari. Kirthima	BE (CSE), ME(CNE)	Assistant Professor	CNE	11	-
19	Prof. Radhika K.R	BE (CSE), M.Tech (CSE) (Ph.D)	Assistant Professor	CSE	15	-
20	Prof. Guruprasad R.	BE (CSE), M.Tech(CSE)	Assistant Professor	CSE	12	-
21	Prof. Srivani .P	BE (CSE), M.Tech(CSE)	Assistant Professor	CSE	2	-
22	Prof. Ravi Kumar B.N	BE (CSE), M.Tech(CSE)	Assistant Professor	CSE	7	-
23	Dr.Suresh Y	BE (CSE), M.Tech(CSE)	Assistant Professor	CSE	1	-
24	Prof. Shankar R	BE (CSE), M.Tech(CSE)	Assistant Professor	CSE	6	-

11. List of senior visiting faculty: **One, Dr. Narayana Iyer**
12. Percentage of lectures delivered and practical classes handled (Programme wise) by temporary faculty: **NIL**
13. Student -Teacher Ratio (programme wise) : **UG: 17:1, PG: 12:1**
14. Number of academic support staff (technical) and administrative staff; sanctioned and filled : **Sanctioned : 05, Filled:05**
15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG:
    Ref. Q. No. 10 above
16. Number of faculty with on-going projects from a) National b) International funding agencies and grants received: **01**
17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received: **NIL**
18. Research Centre /facility recognized by the University**: Yes,   VTU Research Centre**
19. Publications: (Per faculty): **3.12**
    Student Publications: **20**
    Number of Publications listed in international database:**15**
    Chapter in Books : **NIL,** Books Edited : **NIL**
    Citation index: Dr. Ravi(Ravinder) Prakash
                    Dr.Thippeswamy G
20. Areas of consultancy and income generated: **NIL**
21. Faculty as members in a) National committees b) International Committees c) Editorial Boards : **NIL**
22. Student projects

Year	Percentage of students who have done in house projects	Percentage of students who have done projects outside the institute
2013-14	81	19
2014-15	85.7	14.3
2015-16	93	7

23. Awards / Recognitions received by faculty and students :
    Faculty:
    Dr.Thippeswamy G BHARATH EXCELLENCE AWARD for outstanding achievement in the chosen field of activity and services rendered to promote greater friendship and India-International Co-operation during April-2014 CERTIFICATE OF FELICITATION during Conference on " Economic Growth and National Unity" for Out-standing Contribution and praiseworthy achievements in the chosen field during May-2014

Students: Some of the important achievements of the students are listed below

STUDENT'S NAME	TITLE	PLACE	AWARDS
Mr.Bharath M S	Google Summer of Code 2014 : https://www.google-melange.com/gsoc/projects/list/google/gsoc2014	Bengaluru	3 month internship program (Stipend $5500)
Mr. Suraj Kumar Jana	*International Space Apps Challenge:* https://2014.spaceappschallenge.org/project/cquara---coastal-quake-alert-response-and-analytics/	Bengaluru	FIRST POSITION
Sonal T.G	TATVA-13	TATVA-13, held on 22nd & 23rd Feb 2013 at BNMIT, Bengaluru	Won second prize
Diwakar Mayank Kumar	Applife contest : http://www.wipro.com/newsroom/press-releases/Wipro-kicks-off-AppLife-contest-2013-for-engineering-students/	M/S Wipro Technologies, Bengaluru	Won second prize

24. List of eminent academicians and scientists / visitors to the department
25. Seminars/ Conferences/Workshops organized & the source of funding
    a) National

SL NO	WORKSHOP	
1	workshop on "Cloud Computing"	29th & 30th Aug 2015.
2	Work shop on "Agile Frame work and Management"	13,20,27th September, 2014
3	Workshop on " Big Data Analytics"	7/2/2015, 21/02/2015, 7/3/2015
4	workshop on "Android App Development"	15th July to 18th July 2015.
5	National Conference on Electronics, Computers and Computation (NCECC-2013)	10-10-2013
6	National Conference on "Cloud Computing"	28-09-2013
7	National Conference on Software and Information Management	27-09-2013

b) **International: NIL**
26. Student profile programme/course wise:

Name of the Course/Programme Computer Science and Programming	Applications received	Selected	Enrolled		Pass percentage
			M	F	
2011-2015	90+23	113 (95+18+0)	49+09	45+09	89.0
2010-2014	90+11	101 (92+09+0)	50+04	41+05	85.5
2009-2013	90+00	089 (80+09+0)	47+05	33+04	87.6

27.   Diversity of Students

Name of the Course (ECE)	% of students from the same state	% of students from other States	% of students from abroad
2010	76.15	23.85	--
2011	84.69	15.3	--
2012	72.72	25.45	1.81
2013	62.09	29.03	8.87
2014	68.03	21.31	10.65

28.   How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defence services, etc.: **40 (From 2010 – 2015)**

29.   Student progression

Student progression	Against % enrolled
UG to PG	7%
PG to M.Phil.	Nil
PG to Ph.D.	Nil
Ph.D. to Post-Doctoral	Nil
Employed • Campus selection • Other than campus recruitment	 56% 15%
Entrepreneurship/Self-employment	10%

30.   Details of Infrastructural facilities
       a) Library: Available
    b)   Internet facilities for Staff & Students: 4MB for HOD; 2 MB for staff; 512 Kbps for students
    c) Class rooms with ICT facility: 03 Rooms
    d) Laboratories: 4 Programming labs

31.   Number of students receiving financial assistance from college, university, government or other agencies: **11(2012-13), 55(2013-14), 53(2014-15), 82(2015-16)**

32.   Details on student enrichment programmes (special lectures / workshops /seminar) with external experts:

SI. no	TOPIC	Date
1	Life Cycle of Real time projects in IT companies	13/09/14
2	Technical talk on Latest Techniques in "**Wireless Sensor Networks**"	21st May 2015
3	Effective Coding Techniques	29/08/15
4	Career Orientation using latest Technologies	16/10/15
5	Mr.Alok Chaurasia and Mr. Sunil Singh delivered the talk on "Career orientation using latest technologies-Applied Technology ".	Oct 2015
6	Technical talk on "Cloud Computing Trend as per Industrial Approach"	14/11/2015

STUDENTS CENTRIC ACTIVITIES
3rd Semester: 2015-2016 (Odd Semester)

Sl.No	Date	Semester (UG) / Class	Student Centric Activity
1.	05-08-15	III	Implementation of Tower of Hanoi and Permutation problems and their use.
2.	10-08-15	III	Quiz on data structure using C
3.	14-09-15	III	JAVA- Session1
4.	21-09-15	III	JAVA- Session2
5.	28-09-15	III	JAVA- Session3
6.	14-08-15	V	Seminars on "Operating Systems"
7.	20-08-15	V	Seminar on Real time Database projects
8.	28-8-15	V	Requirement Engineering process(Use Case Diagrams)
9.	29-08-15	V	Seminar on Effective coding Techniques
10.	11-09-2015	V	A Discussion on Software Engineering Issues for an Assembler Design
11.	24-09-15	V	QUIZ on Operating Systems Concepts
12.	23-09-15	V	Quiz on Database Management system
13.	28-09-15	V	Poster/PPT Presentation on ER-Diagram and ER-Schema
14.	19-11-15	V	Assembler Design –MINI PROJECT
15.	21-09-15	VII	Posters Presentation on "Storage Area Network"
16.	28-09-15	VII	Latex session-1
17.	04-3-2016	IV	Mozilla & Open Source
18.	22-3-2016	IV	IEEE Technical Seminar by students(Collaborative Learning & Team building)
19.	01-4-2016	VI	Seminar on Project management using MS Project and , Usage of MS project tool and Example demo of Sensitivity analysis for given Lpp using Lingo Software
20.	25-9-2014	V	Seminar on kernel
21.	22-3-2015 to 25-3-2015	II	Think-Pair and share
22.	28-2-2015	IV	EC & LD – MINI PROJECTS
23.	14-4-2015 to	IV	A seminar and IEEE paper presentation
24.	12-3-2015	VI	Quiz on Multiple Optimal Solution and Unbounded solution.
25.	30-3-2015	VI	Seminar on Applications of Linear Programming
26.	18-5-2015	VI	Presentation of Novel Ideas on E-Governance and Societal
27.	19-03-2016	IV -M.Tech	Practicing XP and Mastering Agility
28.	11-3-2015	II -M.Tech	A Group discussion

33. Teaching methods adopted to improve student learning Various Teaching Methods adopted to improve student learning are as follows:

Cooperative learning, Active Learning, Blended learning, Role playing, Partial delivery, Quiz, Seminars, Power point presentation

34. Participation in Institutional Social Responsibility (ISR) and Extension activities
1. Our students actively participated in creating awareness program on eco-green by celebrating green Diwali, the objective is to avoid burning the crackers under Nature club.
2. They have involved in attending NSS camp
3. Our students has created a group called Melange under this various social activities has been arranged like book donation to the govt school kids, cloths to slum people   etc..

35. SWOC analysis of the department and Future plans:
STRENGTH:
   i. Brand "BMS"(1946, First Private Engineering College in India and before Independence)
   ii. High Student Quality (Input at I year level)
   iii. Young ,dedicated and qualified faculty
   iv. Practicing OBE
   v. Supportive / Magnanimous Management
   vi. State-of- the art lab/library facilities
   vii. Excellent Placements
   viii. Student entrepreneurs
WEAKNESS:
   i. Lack of Industry Institute Interaction
   ii. Distance from the City
   iii. Lack of industry sponsored laboratories
   iv. Usage of Modern Teaching aids
OPPORTUNITIES:
   i. Bengaluru is a city with ample number of PSU and Research labs
   ii. Bengaluru is hub of Industries where Industry Institute Interaction can be explored
   iii. Option for MoU with leading universities and industries.
   iv. Scope for consultancy
   v. Scope for enhancing faculty competency
CHALLENGES:
   i. Balancing Academics, Research and Departmental works
   ii. Affiliated status is hindering the growth.
   iii. Entry of foreign universities

Name of the department: **Electrical and Electronics Engineering**
1. Year of Establishment : **2003-04**
2. Name of Programmes/ Courses offered (UG,PG, M.Phil, Ph.D, Integrated Masters, Integrated Ph.D, etc) : **B.E, M.Sc(Engg), Ph.D.**
3. Name of Interdisciplinary courses and the departments/units involved : **NIL**
4. Annual /semester/ choice based credit system (programme wise) :
    The affiliating university introduced CBCS system starting from the academic year 2014-15. The students admitted before 2014-15 academic year did not have CBCS system.
5. Participation of the department in the courses offered by other departments : **NIL**
6. Courses in collaboration with other universities, industries, foreign institutions, etc :
    The student recruits of KPIT Ltd. are offered with two add on courses in collaboration with KPIT, Bengaluru, viz Automotive Electronics and AUTOSAR Infotainment Systems. These courses are taught by department faculty members who undergo a special training at KPIT Ltd.
7. Details of courses/programmes discontinued (if any) with reasons : **NIL**
8. Number of Teaching Posts

	Sanctioned / Required				Filled			
	2011-12	2012-13	2013-14	2014-15	2011-12	2012-13	2013-14	2014-15
Professors	01	01	01	01	01	01	01	01
Associate Prof.	03	03	03	03	02	02	02	02
Assistant Prof.	08	08	08	08	09	10	10	10

9. Faculty profile with name, qualification, designation, specialization.

Name	Qualification	Designation	Specialization	Experience in Years	No. of Ph.D students guided in last 4 years
Dr. T. C. Balachandra	M.E, Ph.D	Professor	M.E(Power Systems), Ph.D(High Voltage Engineering)	Teaching:20 Research : 10 Industry : 07	01 (Guiding)
Mr. H.D. Kattimani	M.S	Associate Prof.	Electronics & Controls	Teaching : 25	NA
Dr. Naraparedd y Ramarao	M.S, Ph.D	Associate Prof	M.S(Computer Control and Automation) Ph.D (Electrical & Electronics Engg)	Teaching : 15 Research : 06	01 (guiding)
Mrs.	M.Tech	Assistant	VLSI and ES	Teaching : 07	NA

Manjula B K		Prof		Industry : 12	
Mrs. Suma Umesh	M.Tech	Assistant Prof	Power Electronics	Teaching : 12 Research : 1.25	NA
Mr. Manjunath a Babu P	M.E	Assistant Prof	Power and Energy systems	Teaching : 13 Research :	NA
Mr. Prashant A A	M.Tech	Assistant Prof	Biomedical Signal Processing	Teaching : 13 Research : 05	NA
Mr. Prashant N A	M.Tech	Assistant Prof	Computer Applications in Industrial Drives	Teaching : 11 Research : 05	NA
Mr. OzwinDSo uza	M.Tech	Assistant Prof	Computer Applications in Industrial Drives	Teaching : 06 Industry : 2.5	NA
Mr. Nagaraj D Chonali	M.Tech	Assistant Prof	VLSI and ES	Teaching : 10	NA
Mr. VikramChe kuri	M.E	Assistant Prof	Power Systems	Teaching : 06	NA
Mr. BabuNaik G	M.E	Assistant Prof	Power Systems	Teaching : 05	NA
Mrs. Shilpa G Nair	M.Tech	Assistant Prof	Computer Applications in Industrial Drives	Teaching : 06	NA
Mr. Rajnikanth V K	M.Tech	Assistant Prof	Computer Applications in Industrial Drives	Teaching : 06	NA

10. List of senior visiting faculty:

Sl No	Name of the Faculty	Qualification	Designation	Academic year
1	Dr..Narayana Iyer.S	Ph.D	Visiting Professor	2014 -2015

11. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty : **NIL**
12. Student – Teacher ratio (programme wise) : **16.6:1**
13. Number of academic support staff(technical) and administrative staff, sanctioned and filled : **05**
14. Qualification of teaching faculty with DSc,/D.Litt/**Ph.D**/M.Phil/**PG:**
    Please Refer Q. No: 10 above
15. Number of faculty with ongoing projects from
a) **National**

Year	Number of faculties
2014-15	02

        b) International : NIL

16. Department projects funded by DST-FIST, UGC, DBT, ICSSR etc and total grants received

Year	Title of the Project	Funding Agency	Name of the Faculty	Total grant sanctioned (INR)
2011-12	NIL			
2012-13	Estimation of Electrical Conductivity in Metals	KSCST	Dr. T C Balachandra(Guide) Mr.Shreyas B K and Others	5000
2013-14	NIL			
2014-15	Simulation Of Micro Gas Sensors For Detection Of Sf6 Leakage And Its Constituent Gases Under Partial Discharge In A Gas Insulated Switchgear	Naval Research Board, India	Mrs. Suma Umesh Dr. T C Balachandra	5.25 Lakhs

17. Research Centre / facility recognized by the university:

    The department is recognized as a Research Centre by VTU for the academic years 2013-2015

18. Publications:

- Publications per faculty: **3.42**
- Number of papers published in peer reviewed journals(national/International) by faculty and students: **48**
- Number of publications listed in International Database(For Eg:Web of Science, Scopus, Humanities International Complete, Dare Database-International Social Sciences Directory, EBSCO host, etc.) **: 2**
- Monographs – Nil, Chapters in books – Nil, Books edited – Nil, Books with ISBN - Nil, SNIP – Nil
  SJR – Nil
- Impact factor : 3.83 (Average)
- Citation Index and h- index

Faculty	Paper title	Citation Index	h-index
Suma Umesh	Active Power Factor Correction Technique for Single Phase Full Bridge Rectifier	10	1
Dr. T. C Balachandra	Breakdown Behavior of Sub-Millimeter Air Gaps Under Alternating Voltage	01	1

19. Areas of consultancy and income generated : **NIL**
20. Faculties as members in
    a) National committees

1. Dr. T. C Balachandra , Expert Committee Member, UGC, New Delhi, Dec, 2010
   b) International committees : **NIL**
   c) Editorial boards
      1. Dr. N. R Ramarao, Technical Reviewer, IEEE International Conference on "Power And Advanced Control Engineering – ICPACE2015", Aug, 2015
21. Student projects :
a) Percentage of students who have in-house projects including inter departmental/programme

Sl. No.	Year Of Pass	% of Student who have done in house projects	% of Student who have done in organization outside the institute
1	2014-15	65.7	34.3
2	2013-14	100	--
3	2012-13	75.4	24.5
4	2011-12	31.3	68.6

22. Awards/Recognitions received by faculty and students:
   Students of the department (B Susruth Reddy, KshitijBallal, AnushaSridharan, AmanSachan) received the 'Wipro Earthian' award and a cash prize of Rs. 1.5 lakhs in the year 2014.

23. List the eminent academicians and scientists/visitors to the department.

Sl.No	Details of academicians and scientists/visitors	Year
1	Dr. E G Shivakumar Professor & Chairman, EEE Dept, UVCE, Bengaluru, during National Conference on Recent Trends in Power Electronic Drives.	2013-14
2	Dr.Vasudev, Scientist, CPRI – Technical talk	2013-14
3	Dr.TSrinivas, Professor, ECE, IISc, Bengaluru – Technical talk	2013-14
4	Dr.Rajasaab, Vice Chancellor, Tumkur University, Tumkur was honoured and felicitated followed by his expert talk.	2013-14
5	Dr.S.G.Sreekanteshewaraswamy, KSCST – Technical talk	2013-14
6	Mr.MohanPrabhu – Technical talk	2013-14
7	Mr. Vijay Kulkarni, SeaChange International& Associated with FSMK Bengaluru – Technical talk	2013-14
8	Mrs. Rajani GN, IP Analyst, GEITC, Bengaluru – Technical talk	2013-14
9	Dr.M.G.Sreenivasan, Hind High Vacuum India Pvt Ltd. – Technical talk	2014-15
10	Mr. PrachetVerma, Design Engineer, Intel Corporation, Bengaluru.Alumnus of BMSIT&M and IISc Bengaluru – Technical talk under IEEE BMSIT&M chapter.	2014-15
11	Mr. D.P. SrinivasMurthy, Asst. Executive Engineer,KPCL – Technical talk	2014-15
12	Mr. KrishanuGanguly, Siemens Technologies Pvt. Ltd. Alumnus of BMSIT&M – Technical talk	2014-15
13	Mr. Sunil T Shambhatnavar, General Manager, Advanced Electronics Systems, Bengaluru. – Technical talk	2014-15

24. Seminars/Conferences/Workshops organized and the source of funding
   a) National:**Funded by the Institution.**

Sl. No	Event	Date
1	National Workshop on Technological Advances in Industrial Automation	26, April, 2013
2	National Conference on Recent Trends in Power Electronic Drives	30, Oct, 2013

b) International : **NIL**

25. Student Profile programme/course wise : Programme – Electrical and Electronics Engg – Intake - 60

Name of Course EEE	Application Received	Selected	Enrolled		Pass Percentage (%)
			Male	Female	
2008-12 Batch	Admissions through CET/COMEDK/Management	69	50	19	81.15
2009-13 Batch		62	43	19	98.38
2010-14 Batch		70	47	23	92.85
2011-15 Batch		71	61	10	91.54

26. Diversity of students :

Name of the Course (EEE)	Percentage of students from same state (%)	Percentage of students from other states (%)	Percentage of students from abroad (%)
2011	62	38	NIL
2012	58	42	NIL
2013	65	35	NIL
2014	70	17	13

27. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services etc?

8 Students cleared GATE and admitted to Post Graduation

28. Student progression

Student Progression	Against Percentage Enrolled			
	2011-12	2012-13	2013-14	2014-15
UG to PG	1.5%	12%	0	1.6%
PG to M.Phil	--	--	--	--
PG to Ph. D	--	--	--	--
Ph.D to Post –Doctoral	--	--	--	--
Employed - Campus Selection - Other than Campus	56%	43% + 5.17%	46% +6.1%	51% + 8.2%
Entrepreneurship/Self-employed	--	--	--	1.43

29. Details of Infrastructure facilities
 a) Department Library
 b) Internet Facility for staff and students made available through LAN and Wi-Fi.
 c) Classrooms with LCD Projectors
 d) Well equipped laboratories
 e) PLC Kits for student projects

30. Number of students receiving financial assistance from college, university,government or other agencies:
 22 (SC/ST Students)
31. Details on student enrichment programmes (special lectures/workshops/seminars)

- Technical Talk on Innovation through student Projects and opportunities by Dr.S.G.Sreekanteshewaraswamy from KSCST on 11/11/13
- Technical Talk on Computer Aided Electrical Drawing by Mr.Mohan Prabhu on 12/11/2013
- IEEE Two Day workshop on "Product Building Using Raspberry Pie" from 29thto 30thMarch, at BMSIT&M, organized by IEEE Student Branch in association with IOTA CELL Bengaluru.
- Technical talk on "GNU Compiler & Debugger" on15thFeb 2014 by Mr. Vijay Kulkarni, SeaChange International& Associated with FSMK Bengaluru
- Technical talk on "Intellectual Property Rights" on17th Feb 2014 by Mrs. Rajani GN, IP Analyst, GEITC, Bengaluru.
- Technical talk on "Thin Film Cell And Its Fabrication" by Dr.M.G.Sreenivasan of Hind High Vacuum India Pvt Ltd. on 21st August 2014.
- Technical Talk was organized by IEEE student branch on "Intuitive Circuit Design Techniques" by Mr. Prachet Verma, Master's student at CEDT, IISc Bengaluru an alumnus of EEE dept., BMSIT&M, on 25th April 2015.
- Technical Talk was organized by Department of EEE and Energy Management Cellon "Energy Management and Efficiency" by Mr. D.P. Srinivas Murthy Asst. Executive Engineer, of KPCL on 7th February 2015.
- A Technical Talk was organized by Department of EEE and ISTE Chapter on "Discrete Control Systems, PLC, SCADA & Field Devices" by Mr. Krishanu Ganguly of Siemens Technologies Pvt. Ltd. on 21st February 2015.
- Technical Talk was organized by Department of EEE on "Innovation Centre- A Concept" by Mr. Sunil T Shambhatnavar, General Manager, Advanced Electronics Systems, Bengaluru on 28th March 2015.

32. Teaching Methods adopted to improve student learning

Traditional Chalk – Board Teaching, Delivery of lecture contents using multimedia, Use of 3-D models, cut-sections of machines/devices, Cooperative learning, Industrial/field visits

33. Participation in Institutional Social Responsibility (ISR) and extension activities

The Department encourages the students to participate in activities of National Service Scheme (NSS), Melton Foundation like blood donation camp, tree plantation drive etc. Department is actively involved in many institutional activities like organizing cultural activities in the institute, main coordination in art and photography. The department is also actively

involved in organizing conferences, workshops, tech-fests, seminars, awareness programmes etc. at Institute level and also interdepartmental level.

34. SWOC Analysis of the department and future plans.

Strengths:

- Committed and well qualified faculty.
- Strategically located campus well connected by different means of transport.
- Cordial interpersonal relationship among stakeholders like teachers, students and parents.
- An ambience which promotes academic freedom for research.
- Good track record of VTU ranks.

Weaknesses:

- Lack of collaborative research.
- No consultancy services carried out.
- Lack of industry sponsored labs.
- Not having patents.

Opportunities:

- Initiation of PG, job-oriented and enrichment courses.
- Up- gradation of ICT to convert existing department into a smart department.
- Exploring opportunities for tie-ups and MoUs with leading industries.

Challenges:

- Competition from similar departments in other colleges coming under the affiliating university.
- Creation of a Tech-savvy ambience and giving ample justification to be called as a department belonging to a smart campus.

Future Plans:

- Facilitating consultancy initiatives for faculty and promoting more industry academia interaction.
- Designing curriculum for courses with high employability after obtaining autonomous status.
- Offering Certificate Courses.
- Augmenting Faculty Exchange and Student Exchange Programmes in collaboration with other Universities/ Colleges.
- Deputing Faculty on Sabbatical Leave.
- Motivating Faculty to write proposals for possible funding and register for Ph.D programme.
- Enhancing collaborative efforts with research institutes of national and international repute.
- Establishing and developing co-laboratories with industry.

- Contributing significantly to energy management coming under the energy research cluster of the institution with a focus on renewable energy solutions.

Best Practices

- Cooperative learning.
- Active learning.
- Proctoring and mentoring the students.
- Motivating students to undergo Industry Internship during semester break.
- Giving scope for faculties to undergo Industry Internship during semester break.
- Organizing inter collegiate project exhibitions.
- Town hall meeting with students.
- Participation in Jnanavardhana activity (Knowledge sharing activity across departments).

1. **Name of the department**: **Telecommunication Engineering**
2. **Year of Establishment** : 2003
3. **Names of Programmes/Courses offered(UG, PG, M.Phil .,Ph.D. , Integrated Masters; Integrated:Ph.D.,etc.)** : UG Telecommunication Engineering.
4. **Names of Interdisciplinary courses and the departments/units involved** : As such the Institute does not offer any Interdisciplinary programmes.
5. **Annual/semester/choice based credit system (programme wise) :**
   Till academic year 2014-15 semester scheme is followed.
   From 2015 -16 onwards choice based credit system is introduced from first year.
6. **Participation of the department in the courses offered by other departments:**

Semester	Course Code	Course title	Course offered by the department
I/II	14ELN15/25	Basic Electronics	Computer Science Information Science Mechnical Engineering
III	10CS31	Electronic Circuits	Computer Science
VII	10EC762	Real Time Systems	Electronics & Communication Engineering

7. **Courses in collaboration with other universities, industries, foreign institutions, etc. :**NIL
8. **Details of courses/programmes discontinued (if any) with reasons :**Nil
9. **Number of Teaching posts sanctioned and filled**

Title	Sanctioned	Filled
Professors	01	01
Associate Professors	03	04
Assistant Professors	09	08

10. **Facultyprofilewithname,qualification,designation,specialization,(D.Sc./D .Litt./Ph.D./M.Phil.etc.,)**

Name	Qualification	Designation	Specialization	No.of Years of Experience	No.of Ph.D. Students Guided for the last4years
Dr. C S Mala	M. Tech, Ph.D	Associate Prof. HoD	VLSI & Embedded	29	nil
Dr.Jayadeva G.S.	Ph.D	Professor	Microelectronics (Device modeling)	25	01
Prof.	M. E	Associate Prof.	Digital	17	nil
Prof. Surekha R	M. E (Ph.D)	Associate Prof.	Image Processing	20	nil

Prof. RajuHajare	M. Tech	Associate Prof.	Nano Electronics	14	nil
Prof. Thejaswini	M. Tech	Assistant Prof.	Signal Processing	14.5	nil
Prof. SiddiqIqbal	M. Tech. (Ph.D)	Assistant Prof.	Wireless Sensor Networks	12	nil
Prof.	M. Tech.	Assistant Prof.	Antennas	11	nil
Prof. Saritha I G	M. Tech	Assistant Prof.	Embedded system	9	nil
Prof. Sowmyashree M	M. Tech(Ph.D)	Assistant Prof.	Wireless SensorNetworks	8.5	nil
Prof. Sumathi M S	M. Tech. (Ph.D)	Assistant Prof.	Wireless SensorNetworks	7.5	nil
Prof. Prathiba N	M. Tech	Assistant Prof.	Signal Processing	3	nil
Prof. Raghunandan G	M. Tech	Assistant Prof.	Digital Electronics & Communication	5.5	nil

11. List of senior visiting faculty

Sl No	Name of the Faculty	Qualification	Designation
1	Dr..Narayana Iyer.S	Ph.D	Visiting Professor
2	Prof. GanapathyHebbar	M.Tech	Visiting Professor

12. Percentage of lectures delivered and practical classes handled (programme wise)by temporary faculty

Name: **Dr.Narayana Iyer.S**

Percentage of Lectures delivered: **100%**

1. Signals & Systems (BMSIT&M)
2. Control Systems (BMSIT&M)

Name: **Prof. GanapathyHebbar**

Percentage of Lectures delivered: **100%**

1. Digital Switching Systems (BMSIT&M)
2. Transmission Lines & Waveguides (BMSIT&M)

13. Student-Teacher Ratio (programme wise) : 15:1
14. Number of academic support staff (technical) and administrative staff; sanctioned and filled

Technical Staff	Sanctioned	Filled
Foreman		01
Instructor		01
Asst. Instructor		03
Mechanic		01

15. Qualifications of teaching faculty with DSc/D.Litt/Ph.D/MPhil/PG. : Please Refer Q. No: 10 above
16. Number of faculty with ongoing projects from a) National b)International funding agencies and grants received : Nil

17. Departmental projects funded by DST-FIST;UGC, DBT, ICSSR, etc. and total grants received :
Two final year student projects entitled "Smart Plate for the Detection of Food Quality" and
"Wireless Charging of Mobile Using Electromagnetic Waves" fetched a total grant of
Rs.12000 /- from KSCST.

18. Research Centre/facility recognized by the University : YES

19. Publications:
   a) Publication per faculty:4.77
   b) Number of papers published in peer reviewed journals(national/
International) by faculty and students: 27
Number of publications listed in International Database(For Eg:Web of Science, Scopus, Humanities International Complete, Dare Database-International Social Sciences Directory, EBSCO host, etc.) : NIL
Monographs : NIL,   Chapter in Books : NIL,   Books Edited : NIL
Books with ISBN/ISSN numbers with details of publishers

Sl. No.	NAME OF THE FACULTY	TITLE OF THE BOOK	PUBLICATION & YEAR
1	Prof. GANAPATHI HEBBAR	Introduction to Digital Switching system	ISBN :978-93-5107-029-0Year:2013
2		Optical fiber communication	ISBN :978-93-5107-095-5 Year:2014

Citation Index: NIL, SNIP: NIL, SJR:2: NIL, Impact factor:NIL, h-index:1 - 3

20. Areas of consultancy and income generated : NIL

21.Faculty as members in a)National committees
 b)International Committees c)Editorial Boards: NIL

22. Student projects
a)Percentage of students who have done in-house projects including interdepartmental/programme
b)Percentage of students placed for projects in organizations outside the institution i. e.in Research laboratories/Industry/ other agencies

Sl No	Programme	Year Of Pass	% of Student who have done in house projects	% of Student who have done in organization outside the institute
1	BE	2014-15	92.59	7.4
2	Telecommunication	2013-14	100	--
3	Engineering	2012-13	100	--
4		2011-12	100	--

23. Awards/Recognitions received by faculty and students
1. Mr. Raju Hajare presented a paper on "Performance Analysis of FINFET and Nanowire for Future Nano electronics" in International conference

(ICONSEA-2014)on 26th ,27th & 28th of June- 2014 at JNTU Hyderabad and was awarded as the best poster presentation.

2. One of the 8th semester project titled "Smart Plate for the detection of food Quality" carried out by a group of four students namely PranavKashyap, ShahinaAnjum, ShashiShanker and Shreya G K, under the guidance of Prof Sumathi M S, was selected as best project work at state level to compete for RUSI AWARD instituted by Rotary Bengaluru Udyog and Standards International Precision Engineers Pvt.Ltd., on 2nd May 2015 at KASSIA Auditorium.

24. List of eminent academicians and scientists/visitors to the department

S.L.No	Date	Name & Organization
1	3/9/2014	Ezhil Buddhan, General Manager (BSNL)
2	27/1/2015	Dr.Sujatha J, Wipro Technologies
3	30/1/2015	Vengada Rajan, Senior Scientist (F), DRDO
4	30/1/2015	M.H.Kori, IETE
5	16/5/2015	Mr.Sasikanth Kumar, ISRO
6	17/10/2015	Dr.Radha Parikh, Visiting Professor, IIIT,Bombay
7	17/10/2015	Dr.Chethan Parikh, Professor IIIT,Bombay
8	18/10/2015	Dr.Ashok Rao, Former CEDT,Network Head IISC Bengaluru
9	25/5/2016	B.Satish Kumar, ISRO

25. Seminars/Conferences/Workshops organized &the source of funding a) National b)International

Sl No	Name of the conference	Dates	Remarks
1	National conference on Wireless Communication and Sensor Networks	30th Oct 2013	BMSITM& Sponsorship
2	Workshop on Mobile Communication Network & Optimization	17th Dec 2013	BMSITM& Sponsorship
3	Workshop on Embedded system & RTOS	21st December 2013	BMSITM& Sponsorship
4	Workshop on Optical Communications and Networks in association with IEEE	20th September 2014	BMSITM& Sponsorship
5	Interdepartmental workshop on Advanced Controllers –MSP 430	July 7th to 11th 2014	BMSIT&M
6	Workshop on Digital Signal Processing and Applications	18th October 2015	BMSIT&M

Sl No	Name of the self-financing program	Dates
1	FDP on Matlab & Simulink	18th-23rd January 2016
2	FDP on Control Systems	June 4th 2015
3	FDP on Outcome Based Education BMSIT&M	September 18th – 19th 2014
4	FDP on Signals and Systems	January 27th to 31st 2015

26.Student Profile Programme/Coursewise:

Name Of the course	Academic year	Applications Received	Selected	Enrolled		Pass Percentage
				M	F	
Telecommunication Engineering	2011-15	Admissions through KEA/ COMEDK/ Management	64	36	28	78.1
	2010-14		70	43	27	68.57
	2009-13		61	28	33	78.6
	2008-12		69	44	25	86.95

*M=Male *F=Female

27. Diversity of Students

Name of the Course	Academic Year	Total No. of Students	% of Students from the same state	% of Students from other state	% of Students from Abroad
Telecommunication Engineering	2014-15	65	51/65=78.46	9/65=13.8	5/65=7.69
	2013-14	57	48/57=84.21	9/57=15.78	------
	2012-13	57	44/57=77.19	13/57=22.8	____
	2011-12	54	47/54=87.03	07/54=12.96	____

28. **How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.?**
PGCET: 12 students

29. Student progression

Student progression	Against % Enrolled		
	2011-15	2010-14	2009-13
UG to PG	8/64=12.5%	9/70=13%	14/61=23%
PG to M.Phil.	NIL	NIL	NIL
PG to Ph.D.	NIL	NIL	NIL
Ph.D .to Post-Doctoral	NIL	NIL	NIL
Employed •Campus selection •Other than campus recruitment	31/64=48.4% 8/64=12.5%	33/70=47% 9/70=13%	33/61=54% 10/61=16%
Entrepreneurship/Self-employment	Details not available		

30. Details of Infrastructural facilities
a) Library: Department library is available. Following are the details:
Number of books: 290, Project reports : 76 (last four years) with CDs,
Technical Reports : 23276 (last four years) with CDs

b) Internet facilities or Staff & Students :

4 Mbps – HOD, 2 Mbps – Staff, 512 Kbps- Students

c) Class rooms with ICT facility=5

Sl.No.	Room Description	Size	Usage	Capacity
1	BSN-503	105 Sq.Mts	First Year	70
2	Class RoomCR-307	105 Sq.Mts	Second Year	70
3	Class RoomCR-305	105 Sq.Mts	Fourth Year	70
4	Class RoomCR-306	105 Sq.Mts	Third Year	70
5	Digital Class Room	205 Sq.mt	Fourth Year, Elective Classes, Software Laboratories	60

d) Laboratories = **06**

Sl.No.	LABORATORY		SEMESTERS	
1	Analog Electronics Lab		3	
2	Logic Design Lab		3	
3	Microcontrollers Lab	DSP Lab	4	5
4	HDL Lab Microprocessor Lab	CCN Lab	4&6	7
5	Analog Communication +LIC Lab	MWA Lab	5	6 & 8
		Project Lab		
6	Advanced Communication Lab		7	

31. Number of students receiving financial assistance from college, university, government or other agencies

Year	Number of students receiving financial assistance	Total
2012-13	5	05
2013-14	6+3	09
2014-15	6+6+3	15
2015-16	6+6+6+3	21

32. Details on student enrichment programmes (special lectures / workshops / seminar) with external experts :

Sl No	Name of the student enrichment programme	Dates	Remarks
1	Expert Talk on Low Power VLSI Design	11th April 2014	BMSIT&M
2	Expert Talk on Impact of Broadband Networks on Social Developments	3rd September 2014	BMSIT&M
3	Talk on Teaching Learning Process in Outcome based Education	August 27th 2014	BMSIT&M
4	Expert Talk on Final Year Projects	December 30th 2014	BMSIT&M
5	Technical Talk on Project and Financement	February 7th 2015	BMSIT&M
6	Expert Talk on Role of semiconductor Technology in RADAR	13th February 2015	BMSIT&M
7	Technical Talk on LAB VIEW and Design Systems	February 21st 2015	BMSIT&M
8	Technical Talk on Calibration of Electronic Instruments	19th March 2015	BMSIT&M
9	Expert Talk on Communication Skills	17th October 2015	BMSIT&M
10	Expert Talk on Analog Electronic Circuits	17th October 2015	BMSIT&M

33. Teaching methods adopted to improve student learning .
Faculty members adopt various teaching methods to cater to the needs of the entire spectrum of students in a particular class. The following are the frequently used teaching methods by the faculty: Classroom teaching using Chalk- Board, ICT, Activity based learning methods

34. Participation in Institutional Social Responsibility (ISR) and Extension activities
The department participated in Voluntary Blood Donation camp, Free Medical Check-up for the staff members in association with M/s Narayana Multi-Specialty Hospital, campus cleaning program was organized along the lines of 'Swachha Bharat' program, initiated by our Honorable Prime Minister, rally at Sri Kantareeva Stadium, Bengaluru on the occasion of National Disaster Reduction Day, SHRAMADAAN ACTIVITY 'ZERO PLASTIC'

35. SWOC analysis of the department and Future plans
Strengths
- Highly experienced faculty   in the Department.
- Good infrastructure for theory as well as Practical classes
- Active learning methods adopted by teachers.
- Students projects have emerged into International/national journal/conference paper publications
- Ranks achieved since inception.
- The department has high speed internet connectivity   and is Wi-Fi enabled.
- Good placement record

Weakness
- Lack of more number of doctorates in the department.
- Limited industry involvement.

Opportunities
- Good opportunity to utilize the service of Engineers & Sucientist from IISc , DRDO,LRDE,ISRO etc for conduction of workshops, technical talks & Faculty Development Programs.
- Good interaction with the Alumni provides opportunities for students to get greater exposure to Industry requirements.
- Possibility to set up Research and Development Centre in the department

Challenges
- Mushrooming of technological institutes.
- Lack of large number of funded projects.
- Less involvement of Core Telecom companies in recruitment.

Future Plans:
- To establish Centre of Excellence in Microelectronics
- To improve Industry Institute interaction
- To start PG courses in

- ❖ Microelectronics
- ❖ RF Communication
- To get into MoU with industries
- To strive to get consultancy
- To get funding for research from Govt/others

1. **Name of the department:** INFORMATION SCIENCE & ENGINEERING
2. **Year of Establishment:** 2010
3. **Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)** :UG – B.E – Information Science & Engineering, PhD – Computer and Information Sciences.
4. **Names of Interdisciplinary courses and the departments/units involved:** NIL
5. **Annual/ semester/choice based credit system (programme wise)**

Programme	System followed	Year
UG	Semester Scheme System	2010 -2014
UG	Choice Based Credit System	2014-2015 Onwards

6. **Participation of the department in the courses offered by other departments :** NIL
7. **Courses in collaboration with other universities, industries, foreign institutions, etc. :** NIL
8. **Details of courses/programmes discontinued (if any) with reasons** : NIL
9. **Number of Teaching posts**

Teaching post	Sanctioned	Filled
Professors	1	1
Associate Professors	3	1
Asst. Professors	8	10

10. **Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt./Ph.D. / M. Phil. etc.,)**

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. Students guided for the last 4 years
S.K Pushpa	M.E (Ph.D)	Associate Professor	CSE	18	-
Dr.Manjunath T N	Ph.D	Professor & HOD	Data Mining	15.5	-
Ashwini N	M.Tech (Ph.D.)	Assistant Professor	ISE	12.5	-
Mahalakshmi S	M.E (Ph.D.)	Assistant Professor	CSE	12.5	-
Shanthi D L	M.Tech (Ph.D.)	Assistant Professor	CSE	14	-

Chandrasheka r K T	M.Tech (Ph.D.)	Assistant Professor	CSE	12.5	-
GireeshBabu C N	M.Tech (Ph.D.)	Assistant Professor	CSE	5	-
Bhavya G	M.Tech	Assistant Professor	CSE	3.5	-
AmbikaSubas h	M.Sc.	Assistant Professor	CS	3.5	-
Vinutha K	M.Tech	Assistant Professors	ISE	2.5	-
Swetha M S	M.Tech (Ph.D.)	Assistant Professor	CSE	8.5	-
Veena N	M.Tech (Ph.D.)	Assistant Professor	CSE	13	-

11. **List of senior visiting faculty:** NIL
12. **Percentage of lectures delivered and practical classes handled (programme wise) by**
    temporary faculty : NIL
13. **Student -Teacher Ratio (programme wise)** : 18:1
14. **Number of academic support staff (technical) and administrative staff; sanctioned and filled**

Academic support staff	Sanctioned	Filled
Technical Staff	02	02
System Admin	01	00

15. **Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG.**
    Refer question No: 10
16. **Number of faculty with ongoing projects from a) National b) International funding agencies and grants received** : NIL

17. **Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received**

Sl.No	Project funding Agency	Grants Received
1.	KSCST	3000/-

18. **Research Centre /facility recognized by the University:** NIL
19. **Publications:**
Faculty Publications
   - Publications per Faculty: 2.8

- Number of papers published in peer reviewed journals (national / international) by faculty and
students: 126
- **Number of Publications listed in international database** (For Eg: Web of Science, Scopus,
    Humanities   International Complete, Dare Database - International Social Sciences Directory,
    EBSCO host, etc.): **2.**
- **Monographs :** Nil
- **Chapter in Books**

Department	Faculty Name	Title of the book	Publisher Deta
ISE	Dr.Manjunath .T.N	Managing and Processing BigData in Cloud Computing	IGI Global, USA, DOI:10.4018/978-1-4666-9767-6.ch011

- **Books Edited**

Faculty Name	Title of the book	Publisher Details	ISBN
Dr.Manjunath .T.N	Managing and Processing BigData in Cloud Computing	IGI Global, USA,	DOI:10.4018/978-1-4666-9767-6.ch011

- **Citation index**
    Impact Factor: 0.4 to 4.8, Citiation Index: 3 (avg), Hindex: 2 (avg)

20.   **Areas of consultancy and income generated**

Sl.No	Area of Consultancy	Income Generated
1	Database to Business logic	75,000/-

21.   **Faculty as members in**
a)   **National committees b) International Committees c) Editorial Boards**….
        Nil

22. **Student projects**

Batch	Percentage of students who Have done in house projects	Percentage of students who have done projects outside the institute
2013-14	94%	6%
2014-15	100%	NIL
2015-16	90%	10%

23.**Awards / Recognitions received by faculty and students : NIL**

24.**List of eminent academicians and scientists / visitors to the department**

Year	Name of Eminent Academicians/ Scientists	Designation	Topic delivered	Date
2012-13	Mr. Venkatesh	Senior Manager, IBM India Private Limited, Bengaluru	Principles of Software Engineering	23rd March 2013
2013-14	Dr.Mohith P Tahiliani	Asst. Prof, Dept. of CSE, NITK Suratka	Network Simulation using NS-2	7th September 2013
	Mr. Kalyan Neriyanuri	R&D Operations – program manager of HP Software, Bengaluru	Opportunity knocking! Are You Ready?	1st October 2013
	Mr. Chakradhari Rowe	Coach at GY AI	Wake up Call! An Insight into the World of Entrepreneurship	20th March 2014
	Mr Subash S K	Founder, Director, CEO, Mindsculptor System Pvt. Ltd	How to crack tough campus programming interviews	10th April 2014
2014-15	Mr.Manjunath	DataLifeCycleCompany	Data storage Technology learning objective	15th September 2014
	Mr Rajesh	Architect, quadwave technologies	Trends in Java for data management	29th Aug 2015
	Mr Shashi Bhushan	Founder & CEO, Healthmacro Technologies	Management & Entrepreneurship	April 2015
2015-16	Prof.Senthil Kumar and Gopinath M P	VIT University Vellore	Operating System	30th September 2015
	Mr M.A.Srinivas	Sr. software Architect, Excel soft Technolog0079	Advanced concepts in DBMS	31st September 2015
	Prof.Srinidhi.H	Assistant Professor, Department of CSE,MSRIT	setting up of CUDA lab	9th January 2016
	Mr. Srinidhi V.A	Managing Director, Kimshuka Technologies Private Limited	Cloud Computing Uses in Real World	30th April 2016

25. Seminars/ Conferences/Workshops organized & the source of funding
   a) National
Workshop :

SL.NO	Academic Year	WORKSHOP	Date
1	2012-13	Workshop(Uxindia)	24th and 25th October 2013
2	2013	NS-2 Network Simulator	7th Sep 2013
3	2013	"Latex: an Introduction"	7th Jan 2014
4	2014-15	How to crack tough campus programming	10th April 2014
5	2015-16	Hadoop Ecosystem for Big Data	18 to 23 jan2016

B) **Conference:**

National Conference:

SL. No:	Academic Year	Conference	Date
1	2013-14	National Conference On Electronic Computer & Computation	10 Oct 2013
2	2014-15	National Conference On Recent Trends Information Technology	14 Feb 2015
3	2015 - 16	NCRTIT - 2	21st -22nd June 2016

b)**International: conference: NIL**

26. **Student profile programme/course wise:**

Name of the Course/programme (refer question no. 4)	Applications received	Selected	Enrolled		Pass percentage
			*M	*F	
ISE 2010-2014	CET, COMEDK, SNQ, MGMT, PIO	71	40	32	69.01%
ISE 2011 -2015		69	40	29	82.60%
ISE 2012-2016		70	39	32	81.42%
ISE 2013- 2017		73	38	35	NA
ISE 2014- 2018		74	38	36	NA

*M = Male   *F = Female

27. **Diversity of Students**

Name of the Course (ISE)	% of students from the same state	% of students from other States	% of students from abroad
2010	68	32	0
2011	84	16	0
2012	76	24	0
2013	74	24	2
2014	80	7	13
2015	67	26	7

28. **How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.**

Twelve students (10 – GRE, 1 – GATE, 1 – Toefl iBF)

29. **Student progression**

Student progression	Against % enrolled		
	2010 Batch	**2011 Batch**	**2012 Batch**
UG to PG	7%	5%	6%
PG to M.Phil.	NA	NA	NA
PG to Ph.D.	NA	NA	NA
Ph.D. to Post-Doctoral	NA	NA	NA

Employed			
• Campus selection	65%	68.33%	64%
• Other than campus recruitment	9%	3.33%	3.12%
Entrepreneurship/Self-employment	1%(1/57)	1%(1/60)	1%(1/60)

30. Details of Infrastructural facilities

Sl. No.	Facilities	Available
1	Number of Classrooms with ICT facility	04
2	Number of Books in Department Library	157
3	Number of Labs	01
4	Internet Facility	Available.

31. Number of students receiving financial assistance from college, university, government or other agencies

Year	Number of students receiving financial assistance from college, university, government or other agencies
2011-12	10
2012-13	09
2013-14	22
2014-15	15
2015-16	53

32. Details on student enrichment programmes (special lectures / workshops /seminar) with external experts

Expert talk seminar :(2012-13)

Sl No	Academic Year	EXPERT TALK	Date
1	2012-13	DATA MINING	18th sep 2012
2	2012-13	PARALLEL COMPUTING	21st Aug 2012
3	2013-14	IT MARKET	1st Oct 2013
4	2013-14	Campus Entrepreneur Event of Wipro	2nd April 2014
5	2013-14	How to crack tough campus programming	10th April 2014
6	2013-14	Latex: An Introduction	7th Jan 2014
7	2015-16	Trends in JAVA and DBMS	19th Sep2015
8	2015-16	ADAVANCEMENT IN OOPS	29th August 2015
9	2014-15	FINANCIAL MANAGEMENT	21st Feb 2015

33. Teaching methods adopted to improve student learning

Various Teaching Methods adopted to improve student learning are as follows

- Cooperative learning
- Active Learning
- Blended learning
- Role playing
- Partial delivery
- Quiz
- Seminars
- PowerPoint presentation

34. **Participation in Institutional Social Responsibility (ISR) and Extension activities**

1. Our students actively participated in creating awareness program on eco-green by celebrating green
   Diwali, the objective is to avoid burning the crackers under Nature club.
2. They have involved in attending NSS camp
3. Our students has created a group called Melange under this various social activities has been arranged like book donation to the govt school kids, cloths to slum people   etc

35. **SWOC analysis of the department and Future plans**
   STRENGTH
   - Good Qualified Faculty members.
   - Practicing Outcome Based Education (OBE)
   - The spirit of co-operation, participatory and commitment of the staff that goes beyond academics and finds time in common programmes and Celebrations.
   - Open to current and global trends in terms of technology innovations and certifications in global courses to equip students for employment.
   - The students' projects discussed and allowed to match up to the current trends. They are analyzed, studied and executed under individual guideship from the department.
   - The Department uses ICT facilities extensively. AV tutorials, spoken tutorials and presentations are used by faculty.
   - The department aims at the holistic development of the student, aiming spiritual, emotional, social and intellectual aspects in of the person.
   - Department have best practices such as In-house Software Cell, MOOCS, Moodle-CMS and Best Outgoing student, Best Seminar, Best Project of the year.
   - Good Placements
   Weakness
   - Lack of industry sponsored laboratories
   - Limitations in Laboratory space lead to infrastructural constraints.
   - Usage of Modern Teaching aids

Opportunity

- We see the chance of signing MoU with leading universities and industry for courses and research collaboration.
- Organizing International and National seminars for exchanges enrich faculty and students.
- We plan to enter into more consultancy service in technology with other bodies.
- The plan to start new and employment generating courses and certifications.
- Strengthening Faculty Competency

Challenges

- To dedicate time and resources for research related works by the faculty and students.
- To be innovative in moulding the students for the industry and research needs.
- Not having representations in the Board of studies of the affiliating university.

Future Plans

- To start R& D center
- To start incubation centers
- To strengthen academic & research ambience
- To setup industry specific Laboratories through MoUs and collaborative works.
- To Strengthen consultancy work
- To Strengthen faculty competency
- To promote e-learning across the department.
- To strengthen the usage of ICT across the department.

Name of the department –**Civil engineering**
1. Year of Establishment :   **2013**
2. Names of Programs / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters Integrated Ph.D., etc.):
     UG – B.E in Civil Engineering
3. Names of Interdisciplinary courses and the departments/units involved - **NIL**
4. Annual/ semester/choice based credit system (Program wise):
For 2013 and 2014 -batch semester scheme is followed. From 2015 batch onwards CBCS is followed.
5. Participation of the department in the courses offered by other departments: **NIL**
6. Courses in collaboration with other universities, industries, foreign institutions, etc: **NIL**
7. Details of courses/Programs discontinued (if any) with reasons: **NIL**
8. Number of Teaching posts

	Sanctioned	Filled	Remarks
Professors	1	1	First batch of the department presently in VII semester
Associate Professors	3	3	
Assistant Professors	8	7	

9. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt./Ph.D. / M. Phil. etc.,)

Sl No	Name	Qualification	Designation	Specialization	No of Years of experience	No of Phd students guided for last 4 years
1	Dr Aravind H Bhashyam	PhD	Professor	Structural Engineering	32	7
2	Dr Jagadish Vengala	PhD	Associate Professor	Concrete Technology	15	Nil
3	Dr Rajesh Gopinath	PhD	Associate Professor	Environmental Engineering	11	Nil
4	Dr Guruprasad	PhD	Associate Professor	Structural Engineering	6	Nil
5	Mrs Prasanna G	ME	Asst. Professor	Environmental Engineering	18	Nil
6	Mr Shiva Prakash M V	ME	Asst. Professor	Industrial Structures	21.1	Nil
7	Mrs Shobha R	ME	Asst. Professor	Structural Engineering	6.5	Nil
8	Mr Manish S	MTech	Asst. Professor	Construction Management	7.5	Nil

9	Mrs Archana K	MTech	Asst. Professor	Water Resource Engineering	4.3	Nil
10	Mr Vinod B R	MTech	Asst. Professor	Geotechnical Engineering	3.5	Nil
11	Mrs Shimna Manoharan	MTech	Asst. Professor	Geotechnical Engineering	2	Nil

10. List of senior visiting faculty : **NIL**
11. Percentage of lectures delivered and practical classes handled(Program wise)   Lectures by temporary faculty : **12%**
12. Student teacher ratio : **18:1**
13. Number of academic support staff (technical)

	Sanctioned	Filled
Technical Staff	2	2

14. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil/PG:
    Ref. Q. No. 10 above
15. Number of faculty with ongoing projects from
    a) National: **NIL**
    b) International funding agencies and grants received: **NIL**
17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants
Received: **NIL**
18. Research Centre /facility recognized by the University: **NIL**
19. Publications:
- Publication per faculty : 13.7
    - Number of papers published in peer reviewed journals (National / international) by faculty and students: **NIL**
    - Number of publications listed in International Database (For Eg: Web of Science, Scopus, and Humanities International Complete, Dare Database – International Social Sciences Directory, EBSCO host, etc.): **NIL**
    - Monographs -**1**
    - Chapter in Books: **NIL,** Books Edited: **NIL**
    - Books with ISBN/ISSN numbers with details of publishers: NIL
    - Citation Index: **NIL**, SNIP: **NIL**, SJR:**NIL**
    - Impact factor: ?, h-index: ?
20. Areas of consultancy and income generated: **NIL**
21. Faculty as members in: **NIL**
    a) National committees b) International Committees c) Editorial Board
22. Student projects
    a) Percentage of students who have done in-house projects including inter departmental/programme: **NIL**
    b) Percentage of students placed for projects in organizations outside

the institution i.e.in Research laboratories/Industry/ other agencies: **Nil**

23. Award /recognitions received by faculty and students

Name	Awards /Recognitions
Dr. Jagadish Vengala	INAE Innovative Award for best PhD thesis , 2015
Dr Rajesh Gopinath	Best Alumni Award 2016

24. List of eminent academicians and scientists/ visitors to the department

SL. No	Eminent Person	Year
1	Er. Ajit Sabnis, Editor in chief, Build Expressions Bengaluru	31-10-2013
2	Dr. Gangadhara Bhatt, Professor, Mangalore University	8-11-2013
3	Er. S.A Reddi, Former MD, Gammon India Limited	15-02-2014
4	Dr. Madhwesh, Principal Bridge Engineer, California transportation department & Adjunct faculty state university of California, Sacremento	2-9-2014
5	Dr. C S Viswanatha(Late), former chairman Civil Aid Technoclinic , Bengaluru	15-9-2014
6	Er.Madhukar B A, MD, Potential Project Managers, Pvt Ltd	15-09-2014
7	Mr Avanidhar Kinhal, Chief Operating Officer Sycone PMC private limited	07-02-2015
8	Dr. N.Balasubramanya, Professor, Acharya Institute of Technology	28-03-2015
9	Mr. Amarnath , Research Associate, Imperial College London	16-10-2015
10	Er.Gopal Rao , Retired Engineer , Nagarjuna Sagar Dam	12-02-2016
11	Dr.Vyasa Rao , Technical Director of V2 Civil Diagnostics	19-02-2016
12	Mr.Rajath Kiran, Co Proprietor of RK Consultants	19-02-2016
13	Dr M S Amarnath , Professor Bengaluru University	4-03-2016
14	Mr..Joel Noronho, Branch Head, AECC Global, Bengaluru	17-03-2016

25. Seminars/ Conferences/Workshops organized and the source of funding
    a. National

Sl No	Conference/seminar/ fest/FDP	Name	Fund
1	Conference- National	Sustainability & Advances in Concrete Technology, 25th April 2015	Through sponsorship
2	Department Fest	Cinnovil- Technical Fest, 24th February 2016	Through sponsorship
3	Faculty Development Program – 6 days	Design Aspects of Fatigue and Fracture in Structures 18th – 23rd Jan 2016	Fund from Registrations and BMSIT&M Management

    b. International: **Nil**
26. Student profile programme / course wise: NA
27. Diversity of students

Name of the course	% of students from the same state	% of students from other states	% of students from abroad
BE Civil Engineering	67%	23%	10%

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.? - **NA**
29. Student progression: **NA**
30. Details of infastrutural facilities
    a) Library
       Apart from central library, department library is furnished with 160 books. Each year new additions are added to the library. The students and faculty have the provision to use this facility. The books are arranged subject wise
    b) Internet facilities for Staff & students
       Wifi Internet Facility is available in all the faculty rooms and also along the corridor. The wifi is 24hours with no usage limit. Each faculty has an unique email id(college domain) and storage space
    c) Class rooms with ICT facility

Sl No	Room	Usage	Capacity	Room equipped with
1	BSN 501	Class room for 2nd year	75	LCD projector with screen
2	BSN 509	Class room for 3rd year	75	LCD projector with screen

    c) Laboratories

Curriculum Lab Description	Exclusive use/Shared	Number of Students	Number of expts.	Quality of instruments	Lab manual
Survey Lab	Exclusive	20	30	GOOD	Yes
BMT Lab	Shared	20	18	GOOD	Yes
Geology Lab	Exclusive	20	10	GOOD	Yes
Hydraulics Lab	Shared	20	14	GOOD	Yes
CADD Lab	Shared	20	13	GOOD	Yes
Geotechnical Lab	Exclusive	20	20	GOOD	Yes
Environmental Engineering Lab	Exclusive	20	13	GOOD	Yes
Transporation Lab	Exclusive	20	12	GOOD	Yes
Concrete Technology Lab	Exclusive	20	18	GOOD	Yes
Drawing Hall	Exclusive	36+36		GOOD	

31. Number of students receiving financial assistance from college, university, government or other agencies:
    - MEA sponsored Nepalese students – **7**
    - Category scholarships – **33**
    - Karepass scholarship - **5**
    - SC/ST: 2013-14 – **4**, 2014-15 - **11**, 2015-16 - **17**

32. Details on student enrichment programmes (special lectures / workshops / seminar) with external experts

Sl. No:	Details of Programme	Year
1	Emerging Trends in Architecture & Civil Engineering by Er Ajit Sabnis, Editor in Chief, Build Expressions ,Bengaluru, India	31-10-2013
2	Remote Sensing and its application to Earth Sciences & Civil Engineering by Dr Gangadhara Bhatt, Professor, Mangalore University, Mangalore , India	8-11-2013
3	Technical Talk on "Principal Stress" by Dr Madhwesh, Principal Bridge Engineer, California transportation department & Adjunct faculty state university of California, Sacramento, California, USA	2-9-2014
4	Concrete and Bridges by Er S.A Reddi, Former MD, Gammon India Limited, Mumbai , India	15-02-2014
5	Engineer's day- Sir M Vishvesharaya's contribution to India by Dr C S Viswanatha(Late), Former Chairman Civil Aid Technoclinic , Bengaluru	15-9-2014
6	Environment, Health and Safety in construction by Er Madhukar B A, MD, Potential Project Managers, Pvt Ltd, Bengaluru , India	15-09-2014
7	Hydraulics in Hydro-Power Plant by Dr N.Balasubramanya, Professor, Acharya Institute of Technology , Bengaluru , India	28-03-2015
8	Environment, Health, Safety-Its relevance in Construction by Mr Avanidhar Kinhal, Chief Operating Officer, Sycone PMC private limited	07-02-2015
9	Engineers' day - Need for interdisciplinary knowledge in the Engineering education by Prof R.N Iyengar , Former Professor at IISc , Presently Director for Centre for Disaster Mitigation (CDM) at Jain University	15-09-2015
10	Entrepreneurship by Dr Vyasa Rao , Technical Director of V2 Civil Diagnostics, Bengaluru , India	19-02-2016
11	Entrepreneurship by Mr Rajath Kiran, Co Proprietor of RK Consultants , Bengaluru , India	19-02-2016
12	Soil stabilisation by Dr M S Amarnath , Professor and Chairman , Department of Civil Engineering, Bengaluru University , Bengaluru, India	4-03-2016
13	Hydraulic Structures by Er Gopal Rao , Retired Engineer , Nagarjuna Sagar Dam, PWD, Andhra Pradesh, India	12-02-2016

33. Teaching methods adopted to improve student learning
    Class room interaction, Collaborative teaching methods, Assignments, Seminars, Expert lectures, PPT with interaction, Industrial visit and exploration, Internship opportunities

34. Participation in Institutional Social Responsibility (ISR) and Extension activities
    a. Students have visited a neighboring village in Doddbalapur to understand the problems faced by villagers in regards to potable water supply and proper sanitation
    b. As part of NSS activities of the college a group of civil engineering students were involved in cleaning of hospital near Tumkur

35. SWOC analysis of the department and Future plans

Strength:	Weakness:
a. Dedicated human resources and pro-active management b. Organizing technical events c. Excellent infrastructure and facilities d. Good industry interaction e. Encouragement for attending value added programs and workshops and FDP f. Timely proctoring and counselling of students g. Wide range of o curricular and extracurricular activities h. Internship opportunities for students and faculties i. Availability of original software for design and survey	a. Lack of focus in getting research projects b. Lack of well-defined goal
Opportunity: a. Increased demand for civil engineering profession b. Advanced laboratories c. Future for Research activity and consultancy projects d. Digitalized classrooms	Constraints / Challenges: a. Providing more industrial exposure to students b. 100 % placements c. Further improvement in academic results d. Lack of entrepreneurship mind-set among students. e. Publications in indexed journals. f. To take up funded Research projects from DST, UGC etc

a) Future plans
 i. Development of Research center with the help of affiliating university.
 ii. Improve the industry – Institute Interaction to provide more opportunities for students to meet Industry – society needs.
 iii. More emphasis on personality development programmes for students along with regular academics.
 iv. Development of laboratories & procurement of advanced software and equipment through research proposals
 v. Collaboration with leading universities and research organizations
b) Best practices followed in the department
 i. At most discipline maintained with respect to timings and scheduling
 ii. Regular monitoring and mentoring of the students
 iii. Personal counselling for the students for their overall development
 iv. Updation of the latest technology
 v. Encouraging students and faculties to actively participate in internships
 vi. Weekly meetings to discuss the progress of the individual and there by progress of the department and progress of the institute

vii.   Conducting technical talks by subject experts on a routine basis

viii. Presentation by the faculties on a routine basis about the various innovations in their specialized area

ix.   Poster presentations by the students based on technical topics

x.   Support to the students to participate and present in conferences

1. **Name of the department** : PHYSICS
2. **Year of Establishment**: 2002
3. **Names of Programmes/Coursesoffered (UG, PG, M.Phil., Ph.D., Integrated**

   Masters; Integrated Ph.D.,etc.) : Supporting department which caters to other engineering branches
4. **Names of Interdisciplinary courses and the departments/units involved** : NIL
5. **Annual/semester/choice based credit system (programme wise)** : Semester (2011-2015)/choice based credit system(2015-16 onwards)
6. **Participation of the department in the courses offered by other departments** : NIL
7. **Courses in collaboration with other universities, industries, foreigninstitutions, etc.** : NIL
8. **Details of courses /programmes discontinued (if any) with reasons**: NIL
9. **Number of Teaching posts**

	Professors	Associate Professors	Asst. Professors
Sanctioned	1	3	8
Filled	1	2	3

10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D./M.Phil. etc.,)

Name	Qualification	Designation	Specialization	No.ofYears of Experience	No.of Ph.D. Students Guided for the Last 4 years
Dr.NDN Prasad	M.Sc., Ph.D.	Professor	Astrophysics	Teaching : 31 years Research: -02	NIL
Dr.Dhananjaya.N	M.Sc., M.Phil., Ph.D.	Associate Professor	Nuclear and Particle Physics	Teaching : 9 years Research: 02 months	NIL
Dr.R.Lokesh	M.Sc., Ph.D.	Associate Professor	Solid State Physics	Teaching : 18 years Research: 05 years	NIL

Mrs.Yashaswini	M.Sc.	Assistant Professor	Condensed Matter Physics	Teaching : 7.5 years Research: - 00	NA
Mrs.Ashwini.K.R	M.Sc.	Assistant Professor	Nuclear and Particle Physics	Teaching : 7.5 years Research:-00	NA
Mr.Daruka Prasad	M.Sc., M.Phil.	Assistant Professor	Nuclear and Particle Physics	Teaching : 16 years Research: 03 years	NA

11. **List of senior visiting faculty**: NA
12. **Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty**: NA
13. **Student-Teacher Ratio (programme wise)** : 15:1
14. **Number of academic support staff (technical) and administrative staff; sanctioned and filled**: 01
15. **Qualifications of teaching faculty with DSc/D.Litt./Ph.D./MPhil/PG.**:
Please refer Question 10 above
16. **Number of faculty with ongoing projects from**
a)National

Year	No. of Faculty
2014-2015	01

b)International funding agencies and grants received : NIL
17. **Departmental projects funded by DST-FIST;UGC, DBT, ICSSR, etc. and total grants received**

Year	Title of the Project	Funding Agency	Name of the Faculty	Total grant Sanctioned
2014-2015	Plant latex mediated green combustion synthesis of rare earthdopednano-aluminates: Study of structural and photoluminescent properties	DST-Science & Engineering Research Board (SERB)	Dr.Dhananjaya.N	Rs. 21.60 Lakhs
	Structural and it's luminescence properties of rare earth activated Oxyhalides for display and dosimetric applications	VGST, Karnataka Govt. under the scheme "SMYSR Programme"		Rs. 4 Lakhs

18. **Research Centre/facility recognized by the University:**

Year	Recognized by the University
2014-2015	VTU

19. **Publications:**
   * **a) Publication per faculty: 8.83**
   * **Number of papers published in peer reviewed journals (national/**

   International) by faculty and students: 63
   * Number of publications listed in International Database (For Eg:Web of Science, Scopus, Humanities International Complete , Dare Database-International Social Sciences Directory, EBSCO host, etc.): 53

   *Monographs: NIL, *Chapter in Books: NIL, * Books Edited: NIL
   * **Books with ISBN/ISSN numbers with details of publishers:** NIL
   * **Citation Index:**
     Dr. Dhananjaya.N – 492
     Mr. Daruka Prasad - 230
   * **SNIP: 1.34**
   * **SJR: 0.967**
   * **Impact factor**
   * **h-index**

Impact factor(Overall)for ex: 0.8 to 1.6)	
Department	Range
Physics	1.5 to 2.5

H index (Overall)for ex: 0.8 to 1.6)	
Department	Range
Physics	9 to 11

20. **Areas of consultancy and income generated**: NIL
21. **Faculty as members in**
a)National committees b)International Committees c) Editorial Boards: NIL
22. **Student projects :NA**
23. Awards / **Recognitions received by faculty and students** :

Year	Faculty Name	Awards or Recognition
2011-2012	**Dr.Dhananjaya.N**	Best Poster award at National Conference on Recent Advances in Material Science
2012-2013	**Dr.Dhananjaya.N**	Best Oral Presentation award at International conference on Recent Advances in Materials Science (RAMS-2012), held on at the Atria Hotel, Palace Road. Bengaluru
2014-2015	**Dr.Dhananjaya.N**	• Young Scientist Award 2014

24. **List of eminent academicians and scientists / visitors to the department.**

SL No	Conference Tile	Department	Eminent Person	Year
1	National conference on 'Emerging Trends in Nano Applications' (NCETN-2015)	Physics	Dr. A.R.Pani, Dr. Uma.V, Dr. B.M.Nagabhushana, Dr.C.Shivakumara, Dr.Chandasree Das, Dr. KaustabGhosh	2015
2	National conference on 'Nanoscience and Nanotechnology'	Physics	Dr. Vijay Singh, Dr.K.B.RVarma	2013

25. **Seminars/Conferences/Workshopsorganized&the source of funding** a) **National**

Sl No	Department organizing the conference	Name of the conference	Dates	Remark
1	Physics	National conference on 'Emerging Trends in Nano Applications' (NCETN-2015)	2015	Internal funding
2	Physics	National conference on 'Nanoscience and Nanotechnology'	2013	
3	Physics	Workshop on 'Advanced materials and their applications'	2011	

b) International: NIL

26. **Student profile programme / coursewise**: Information will be furnished by the respective branches: NA

27. **Diversity of Students** : Information will be furnished by the respective branches: NA

28. **How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civilservices, Defenseservices ,etc.?** : NA

29. **Student progression**: NA

30. **Details of Infrastrural facilities.**

a) **Library**:
A centralized well equipped library caters to the needs of all students. In addition we have a department library which caters to the needs of students and faculties pursuing PhD

b) **Internet facilities for Staff & Students**: Bandwidth of 40 MBPs

c) **Class rooms with ICT facility**: Class rooms are provided with LCD projector with Wi-fi facility

b) **Laboratories**
An Engineering Physics Lab which caters to the requirement of VTU syllabus. In addition to this we have a R&D lab to pursue research in Material Science (Synthesis and characterization)

31. **Number of students receiving financial assistance from college, university,Government or other agencies** : NA

32. **Details on student enrichment programmes (special lectures/workshops/seminar) with external experts**

Year	Event
2014-15	Effectiveness in online video learning
	"Awaken Genius within"
	"Usage of Internet for effective learning of Science and Technology"
	Frequently Quiz events conducted
	Essay writing
2015-16	co-curricular activities on "Creating awareness about Nanoscience and Nanotechnology"
	quiz eventon "Laser and its applications"

33. **Teaching methods adopted to improve student earning**

Traditional Method ; class room teaching, Cooperative learning techniques, Tutorial classes, Special classes

34. **Participation in Institutional Social Responsibility (ISR)and Extension activities**

Department is involved in many institutional activities such as in the administration of Hostel in the capacity of Chief warden/ deputy warden, in organizing events such as conferences and workshops and coordinating in activities like student feedback etc.

35. **SWOC analysis of the department and Future plans**

Strength

Following are the strengths of the department

- Well qualified and experienced faculties
- Active in research
- Two of our faculties are reviewers for Journals i.e., Journal of alloys and compounds, RSC advances, Material science research bulletin etc
- Active in organizing various events such as conference/workshop

Weakness

Clear weaknesses cannot be indicated however some of the limitations and short comings are

- Department does not have any records of publishing Books/Author of any patents

Opportunities

- Adequate facilities to pursue their research.
- Competent human resources to guide for PhD programs.
- To carry out research projects.
- To collaborate with Institutions of higher learning.

Challenges

The major challenges is to

- Get funds through funded projects.
- Make curriculum appropriate for current trends and latest developments in science and technology.
- Motivate and create interest in fundamentals of pure sciences among engineering students.
- Demonstrate relevance of pure sciences in engineering curriculum.

Future Plans

Following are the immediate plans

- To establish the R&D Centre of the department in full swing and to become a Nodal center for R&D activities to attract consultancy.
- To develop human resources to meet future challenges in the field of education effectively through training and skill development of teaching and non-teaching faculties.
- To start writing the books on the research and teaching related fields in
  Association with the world recognized publishers.
- To achieve excellence in academic activities and to acquire autonomous status.

Best Practices in Teaching and learning

- To identify slow learners and to provide individual attentions to such category of students in the form of counseling.
- Effective proctoring system to help the slow learners.
- Providing course materials to the students which helps them to perform
- Better in internal test and in university examination.

1. Name of the department: **Chemistry**
2. Year of Establishment: 2002
3. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated

   Masters; Integrated Ph.D., etc.)

   Offering Engineering Chemistry Theory and Engineering Chemistry Lab courses to the undergraduate first year students of all branches.

4. Names of Interdisciplinary courses and the departments/units involved: Nil
5. Annual/ semester/choice based credit system (programme wise):
   Semester (2011-2015) Choice based credit system (2015-16 onwards)
6. Participation of the department in the courses offered by other departments: Nil
7. Courses in collaboration with other universities, industries, foreign institutions, etc. Nil
8. Details of courses/programmes discontinued (if any) with reasons: Nil
9. Number of Teaching posts

	Sanctioned	Filled
Professors	1	1
Associate Professors	1	1
Asst. Professors	3	3

10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt./Ph.D. / M. Phil. etc.,)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. Students guided for the last 4 years
Dr. B. E. Ramachandran	MSc, PhD	Professor	Materials Science	40	Nil
Dr. R. Srinivasan	MSc, Ph.D	Associate Professor	Inorganic Solid State Chemistry	17	Nil
Mrs. Bincy Rose Vergis	MSc, M.Phil	Assistant Professor & Head	Organic Chemistry	18	NA
Dr. K.H. Sudheer Kumar	MSc, Ph.D	Assistant Professor	Inorganic Chemistry	22	Nil
Ms. G.A. Swetha	MSc	Assistant Professor	Electrochemistry	9	NA

11. List of senior visiting faculty: Nil
12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty: NA

13. Student -Teacher Ratio (programme wise): 15:1
14. Number of academic support staff (technical) and administrative staff; sanctioned and filled

1. R.G. Jayaramaiah	BSc	Lab instructor
2. N. Tejaswini	BSc	Lab mechanic

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG. Please refer Question 10 above
16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received:
   a) National : Nil
   b) International: Nil
17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received: 01

Year	Number of Faculty	Funded by	Grants Sanctioned
2014 - 2017	1 (Dr. C. Kavitha)	DST-SERB	32 Lakhs

18. Research Centre /facility recognized by the University:
Chemistry department has research Centre recognized by VTU, Belagavi [from 2014-15]
19. Publications:
∗ a) Publication per faculty - 4
∗ Number of papers published in peer reviewed journals (international) by faculty: 23
∗ Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.): 23
∗ Monographs: Nil, Chapter in Books: Nil, Books Edited: Nil
∗ Books with ISBN/ISSN numbers with details of publishers: Nil

∗ Citation Index: Dr. C. Kavitha-159, Dr. R. Srinivasan – 191
∗ SNIP: Nil, SJR: Nil
∗ Impact factor: 1.8 to 3.5
∗ h-index: Dr. C. Kavitha-8, Dr. R. Srinivasan – 6

20. Areas of consultancy and income generated
Started consultancy from this year (2016) through analytical services for the characterization of samples by Raman spectra.

21. Faculty as members in

a) National committees b) International Committees c) Editorial , Boards: Nil
22. Student projects: NA
23. Awards / Recognitions received by faculty and students: Nil

24. List of eminent academicians and scientists / visitors to the

department: Nil

25. Seminars/ Conferences/Workshops organized & the source of funding a) National

Departments organizing th conference	Name of the Conference	Year
Chemistry jointly with Physics and ECE department	National Conference on Ëmerging trends in Nano Applications (NCETN 2015)	Mar 2015 (Source of funding: Internal)
Chemistry jointly with Physics and Mechanical department	National Conference on Nanoscience and Nanotechnology	Apr 2013 (Source of funding: Internal)

a) International: Nil

26.   Student profile programme/course wise: NA

27.   Diversity of Students: NA

28.   How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.? NA

29.   Student progression: NA

30.   Details of Infrastructural facilities

a) Library: A centralized library caters to the needs of all students. In addition we have a department library which caters to the needs of students and faculties pursuing Ph.D.

b)   Internet facilities for Staff & Students: Available with Bandwidth of 40 MBPS

c) Class rooms with ICT facility: Wi- Fi facility is available.

 d)   Laboratories: An Engineering Chemistry Lab which caters to the requirement of VTU syllabus. In addition to this we have a R&D lab to pursue research in Material Science (Synthesis and characterization)

 31.   Number of students receiving financial assistance from college, university, government or other agencies :   NA

 32.   Details on student enrichment programmes (special lectures / workshops /seminar) with external experts: NA

33. Teaching methods adopted to improve student learning:
Traditional black board teaching [Major] and power point presentations [Minor] with strong tutoring and proctoring with personal attention.

34. Participation in Institutional Social Responsibility (ISR) and Extension activities: Nil

35. SWOC analysis of the department and Future plans:

Strength	Weakness
i) Availability of experienced teachers with doctorate degree.	i) Non - availability of full time research scholars.
ii) Research in the area of Material	ii) Non -availability of routine research

science. iii) Availability of Advanced Materials Research Lab. iv) Research grants to the tune of 32 Lakhs.	facilities. iii) Lack of involvement of engineering students in basic science research. iv) Delay in procurement due to administrational procedures.
Oppurtunity i) Lot of good established government research institutes like I.I.Sc, RRI, etc for possible collaboration. ii) To start post graduate programs in interdisciplinary area of Nano Science and Technology iii) To start consultancy through analytical services.	Challenge i) Addressing more societal problems through research. ii) Carrying out quality work that deserves publication in high impact journals. iii) To enhance and retain the research scholars in the department.

The future plan of the department is

- To excel in research and increase the number of research students.
- To obtain more research grants and increase the research facilities.
- To do consultancy through analytical services for characterization of nanomaterials
- To publish more papers in reputed high impact factor journals.
- To do cutting edge research in frontier areas with more applicability and usefulness to society.

1. Name of the department: **Mathematics**
2. **Year of Establishment:**   2002
3. **Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.):**
   Supporting Department
4. **Names of Interdisciplinary courses and the departments/units involved:**
   NIL
5. **Annual/ semester/choice based credit system (programme wise):**
   Semester(2011-2015)/choice based credit system(2015-16 onwards)
6. **Participation of the department in the courses offered by other departments**
   DMS, GTC and M.Tech / CSE , ISE and MECH
7. **Courses in collaboration with other universities, industries, foreign institutions, etc. :**   NIL
8. **Details of courses/programmes discontinued (if any) with reasons:**
   NIL
9. **Number of Teaching posts**

	Sanctioned				Filled			
	2011-12	2012-13	2013-14	2014-15	2011-12	2012-13	2013-14	2014-15
Professors	01	01	02	02	01	01	02	02
Associate Professors	01	01	01	03	01	01	01	03
Asst. Professors	05	05	04	04	05	05	04	04

10. **Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.,)**

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. Students guided for the last 4 years
Dr.Annamma Abraham	Ph.D	Professor & head	Fluid Mechanics	Teaching : 28 Research:	05
Dr. N G Goudru	Ph.D	Professor	Mobile wireless Communication	Teaching : 34 Research: 13	Nil
Dr. Jojy joseph Idicula	Ph.D	Associate Professor	Approximation Theory	Teaching : 18 Research: 06	Nil
Dr.Chethan A S	Ph.D	Associate Professor	Fluid Mechanics	Teaching : 17 Research: 16	Nil
Dr. Karabi Sikdar	Ph.D	Associate Professor	Queueing Theory	Teaching : 8 Research:16	Nil
Mrs. Anitha kiran	M.Sc, MBA	Asst. Professor	Queueing Theory	Teaching : 10 Research: 2	Nil

Mrs.Annapoorna	M.Phil	Asst. Professor	Graph theory	Teaching : 10 Research: 3	Nil
Mr. Kallur V Vijaya Kumar	M.Sc	Asst. Professor	Finite element method Magneto hydro dynamics	Teaching : 14 Research: 5	Nil
Mrs. Sreelakshmi T K	M.Sc	Asst. Professor	Fluid Mechanics	Teaching : 8 Research: 2	Nil

11. List of senior visiting faculty: NIL

12. Percentage of lectures delivered and practical classes handled(programme wise)

by temporary faculty :   NIL

13. Student -Teacher Ratio (programme wise):   15 : 1

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled: NIL

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG :
Please refer Question 10 above

16. Number of faculty with ongoing projects from
         a) National :

Year	No. of Faculty
2013-2014	1
2014-2015	1
2015-2016	1

         b) International funding agencies and grants received: Nil

17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received

Year	Title of the Project	Funding Agency	Name of the Faculty	Total grant Sanctioned
2013-2015	Study and development of computational methods on finite buffer discrete time queues with N threshold policy	DST	Dr. Karabi Sikdar	9.38 Lakhs

18. Research Centre /facility recognized by the University

Year	Recognized by the University
2011-2015	VTU

19. Publications:
         a) Publication per faculty: 3.34
         ∗ **Number of papers published in peer reviewed journals (national /**
             international) by faculty and students: 28

         ∗ **Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences**

Directory, EBSCO host, etc.): 25
* **Monographs –** NIL
* **Chapter in Books –** NIL
* **Books Edited –** NIL
* **Books with ISBN/ISSN numbers with details of publishers**
Dr. Chethan A S authored a book entitted "Engineering Mathematics-I" published by Emmes Medical publishers.
* **Citation Index –** NIL
* **SNIP –** NIL
* **SJR –** NIL
* **Impact factor**

Impact factor	
Department	Range
Mathematics	Dr. Annamma Abraham: 0.5 to 2.52 Dr. Karabi Sikdar: 0.627 to 5.629 Dr. Chethan A.S.: 0.75 Mrs. Annapoorna M.S: 3.12 Mr.Kallur V Vijayakumar: 0.7

* **h-index**

H Index	
Department	Range
Mathematics	Dr. Annamma Abraham:4 Dr. Chethan A.S.: 2 Dr. Karabi Sikdar:8

20. **Areas of consultancy and income generated :** Nil
21. **Faculty as members in**
    a)National committees b) International Committees c) Editorial Boards- Nil
22. **Student projects**: NA
23. **Awards / Recognitions received by faculty and students**

Year	Faculty Name	Awards or Recognition
2012-2013	Dr. Annamma Abraham	Best Citizens of India Award , International Publishing House, 2012
2013-2014	Dr. Karabi Sikdar	• Young Scientist Award under Scientific and Engineering Research Council, 2014, Department of Science and Technology, New Delhi. • Certificate of recognition from BMS Institute of Technology & Management, September 2014.

24. **List of eminent academicians and scientists / visitors to the department** : Nil

25. **Seminars/ Conferences/Workshops organized & the source of funding**

a) **National**

Year	Name of the Conference	Organizer and Source of Funding
2013-2014	National Conference on Electronics, Computers & Computation	Departments of Computer Science & Engineering, Information Science & Engineering and Mathematics, BMS Institute of Technology, 10th Octaber , 2013

b) **International** : Nil

26. **Student profile programme/course wise**: NA
27. **Diversity of Students-** NA
28. **How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.?** - NA
29. **Student progression** -NA
30. **Details of Infrastructural facilities**

   a) Library: Departmental Library has 70 books.
   b) Internet facilities for Staff & Students: Department has systems with internet facility.
   c) Class rooms with ICT facility: NIL
   d) Laboratories: NA

31. **Number of students receiving financial assistance from college, university,**

   Government or other agencies -NA

32. **Details on student enrichment programmes (special lectures / workshops /**

   seminar) with external experts

Year	Event
2012-13	• Seminar on Ä̈pplications of Graph Theory" by Ms Aruna S., VIII Sem CSE student on 21-03-2013. • Seminar by Mr. S. A. Rahim of MATHEMAJIK SOSITY on 05 – 12 – 2012
2013-14	• Technical talk on "Numbers Beyond Infinity" by Dr B.R Sreenivas, Former Principal & visiting Professor, Sri Kongadiappa College, Doddaballapur and Visiting Professor, NMKRV College for Women, Bengaluru, on the 31th of October.
2014-15	• Seminar on "Linear programming and its applications" by Prof. Sreenivasa Reddy, Professor and Head, Department of Mechanical Engineering, R. L. Jalappa Institute of Technology, Doddaballapur on 25th August, 2014 • Seminar on "Mathematics through Origami" by Mr. Sivashankara Sastry, an expert in the field of origami on 7th February, 2015. • Seminar on "Mathematics in Sculpture'' by Mr. K.V. Shankar Narayanan, a sculptor from Devanahalli on 7th February 2015.
2015-16	• Seminar on "Neuro Linguistic programming" by Mrs. Nancy Johnson, NLP Practitioner and coach.on 11th September 2015 • Technical talk on "Internet of Things and Bio Mimicry" by Mr. Suraj

	Jana, student of 7th Sem CSE, BMSIT&M and Dr Badari Narayan, Professor, Department of Mechanical Engineering,on the 13th August, 2015.
	• Seminar on "Nonnegative matrix factorisation and its applications" by prof. A. S. Vasudeva murthy, TIFR, Bengaluru on 1st April, 2016.
	• Seminar on "Stochastic modelling in Manufacturing and Service" by Prof. S. R. Chakravarthy on 16th Feb 2016

33. Teaching methods adopted to improve student learning:
- Traditional Method, Cooperative learning techniques, Tutorial classes, Remedial classes to weaker section of the students, Special classes, Seminars and guest lectures, Class Tests.

34. Participation in Institutional Social Responsibility (ISR) and Extension activities

The students and faculty members regularly participate in the Institutional Social Responsibility (ISR) and Extension activities organized by the college NSS unit.

35. SWOC analysis of the department and Future plans

Strength
- Dedicated and well qualified faculty.
- 50% of the faculty are doctorate holders and the remaining 50% are pursuing.
- Students are the strength of the department.
- Ready to assist the students academically to reach their goal.
- Good library and Internet facility.
- Active participation in research activities.
- Training the students to improve their literary talents and oratorical skills.

Weakness
- Insufficient recreation facilities for faculty members
- Collaborative Activities.

Opportunities
- Research and extension activities
- UG students passed out with good results get opportunity for higher studies in various Universities.

Challenges
- To start research activities for the development of the faculty members with available facilities in collaboration with nearby Universities and research institutes.
- To achieve 100% results.

Future Plans
- Development in infrastructure facilities
- Start Mathematical Laboratory
- Organize more number of seminars by inviting experts in Mathematics.

- Conduct training and research programmes in various fields of mathematics for the benefit of students/faculty.

Best Practices in Teaching and learning

The Indian education philosophy believes that the destiny of India is now being shaped in the class rooms. We believe that solution to any and every problems is Science and Technology. It is the education on science and technology that determines the prosperity and quality of the life of our people. The success of national reconstruction and enterprise depends on the number of quality engineers comes out of an engineering institute. The quality conscious system could produce people who in turn can understand the social problems and mitigate the needs of the society. Therefore, teachers have great responsibility and commitment. Teaching is nor a profession but a passion. A teacher should love to teach like a musician loves to play.

The teaching structure has one independent variable, one dependant variable and one intermediate variable. The teacher is an independent variable who plans, organises and delivers. The student is a dependant variable who acts according to the planning and guidance of the teacher. The intermediate variable is the content of presentation and strategy of presentation that leads to interaction between student and teacher.

1. Name of the department: **Master of Computer Applications**
2. Year of Establishment: **2003**
3. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters;
   Integrated Ph.D., etc.): **PG: Master of computer Applications (MCA)**
4. Names of Interdisciplinary courses and the departments/units involved: **NIL**
5. Annual/ semester/choice based credit system (programme wise):
   Semester system is followed from 2003 – 2015 and Choice Based Credit System (CBCS) is followed from academic year 2016-2017.
6. Participation of the department in the courses offered by other departments: **NIL**
7. Courses in collaboration with other universities, industries, foreign institutions, etc.:
   Partial deliveries of courses were conducted in the subjects DBMS, J2EE, Software testing and practices and Mobile applications.
8. Details of courses/programmes discontinued (if any) with reasons: **NIL**
9. Number of teaching posts

	Sanctioned	Filled
Professors	01	01
Associate Professors	03	02
Asst. Professors	08	09

10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.,)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. Students guided for The last 4 years	Remarks
Dr. Arunkumar B R	BSc, MCA, M.Phil (CS), M.Tech (CSE), PhD (CS)	Professor & HOD	Mobile Ad-hoc Networks	16.6	Guiding five Ph. D students	From Aug-2013
Dr. N G Goudru	M.Sc., M.S, Ph.D.	Professor & HOD	Computer networks	34	-	Before 2013
Mr. P.Ganesh	BSc, MCA	Associate Professor	Cloud Computing	14		
Ms. Aparna K	BSc, MCA, MPhil, (PhD)	Associate Professor	Data Mining	14		
Mr. Nagabhushan S.V	BSc, MCA, (PhD)	Assistant Professor	Ecommerce	10		

Mr. Dwarakanath G V	BSc, MCA, (PhD)	Assistant Professor	Mobile Ad-hoc Networks	12.6		
Mr. Shivakumara T	BSc, MCA, M.Tech-(IT), (PhD)	Assistant Professor	Network Security	8.6		
Mr. Reshma C R	BSc, MCA	Assistant Professor	Cognitive Radio Networks	6.5		
Mrs. Drakshaveni G	BSc,, MCA, M.Tech(CST), (PhD)	Assistant Professor	Image Processing	11.6		
Mrs. Nirupama B K	BSc, MCA	Assistant Professor	Computer Networks	5		
Mrs. M.Sridevi	BSc, MCA, (PhD)	Assistant Professor	Data Analytics	9.5		
Mr. Venkatesh	BSc, MCA, (PhD)	Assistant Professor	Wireless Sensors	7		
Mr. Sudarshanam P	B.Sc,, MCA, M.E(CSE)(PhD)	Assistant Professor	Parallel computing	16		

11. List of senior visiting faculty: **NIL**

12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty: **NIL**

13. Student -Teacher Ratio (programme wise): **15:1**

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled:

Technical staff	Sanctioned: 02	Filled: 02

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG.
    For the details kindly refer Q. No. 10 above.

16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received: **NIL**

17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received: **NIL**

18. Research Centre /facility recognized by the University: **Applied for Research Centre for the academic year 2016-17**

19. Publications:

∗ a) Publication per faculty: **2.5**

∗ Number of papers published in peer reviewed journals (national/ international) by faculty and students

∗ Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete, Dare

Database - International Social Sciences Directory, EBSCO host, etc.): **10**

* Monographs**: Nil,** Chapters in Books: **01,** Books with ISBN/ISSN numbers: **04**

> * **Books with ISBN/ISSN numbers with details of publishers**
>> • The book written by Mr. Shivakumara T. Asst. Professor, Department of MCA, BMSIT&M with the title **"Programming Using C# & .NET"** covers all the concepts related to VTU 5th Sem MCA new Syllabus 2013, published by Thakur publishers, **ISBN: 978-93-5163-609-0, 2015-16.**
>> • The book written by Mr. Shivakumara T Asst. Professor, Department of MCA, BMSIT&M with the title **"Advanced Java programming"** covers all the concepts related to VTU 4th Sem MCA new Syllabus 2013, published by Thakur publishers, **ISBN: 978-93-5163-415-7, 2014-15.**
>> • The book written by Mr. Nagabhushan S. V. Asst. Professor, Department of MCA, BMSIT&M with the title **"Programming using JAVA"** covers all the concepts related to VTU 3rd Sem MCA new Syllabus 2013, published by Thakur publishers, 2013-14
>> • The book written by Mr. Shivakumara T. Asst. Professor, Department of MCA, BMSIT&M with the title **"Object oriented programming using C++"** covers all the concepts related to VTU 2nd Sem MCA new Syllabus 2013, published by Thakur publishers, **ISBN: 978-93-83922-23-9, 2012-13**

* Citation index: **Max - 205**, h index: 5, SNIP: **NIL**, SJR: **NIL**

* Impact factor: **Average impact factor of paper publications is nearly equal to 1**

20. Areas of consultancy and income generated: **NIL**

21. Faculty as members in

> a) National committees : **NIL** b) International Committees: **NIL**

c) Editorial Boards….

> Dr. Arunkumar B R is Editorial Board member of the Journal
> i) International Journal of Computer Applications & IOT (India based)
> ii) International Journal of Sensor Networks & Data Communication (USA)

22. Student projects

a) Percentage of students who have done in-house projects including inter departmental/ programme

b) Percentage of students placed for projects in organizations outside the institution i.e. in research laboratories/ industry/ other agencies

Year	In-house projects	Outside the Institution
2015-16	17.5	82.5
2014-15	32.65	67.35

2013-14	77.20	22.80
2011-12	78.57	21.42

23.   Awards / Recognitions received by faculty and students:

Students Rank holders list of VTU:

Sl. No	Year	Student Name	USN	RANKS	Percentage
1	2015-16	Ms. Kavya L Hegde	1BY13MCA16	1st	86.16
2		Mr. Ajith K.P.	1BY13MCA04	4th	84.44
3	2014-15	Ms. Shruthi Tavanakke	1BY12MCA43	5nd	85.69
4	2011-12	Ms. Hemavathi N	1BY07MCA12	2nd	86.11
		Ms. Deepthi A.S	1BY07MCA09	5th	85.69

Received BEST PAPER Award in Conferences:
1) Paper titled "supplier selection model in E-Procurement" by Mr. Naghabushan S V, Asst. Prof., in the International conference at IISC held during April 12th and 13th 2015.
2) Under the guidance of Mrs. Drakshaveni.G student of 6thsem MCA, Mr Sharath M.N presented a paper on "Embedding data in JPEG & MPEG Images using LSB & Cryptography Algorithm" held at Sheshadripuram First Grade College, Bengaluru on 19th of March 2014.

24.   List of eminent academicians and scientists / visitors to the department

Sl. No	Year	Resource Person	Company
1	2015-16	Mr. Sheshadri,	Project Leader, Microsoft, Benagluru
2		Dr.Ramakanth, Dean,	Professor & Head, ISE, RVCE, Benagluru
3		Mr.Praveen Alur	Software engineer ,Cerner, Bengaluru
4		Mr.Prakash R	Head, HPO,Bengaluru
5		Dr.Mydili Nair	Associate professor,Department of information science and enginnering M S R T
6		Mr.DattatreyaS.Vellal	Senior,Technical lead,Exeter Software Pvt. Ltd., Bengaluru
7	2014-15	Prof.RakeshGodhwani	IIM –Bengaluru
8		Dr. N Shivarama Reddy	State resource Person-Teacher Education & Nodal Officer –IYC, Bengaluru Division
9	2013-14	Dr Ananth Koppar,	CEO, K-Two Technology Solutions, Bengaluru
10		Mr Rajnish	Microsoft , Bengaluru
11	2012-13	Sri. S. Anand	Gramener IT Solution, Bengaluru

12		Dr. Jayant	SERC, IISc, Bengaluru
13		Dr. Murali Krishna Ramanathan	IISc, Bengaluru
14		Dr. Satish Vadhiyar	IISc, Bengaluru
15		Mrs. J. Lakshmi	IISc, Bengaluru
16		Dr. Vijaykumar	MSRIT, Bengaluru
17		Dr. B. Sathish Babu	SIT, Tumkur
18	2011-12	Sri. Srinivasan Viswanathan	Datsi IT Solutions Pvt. Ltd., Bengaluru

25. Seminars/ Conferences/Workshops organized & the source of funding

Conference:

Year	Title	Date
2013-14	National Conference on Software & information management	27/9/2013
	National Conference on Cloud Computing	28/9/2013

Workshop & seminar details please refer: **Q. No. 32**

26. Student profile programme/course wise:

Name of the Course/ programme (refer question no. 4)	Applications received	Selected	Enrolled		Pass percentage
			*M	*F	
MCA(2012-15)	-	52	35	17	**96.15%**
MCA(2011-14)	-	60	45	15	**95%**
MCA(2010-13)	-	59	40	19	**94.91%**
MCA(2009-12)	-	60	48	12	**95%**

*M = Male   *F = Female

27. Diversity of Students:

Name of the Course	% of students from the same state	% of students from other States	% of students from abroad
MCA(2015-16)	82%	18%	-
MCA(2014-15)	98%	2%	-
MCA(2013-14)	90%	10%	-
MCA(2012-13)	79%	21%	-

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.? NIL

29. Student progression

Student progression	Against % enrolled			
UG to PG	Not Applicable			
PG to M.Phil.	-----			
PG to Ph.D.	-----			
Ph.D. to Post-doctoral	------			
Employed ☛ Campus selection ☛ Other than campus recruitment	Item	2012-15	2011-14	2010-13
	Campus selection	24%	21%	58%
	Other than campus recruitment	32%	35%	29%
Entrepreneurship/Self-employment	DATA NOT AVAILABLE			

30. Details of
Infrastructural facilities
   a) Library: Dept. Library has 200 books.
   b) Internet facilities for Staff & Students:
60 MBPS is allotted for all the students & faculty in the department
c) Class rooms with ICT facility: 3 class rooms have ICT facility.
 d) Laboratories: 03
labs available
31. Number of students receiving financial assistance from college, university, government or other agencies

Year	No. of students received financial support	
	SC / ST	BCM
2012-13	2	-
2013-14	7	-
2014-15	10	-
2015-16	13	22

32. Details on student enrichment programmes (special lectures / workshops / seminar) with external experts): To enrich the competency of the students the dept. regularly organizes co-curricular activities such as workshops, expert talks, Value added courses in and partial delivery of courses with the Industry persons/ domain experts. Such activities identified

Workshops Organized

Si. No:	Name of Activity, Resource Person & Date
1.	One day workshop on " Software Testing Tools" by Mr. Sheshadri Project Leader, Microsoft, Benagluru on 22-4-2016
2.	One day workshop on "Mobile Application development using Android", by Dr.Ramakanth Dean, Professor & Head, ISE, RVCE, Benagluru on 29-4-2016
3.	Computer Network Simulation NS-2 by 1. Dr. Hemant Rath, Senior Scientist, Innovative Labs TCS and Mr. Dwarakanath G. V. Asst. Prof., MCA Dept., BMSIT&M on 17/12/2013
4.	Knowledge Dissemination by Dr. Vijaya Singh, Deputy Director, NRB, Mr. Vijayarajan, CSI, Dr. Arunkumar B R, Prof. & HOD of MCA, BMSIT&M, Ms. Aparna K, Assoc. Prof. of MCA, BMSIT&M, Mr. Shivakumara T, Asst. Prof. of MCA, BMSIT&M, Mr. Nagabhushan S. V., Asst. Prof. of MCA, BMSIT&M on 18/12/2013
5.	Two Days Workshop on "Data Mining using Informatica" by Mr. Pundrik Vinayak, Assoc. System Engineer, IBM and Mr. Sumith, Managing Director XYSys on 21/12/2013 and 22/12/2013.
6.	Five Days Workshop on "RSA & Design Pattern" by Mr. Vijay Krishnan, IBM, Mr. Yogananda Prasad, Cranes Softwares and Mr. Naresh, Business Analyst, Qatar Subsidiaries, Qatardu during 18/3/2014 to 22/3/2014.
7.	Software Testing by Mr. Kemparaja V, Project Associate, Cognizant Technologies, B'lore on 13/9/2014
8.	Seminar on "Mobile Application development using MAC iOS" by Mr. Ganapathy S Nagarajan, Founder of Boove Software, B'lore on 28-2-2015
9.	One day Seminar on "Mobile Application development using Android" by Mr. Dileep Kumar Singh Alumnus of BMSIT&M on 7-3-2015
10.	Five Days Workshop on "Research Methodology" by Dr. N. Vishwanadam, Emeritus Prof. & Sr. Research Scientist, IISc., B'lore, Dr. Ramakanth, Dean, RVCE, B'lore, Dr. Mahadevaswamy, CEO, Applied Inventions, B'lore, Dr. Rajesh K. Prof. SIT, Tumkur, Dr. Mathirajan, Prof. & Chief Research Scientist, IISc., B'lore, Dr. G.V.Prabhushankar, Prof., SIT, Tumkur, Dr. Boby John, Prof. & Corporate Sonsultant, ISI, B'lore, Dr. Arunkumar B. R. Prof. & HOD, Dept. of MCA, BMSIT&M, Dr. Hariprasad S. A., Prof. & HOD, Dept. of ECE, BMSIT&M during 23-06-2015 to 27-06-2015
11.	One day workshop on " Software Testing Tools" by Mr. Sheshadri, project Leader, Microsoft, Benagluru on 22-4-2016.
12.	One day workshop on "Mobile Application development using Android" by Dr.Ramakanth, Dean, Professor & Head, ISE, RVCE, Benagluru on 29-4-2016.

Invited Lectures Academic year 2015-16

Sl. No	Topic	Date	Resource Person	Company
1	Big Data and career opportunity	26/2/2016	Praveen Alur	Software engineer ,Cerner, Bengaluru
2	Parallel computing and neural networks	18/3/2016	Prakash R	Head, HPO,Bengaluru
3	Problem solving skills	25/8/2015	Mr. Chengappa B S	Assistant professor,Dept. of MCA,P E S IT
4	Machine Learning applied to	12/9/2015	Dr.Mydili Nair	Associate

	Music data			professor,Depart ment of information science and enginnering M S R IT
5	Digital publishing and delivery of study material	31/10/201 5	Mr.C M Machayya	C0-Founder,Interline publishing
6	Web technologies & US	10/12/201 5	Mr.Dattatreya S.Vellal	Senior,Technical lead,Exeter Software Pvt. Ltd., Bengaluru
7	"Awareness on Social Responsibilities & Human Rights"	14-02- 2015	Mrs.GeethaMeno n	SthreeJagrithiSam ithi', Bengaluru
8	"NETWORKING IN REAL WORLD"	06/02/2015	Mr Sandi	Mohan's networking,Benga luru
9	"Cyber Law & Security"	07-02-2015	Mrs. Nagarathna	Advanced centre for Cyber law, NLSIU, Bengaluru
10	"How Leader 's persuade action –a necessary skill for entrepreneurs"	26/9/2014	Prof.RakeshGodh wani	IIM –Bengaluru
11	"Computer network security configuration using CISCO packet tracer	23/ 9/ 2014	Mr Bilal Ahamed	CISCO,Bengaluru
12	"Software testing"	13/9/2014	Mr.Kemparaja V	Cognizant Technologies, Bengaluru
13	"MIRACLE OF MEANINGFUL WORK"	30/8/2014	Dr. N Shivarama Reddy	State resource Person-Teacher Education & Nodal Officer – IYC, Bengaluru Division
14	"IT in Career Management"	18/08/201 4	Mr.DattatreyaS. Vellal	Exeter Software Pvt. Ltd., Bengaluru
15	"UMTS Services & Technology Introduction"	09/08/201 4	Mr.Kannan Kadirevelu	Alcatel Lucent India Ltd., Bengaluru
16	"Participatory Sensing"	24/8/2013	Dr. Rajan M. A.	Tata Consultancy Services, Bengaluru.
17	"An Introduction to Behind the Scene Technologies of the Social-net"	12/9/2013	Mr. Dattatreya S. Vellal,	Exeter Group, Bengaluru
18	"Technology Trends & Preparedness".	24/10/2013	Mr. T. Sabhapathy,.	Nine Stars Information

				Technologies Ltd., Bengaluru & CSI Regional Student Coordinator for Karnataka & Andhra Pradesh was the resource person
19	"Entrepreneurial challenges & Invocation"	08/2/2014	Dr Ananth Koppar,	CEO, K-Two Technology Solutions Bengaluru
20	"Data Analysis and its Application"	11/2/2014	Dr Mohan Kumar	Trend Wise Analytics
21	"Scaling Up Business"	21/2/2014	Mr Rajnish	Microsoft , Bengaluru
22	"Big Data:Trends and Applications"	11/8/2012	Sri. S. Anand	Gramener IT Solution, Bengaluru
23	"Database Query Optimization"	22/8/2012	Dr. Jayant	SERC, IISc, Bengaluru
24	"Research Insight to Software Engineering"	6/3/2013	Dr. Murali Krishna Ramanathan	IISc, Bengaluru
25	"Grid Computing"	27/3/2013	Dr. Satish Vadhiyar	IISc, Bengaluru
26	"Virtualization and Cloud System"	24/4/2103	Mrs. J. Lakshmi	IISc, Bengaluru
27	"Smart Sensor Networks for a GO GREEN WORLD"	28/8/2011	Dr. Vijaykumar	MSRIT, Bengaluru
28	"Cloud Computing an Application Perspective"	179/2011	Dr. B. Sathish Babu	SIT, Tumkur
29	"Insights of Cloud Computing Architecture"	25/2/2012	Sri. Srinivasan Viswanathan	Datsi IT Solutions Pvt. Ltd., Bengaluru

33.   Teaching methods adopted to improve student learning
        Partial Delivery of Courses
- Demonstration by teacher
- Small group discussion in lab
- Oral question by teacher
- Brainstorming
- Case studies.
- Collaborative:-Pair-wise

34.   Participation in Institutional Social Responsibility (ISR) and Extension activities
        "JOY OF GIVING WEEK" was organized during October 2ⁿᵈ –

9th 2013, Samajik Sambhnda-Seva Yojana (SSSY), materials (Food & clothes) were collected from the donors and distributed to the Home of Hope (Orphanage and beggars' rehabilitation centre), St. Joseph's School, Sri Rakum Blind School & Agni Raksha around Bengaluru.

35. SWOC analysis of the department and Future plans

SWOC Analysis of the Department

Strengths	Weakness
• Well qualified, experienced, dedicated faculty members with good retention rate. • Adequate infrastructure & better academic achievements. • Innovative/ Co-operative Teaching-Learning methods with research /project orientation. • Co-curricular activities enriching the students' competencies through PDC, VAC, Individual Seminars on topics beyond syllabus by the students, Expert Talks, Industry Visits, Workshops & Competitions. • 90% of the Faculty members are pursuing Ph.D. • Very good number of paper publications by faculty members and students. • Good number of internships offered to students in industry/ department.	• Lack of Funded projects, Consultancy, Industry sponsored labs. • Courses in collaboration with National/ Foreign Industry, University/Institution. • Insufficient efforts in acquiring IPRs such as Copyrights and Patents. • Very active large number of Alumnus is not continuously associated with the department. • Potential networking with industry has to be completely connected. • Professional body activities are not adequate. • Paper publications in foreign based international journals with good impact factor, standard indexing such as Thomson Reuters are not done.
Opportunities	**Challenges**
• Establishing industry labs in contemporary subjects. • Consultancy work through Centers of Excellence. • Conduct courses under Continuing Education scheme. • To publish papers in high impact journals including foreign based. • To enhance MoU with Industry, Institutions and R&D labs for collaborative works. • Offer training/certification programs in thrust areas.	• Keeping pace with rapid changes in the industry. • 100% results, admissions & employability. • Acquiring expertise/ involving Faculty members in R&D projects. • Imparting/facilitating project/problem -based learning in Advanced Technologies in the core/multi disciplines. • Perfect alignment of COs, teaching methods, assessment methods and Programme Outcomes to attain PEOs. • Attracting students into MCA programme despite of changes in State/Central Government rules/policies which favours the admission into other programmes of the same university/ or other universities including the foreign universities. • Competition by the students of other institutions from the same department.

	• Schools of foreign universities opening in India. • Motivating students towards entrepreneurship.

Future plans:
1. Collaborative projects with industry and research institutes.
2. Consultancy work through Centres of Excellence.
3. Increasing the competency of the students from multi-disciplinary backgrounds.
4. Training the students in current technologies anticipated by the industry by the time to   time to keep pace with the industry.
5. Increasing employability through focus on individual technical potential capabilities (Programming, Modern tools usage etc.)
6. Enriching Classes - Identify the top 10 students and guide them in the areas where they have opportunity to improve (To improve percentage of FCDs, No. of ranks, Optimizing top students' performance).
7. Encouraging student towards core/multi-disciplinary projects (with financial assistance from the management).
8. Regular internship/Training for the faculty members to reflect expectations of the outside world including industries in their core research/subjects.
9. To enhance professional body activities to network and collaborate which increases exposure to outside world.
10. Increasing student internship at industry /institute during vacation period.
11. Research & Development need to be strengthened.
12. Encouraging the students and faculty members to take up certification courses through NPTEL and MOOC.
13. Enhancing the usage of ICT in the department.

1.   Name of the department: **Library & Information Centre**
2.   Year of Establishment: 2002
3.   Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated
       Masters; Integrated Ph.D., etc.) - Not applicable (NA)
4.   Names of Interdisciplinary courses and the departments/units involved- NA
5.   Annual/ semester/choice based credit system (programme wise) - NA
6.   Participation of the department in the courses offered by other departments - NA
7.   Courses in collaboration with other universities, industries, foreign institutions, etc. - NA
8.   Details of courses/programmes discontinued (if any) with reasons - NA
9.   Number of Teaching posts

	Sanctioned	Filled
Professors	Nil	Nil
Associate Professors	Nil	Nil
Asst. Professors	01 – Librarian	01

10.   Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt.
       /Ph.D. / M. Phil. etc.,)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. Students guided for the last 4 years
Gopalakrishna	B.Com., M.L.I.Sc.	Librarian	Ind. Inf. Sys & Ser.	13+ yrs in BMSIT&M 12+ yrs in Other Institutions	Nil

11.   List of senior visiting faculty- NA
12.   Percentage   of   lectures   delivered   and   practical   classes   handled(programme wise)
       by temporary faculty- NA
13.   Student -Teacher Ratio (programme wise) - NA
14.   Number of academic support staff (technical) and administrative staff;
       sanctioned and filled: Filled 09
           1. Mrs. Anitha K. S.   Asst. Librarian
           2. Mr. Divakara D. K.   Asst. Librarian
           3. Mrs. Ramya K   Library Asst.
           4. Mrs. Shailavathi R   Library Asst.

     5. Mrs. Usha G. C.   Library Asst.
     6. Mr. Sharath Sagar M S   Library Asst.
     7. Mrs. Varija A   Library Asst.
     8. Mr. Rajesh M   Library Asst.
     9. Mr. Gopi T   Peon

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG: Nil

16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received: Nil

17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received: NA

18. Research Centre /facility recognized by the University: NA

19. Publications:
*   a) Publication per faculty: Nil
*   Number of papers published in peer reviewed journals (national /international) by faculty and students: Nil
*   Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) : Nil
    *   Monographs - Nil
    *   Chapter in Books   - Nil
    *   Books Edited - Nil
    *   Books with ISBN/ISSN numbers with details of publishers - Nil
    *   Citation Index - Nil
    *   SNIP   - Nil
    *   SJR   - Nil
    *   Impact factor - Nil
    *   h-index   - Nil

20. Areas of consultancy and income generated : Nil

21. Faculty as members
in
    a)National committees b) International Committees c) Editorial Boards…. : NA

22. Student projects
    a)Percentage of students who have done in-house projects including inter departmental/programme : NA
    b)Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies: NA

23. Awards / Recognitions received by faculty and students: Nil

24. List of eminent academicians and scientists / visitors to the department: Nil

25. Seminars/ Conferences/Workshops organized & the source of funding a) National   2   Registration /Institution

    b) International: Nil
26. Student profile programme/course wise: NA
27. Diversity of Students: NA
28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.?: NA
29. Student progression: NA
30. Details of Infrastructural facilities

    a) Library – 1492 sq. mt.; 44,000+ Vols.; 8 e-Journal Packages; 2 e-Books, 1+9 Staff; DELNET & Brit. Council Lib. Membership, Reprographic facilities.

    b) Internet facilities for Staff & Students   : NA

    c) Class rooms with ICT facility : NA

    d) Laboratories: NA
31. Number of students receiving financial assistance from college, university, government or other agencies: NA
32. Details on student enrichment programmes (special lectures / workshops /seminar) with external experts: NA
33. Teaching methods adopted to improve student learning: NA
34. Participation in Institutional Social Responsibility (ISR) and Extension activities: Nil
35. SWOC analysis of the department and Future plans

    Strengths:
    - Spacious Computerized Library
    - Rich collection both in engineering & allied subjects.
    - NPTEL Videos & Web Courses
    - DELNET for Inter-Library loan & membership with British Council Library
    - Adequate number of computer systems including server
    - Qualified Staff

    Weakness:
    - Lack of experts in Linux Administration, Perl programming.
    - 50% of female staff.

    Opportunities:
    - Library Extension Activities – Best Readers Award.
    - Screening of Videos on Personality Development.

    Challenges:
    - Proliferation & information explosion.
    - Escalating costs of information sources & shrinking budgets.

- Piracy in book publishing.
- Unstable exchange rates.
- Honoring Copyrights.

1. Name of the Department: **Physical Education and Sports**
2. Year of Establishment: **2002**
3. Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated
   Ph.D., etc.): **NA**
4. Names of Interdisciplinary courses and the departments/units involved: **NA**
5. Annual/ semester/choice based credit system (programme wise): **NA**
6. Participation of the department in the courses offered by other departments: **Nil**

7. Courses in collaboration with other universities, industries, foreign institutions, etc: **Nil**

8. Details of courses/programmes discontinued (if any) with reasons: **Nil**

9. Number of teaching posts

	Sanctioned	Filled
Director of Physical Education	01	01
Assistant Director of Physical Education	01	01
Asst. to Director of Physical Education	---	01

(Add Guest faculty if any Department has such teachers) : YES, Utilized coaches during competitions.

10. Faculty profile with name, qualification, designation, specialization, (UG/ PG. /Ph.D. / M. Phil. etc.,)

Name	Qualification	Designation	Specialisation	No. of Years of Experience	No of PhD Students Guided for the last 4 Years
Mr. Mallikarjuna--gouda B Patil	BA, BPEd, MPEd, MPhil, NIS (2 yrs) Diploma in Coaching-Basketball	Director of Physical Education	Basketball, Fitness Trg.	17 Years	---
Mrs. Deepa. S	BCom, MCom, BPED, MPED	Asst. Physical Education Director	Basketball	04 Years	---
Mrs. Rani. M. S	BCA (deputed for higher studies)	Asst. Physical Education Director	---	03 years	---
Mr. Murali. K. G	BA	Grounds man	---	08 Years	---

11. List of senior visiting faculty: **NA**

12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty
   : **NIL**

13. Student -Teacher Ratio (programme wise): **NA**

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled: **01 Grounds Man**

15. Qualifications of teaching faculty with UG / PG / Ph.D/ MPhil/: **Please refer SL. No. 10.**

16. Number of faculty with on-going projects from a) National b) International funding agencies and
    grants received: **Nil**

17. Departmental projects funded by DST-FIST; UGC, DBT, ICSSR, etc. and total grants received:
    Nil

18. Research Centre /facility recognized by the University:

VTU recognised our sports facility to conduct various VTU inters collegiate tournaments, VTU team selection trials & VTU coaching camps.

19. Publications:
   i. Paper presentation on 'VISION 2030' in the international conference on physical education & sports science held at Manipal University, Manipal, Karnataka, India.
   ii. Paper presentation on "Advance technique of JUMP SHOT in Basketball" in the international conference on advent of technology and its implementation on sports and physical education.
   iii. Paper presentation on "Strategic plan to promote sports culture in professional colleges" in the National conference on innovations in physical education.

20. Areas of consultancy and income Generated:

Offered consultation in areas related to Basketball - Coaching, Officiating, Construction of Basketball court, ground preparation plans etc...

21. Faculty as members in

**a. National committees b) International Committees c) Editorial Boards…
: Mr. MALLIKARJUNAGOUDA .B. PATIL – DPE:**

   a. Statistical official in 2nd School Games Asian Basketball Championship organized by SGFI and was held at Talkatorea Stadium New Delhi in 1997.
   b. Karnataka University Basketball (M) team selection committee member and team coach cum manager for south zone inter-university Basketball (M) tournament 1990-2000 organized by VTU held at SIT, Tumkur.
   c. Karnataka State Mini (under 13 years) Basketball Girls team coach for Mini Nationals held at Kapoorthala, Punjab in 2001.

d. Member of committee to prepare the test norms for sports activity of Karnataka. Also member of the committee for selection of Boys and Girls Basketball teams from Departments and Hostel inmates.

e. Selection Committee member for VTU team selections in various games from 2004 onwards.

f. Nominated as coach / manager for various VTU teams to represent inter-university competetions.

g. Technical Official for Junior Asian Basketball Championship 2004, Conducted by KSBBA at Bengaluru.

h. Technical Official for All India South Zone & Inter Zone Inter University Table Tennis(M&W) Tournament Organised by VTU, AT Belgaum in 2010.

i. Membership- National association of Physical Education & Sports Science (NAPESS) & Affiliated to International Council of Sports Science & Physical Education (ICSSPE)

j. Member of VTU PEDs association.

k. Joint Secretary for 'Hubli Miracles'- Basketball Club Hubli.

l. Member of SPEFT-K.

m. Organizing committee member of "National conference on innovations in physical education (CIPE-2017)"

Mrs. DEEPA. S – Asst. PED:

a. Karnataka State Youth (under 16 years) Basketball Girls Team Manager 2015- (Third Place).

b. Kendriya Vidyalaya State basketball Girls team Coach 2015-(Winners)

c. Karnataka state PU Board Basketball Girls team coach 2017

22. Awards / Recognitions received by faculty and students:

a. AWARDS –

I. FACULTY:
I .Mr. MALLIKARJUNAGOUDA. B.PATIL – DPE :

a) As a **"PRESIDENT SCOUT"** in the Year 1987.

b) **"BEST PLAYER"** Award in Karnataka University Single Zone Inter Collegiate Basketball (M).Tournament held at BLDEACE, Bijapur in the year 1993.

c) **"BEST ALLROUNDER"** Award in the Marad Memorial, Karnataka University Inter Collegiate Basketball (M).Tournament held at Dharwad

d) **"BEST DEFENCE PLAYER"** Award in the Inter Rayalseeema Basketball (M).Tournament held at Ananthapur (AP)

e) **"BEST PLAYER"** Award in the all India Invitation Basketball (M).Tournament held at Gulbarga.

f) **"BEST PLAYER"** Award in the all India Invitation Inter Collegiate 'INPRO'Basketball (M).Tournament held at AEC, Bhatkal.

II. Mrs.DEEPA. S- Asst.PED:
i. **"BEST DEFENCIVE PLAYER"** Award in the Inter Collegiate Basketball (W) held at Mount Carmel College, Bengaluru.
ii**. "WINNERS"** Award in the State Level youth, Junior & Senior (1999 to 2009)
iii. **"WINNERS"** Award in the National Level youth, Junior & Senior (1999 to 2009)
III. Mrs. RANI.M.S- Asst to PED:
i. Ekalavya Award.
 STUDENTS:
   i. Ravindra Babu of Mechanical Engineering department has won the 'Gold Medal' in Junior Hockey Nationals in 2004 – 05.
   ii. Dilip M of Mechanical Engineering department, has won the 'Gold Medal' in VTU Wrestling Competetion – 2005-06.
   iii. Vishal Ajjampur of Electrical & Electronics Engineering department represented junior India Team in Water-Polo in 2011.
   iv. Tejaswini. K of Computer Science & Engineering deparement, represented VTU in All India Taekwondo Inter-University tournament and secured a 'Bronze Medal' in 2013-14 and a 'Gold Medal' in 2014-15 to become a 'National Taekwondo Medallist'.
   v. Kumar Avi Tandon VI / Sem won both GOLD & SILVER Medal twice in Pole Vault Athletics (M&W) Meet 2014 to 2016.
23. List of eminent academicians and scientists/ visitors to the department :
24. Seminars/ Conferences/Workshops organized & the source of funding
a) National: **Nil**   b) International: **Nil**
25. Student profile programme/course wise: **NA**
26. Diversity of Students: **NA**
27. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defence services, etc.? **Nil**

28. Student progression: Many students of the institution have been selected to represent VTU team in various sport events.

   a. The college Football and Cricket Teams won the VTU Bengaluru North Zone Tournaments.
   b. Kumar Avi Tanton (M) won both 'Gold & Silver Medal' twice in VTU athletic championship.
   c. Tejaswini. K won the 'Bronze & Gold Medal' in All India Taekwondo Inter-University tournament in the year 2013 -14, 2014-15 respectively.
   d. The institution's Volleyball (W) team were 'Runners' in VTU Bengaluru North Zone tournament.
   e. Badminton (W) & table tennis (M) both runners in VTU Bengaluru north zone tournament, 2016-17.

29. **Details of Infrastructural facilities:**
 Well Equipped Gymnasium: 10 station multi-gym, weight-lifting sets, Smith Machine, Olyimpic Bench etc.
   a. Indoor Games: Badminton, Table Tennis, Carrom, Chess & Boxing Punching Bag.
   b. Multi-purpose Ground for Cricket, Football & Hockey.
   c. Volleyball, Basketball, Throwball Court.
   d. Cricket Net Stand.

30. Number of students receiving financial assistance from college, university, government or other agencies: 7 Members (VTU & Management)

31. Details on student enrichment programmes (special lectures / workshops / seminar) with external experts:
One of our athletes has got permission to practice 'Pole Vault' in SAI South Centre Bengaluru.

32. Teaching methods adopted to improve student learning:
Scientific principles are followed to train the college teams to improve their sports performance.

33. Participation in Institutional Social Responsibility (ISR) and Extension activities: **NIL**

34. **SWOC analysis of the department and Future plans:**

   STRENGTHS:
   - Good infrastructure facilities
   - Good coaching (Qualified Coaches will be utilized to train our students)
   - Good incentives (fee concession, cash awards to achievers, refreshment, team uniforms, TA & DA).
   - Good training facilities (scientific training aids)

   WEAKNESS:
   - Sufficient time is not available for regular practice.

   OPPORTUNITIES:
   - Opportinities to practice in various level tournaments / competitions (inter - collegiate, District, State, Inter-University, open National & International).
   - Exposure from conducting inter college tournament in VTU level.
   - Develop discipline, fitness and leadership qualities.
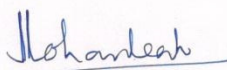
   CHALLENGES:
   · To represent National, state and University teams.
   · To balance both academics and sports.

   BEST PRACTICES IN SPORTS TRAINING
   i. Conducting fitness and skill tests for college team selections.
   ii. Organizing friendly matches to set the team combination and gain match experience.

FUTURE PLANS:
Planning to upgrade the sports facilities to start sports academy in the college premises for the possible events so that students should not waste their time in travelling to some far-away sports academy for practice purpose which affects their academics.

Date :

Ref :

Encl :

BMS

INSTITUTE OF TECHNOLOGY & MGMT.
Approved by AICTE, New Delhi &
Affiliated to Visvesvaraya Technological University,
Belagavi, Karnataka.

Post Box No. 6443
Doddaballapura Main Road,
Yelahanka, Bengaluru - 560 064.
INDIA

Declaration by the Head of the Institution

I certify that the data included in this Self -study Report (SSR) are true to the best of my knowledge.

This SSR is prepared by the institution after internal discussions, and no part thereof has been outsourced.

I am aware that the Peer team will validate the information provided in this SSR during the peer team visit.

Place: Bengaluru

Date: 22.12.2016

Signature of the Head of the Institution
PRINCIPAL
BMS Inst.of Tech.& Mgmt.
Doddaballapur Main Road
Avalahalli,Yelahanka, B'lore-64

Ph. : Office : + 91-80-28561576, Fax : + 91-80-28567186,
E-mail : principal@bmsit.in, principal_bmsit1@rediffmail.com Website : www.bmsit.in

BMS

INSTITUTE OF TECHNOLOGY & MGMT.
Approved by AICTE, New Delhi &
Affiliated to Visvesvaraya Technological University,
Belagavi, Karnataka.

Date :

Ref :

Encl :

Post Box No. 6443
Doddaballapura Main Road,
Yelahanka, Bengaluru - 560 064.
INDIA

Certificate of Compliance
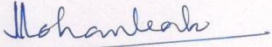
This is to certify that BMS Institute of Technology & Management, Yelahanka, Bengaluru – 560 064, Karnataka fulfils the following norms:

1. Stipulated by the affiliating university.
2. The affiliation and recognition is valid as on date.
3. In case the affiliation/recognition is withdrawn by the authority concerned, the same will be informed to NAAC immediately.

In case the affiliation/recognition is conditional, then the detailed enclosure with regard to compliance of conditions by the institution will be sent.

It is noted that NAAC's accreditation, if granted, shall stand cancelled automatically, once the institution loses its University affiliation or recognition by the regulatory council, as the case may be.

In case the undertaking submitted by the institution is found to be false then the accreditation given by NAAC is liable to be withdrawn. It is also agreeable that the undertaking given to NAAC will be displayed on the college website.

Place: Bengaluru

Date: 22.12.2016

Signature of the Head of the Institution
BMS Inst.of Tech.& Mgmt.
Doddaballapur Main Road
Avalahalli,Yelahanka, B'lore-64

Ph. : Office : + 91-80-28561576, Fax : + 91-80-28567186,
E-mail : principal@bmsit.in,   principal_bmsit1@rediffmail.com   Website : www.bmsit.in

List of Abbreviations

ABET	Accreditation Board for Engineering and Technology
A&A (A/A)	Assessment and Accreditation
AC	Academic Council
ACM	Associates of Computing Machinery
AICTE	All India Council for Technical Education
AIM	Atal Innovation Mission
AMC	Academic Monitoring Committee / Annual Maintenance Contract
AO	Administrative officer
AQAR	Annual Quality Assurance Report
ARC	Academic Research Centre
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AUTOSAR	Automotive Software Architecture
AVRC	Audio-Visual Research Centre
BCUD	Board of College and University Development
BMSCE	BMS College of Engineering
BMSET	BMS Education Trust
BMSIT&M	BMS Institute of Technology & Management
BoE	Board of Examiners
BOG	Board of Governors
BoS	Board of Studies
BPED	Bachelor of Physical Education
BSNL	Bharat Sanchar Nigam Limited
CAL	Computer Aided Learning
CAS	Centre for Advanced Studies
CAT	Common Aptitude Test
CBCS	Chose Based Credit System
CCTV	Closed-Circuit Television
CDC	College Development Council
CDROM	Compact Disc Read Only Memory
CDs	Compact Disc

CEC	Consortium for Educational Communication
CET	Common Entrance Test
CFL	Compact Fluorescent Lamp
CGPA	Cumulative Grade Point Average
CHE	Chemistry
CII	Confederation of Indian Industry
CIPRAC	Centre for Industry Partnership, Research & Consultancy
COE	Centre of Excellence
COHSSIP	Committee for Humanities and Social Science Improvement Program
COMEDK	Consortium of Medical, Engineering and Dental Colleges of Karnataka
COSIP	Committee for Science Improvement Program
COSIST	Committee for Strengthening of Infrastructure Improvement Program In Science and Technology
CPE	College With Potential for Excellence
CR	Criteria
CR-GPA(s)	Criterion- Wise Grade Point Average(S)
CRPF	Central Reserve Police force
CRT	Cathode Ray Tube
CSA	Centre for Social Action
CSI	Computer Society of India
CSIR	Council of Scientific and Industrial Research
DAE	Automotive Electronic Systems
DBMS	Database Management System
DBT	Direct Benefit Transfer
DDC	Dewey Decimal Classification
DELNET	Developing Library Network
DEP	Distance Education Programmes
DG	Diesel Generator
DRS	Departmental Research Support of UGC
DSA	Departmental Special Assistance of UGC
DSc	Doctor of Science
D-SPACE	Digital Library Software Used for Institutional Repository
DST	Department of Science and Technology
DST-SERB	Department of Science and Technology - Science and Engineering Research Board

DTP	Desk Top Publishing
DVDs	Digital Video Diskette
EBSCO	E-Journal Package for Architecture and Management
ECE	Electronics and Communication Engineering
ECU	Electronic Control Unit
EDC	Entrepreneurship Development Cell
EDUSAT	Education Satellite
EEE	Electrical and Electronics Engineering
EMRC	Educational Multimedia Research Centre
FDP	Faculty Development Programme
FIST	Fund for Improvement of Science & Technology Infrastructure
FTTH	Fibre To The Home
GATE	Graduate Aptitude Test In Engineering
GATS	General Agreement on Trade In Services
GCIC	German Chambers of Industry and Commerce
GMAT	Graduate Management Admission Test
GMC	Group Medical Coverage
GPA	Group Personal Accident
GRE	Graduate Record Examination
GTTC	Government Tool room and Training Centre
HEI	Higher Education Institution
IA	Internal Assessment
IAS	Indian Administrative Services
IBM	International Business Machines
ICHR	Indian Council of Historical Research
ICPR	Indian Council of Philosophical Research
ICSSR	Indian Council of Social Science Research
ICT	Information and Communication Technology
ICTIEE	International Conference On Transformation In Engineering Education
IEEE	Institute of Electrical and Electronics Engineers
IEQA	Institutional Eligibility for Quality Assessment
IETE	Institution of Electronics and Telecommunication Engineers
IIIT	Indian Institutes of Information Technology
IISc	Indian Institute of Science
IIT	Indian Institute of Technology

INFLIBNET	Information and Library Network
INQAAHE	International Network for Quality Assurance Agencies In Higher Education
INSA	Indian National Science Academy
IPR	Intellectual Property Rights
IQAC	Internal Quality Assurance Cell
IQAS	Internal Quality Assurance System
ISBN	International Standard Book Number
ISR	Institutional Social Responsibility
ISRO	Indian Space Research Organization
ISSN	International Standard Serial Number
ISTE	Indian Society for Technical Education
IT	Information Technology
IUC	Inter University Centre
KA	Key Aspect
KA-GP(s)	Key Aspect-Wise Grade Point(S)
KEA	Karnataka Examinations Authority
KSCST	Karnataka State Council for Science and Technology
LAN	Local Area Network
LCD	Liquid Crystal Display
LED	Light Emitting Diode
LIC	Local Inspection Committee
LoI	Letter of Intent
MbPS	Megabits Per Second
ME	Mechanical Engineering
MHRD	Ministry of Human Resource and Development
MIR	Minimum Institutional Requirements
MIS	Management Information System
MoC	Memorandum of Contract
MOOC	Massive Open Online Course
MoU	Memorandum of Understanding
MPED	Master of Physical Education
NAAC	National Assessment and Accreditation Council
NAL	National Aerospace Laboratories
NBA	National Board of Accreditation
NCTE	National Council for Teacher Education

NDRF	National Design and Research Foundation
NEF	National Education Foundation
NET	National Eligibility Test
NGO	Non-Government Organization
NIMHANS	National Institute of Mental Health and Neuroscience
NLP	Neuro-Linguistic Programming
NME-ICT	National Mission On Education Through Information and Communication Technology
NPE	National Policy Education
NPTEL	National Programme On Technology Enhanced Learning
NRI	Non-Resident Indian
NSS	National Service Scheme
OBC	Other Backward Caste
OBE	Outcome Based Education
OCW	Open Course Ware
OMR	Optical Mark Recognition
OOD	On official Duty
OPAC	Online Public Access Catalogue
ORSI	Operations Research Society of India
PG	Postgraduate
PHY	Physics
PIO	Person of Indian Origin
PLC	Programmable Logic Controller
PMKVY	Pradhan Mantri Kaushal Vikas Yojana
PO	Programme Outcomes
PSO	Programme Specific Outcomes
PTM	Parent Teacher Meeting
PTR	Peer Team Report
QAA	Quality Assurance Agency
QE	Qualifying Examination
RO	Reverse Osmosis
RTOS	Real-Time Operating System
SA	Self-Analysis
SAP	Special Assistance Program
SC/ST	Scheduled Caste / Scheduled Tribe
SCADA	Supervisory Control and Data Acquisition

SET/SLET	State Level Eligibility Test
SIT	Satellite Interactive Terminal
SJR	SCImago Journal Rank
SLQACC	State Level Quality Assurance Co-Ordination Committee
SMEs	Small and Medium-Sized Enterprises
SMS	Short Message Services
SNIP	Source Normalized Impact Per Paper
SNQ	Super Numerary Quota
SPRAC	Students Projects Review and Assessment Committee
SRU	Search and Retrieve Through URL
SSR	Self-Study Report
SWOC	Strengths, Weaknesses, Opportunities and Challenges
TCE	Telecommunication Engineering
TEI	Teacher Education Institution
TI	Texas Instruments
TOEFL	Test of English As A foreign Language
TPC	Training and Placement Cell
UG	Undergraduate
UGC	University Grants Commission
UNDP	United Nation Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nation Children Educational Foundation
UNO	United Nation Organization
UPS	Uninterrupted Power Supply
URL	Uniform Resource Locator
USIC	University Science Instrumentation Centre
VGST	Vision Group On Science and Technology
VTA	Valluri Technology Accelerators
VTU	Visvesvaraya Technological University
Wi-Fi	Wireless Fidelity
YRC	Youth Red Cross

APPENDICES

विश्वविद्यालय अनुदान आयोग
University Grants Commission
(मानव संसाधन विकास मंत्रालय, भारत सरकार)
Ministry of Human Resource Development,
Govt. of India)
बहादुर शाह ज़फर मार्ग, नई दिल्ली – 110 002
Bahadur Shah Zafar Marg, New Delhi – 110 002

UGC Website: www.ugc.ac.in
Ph. 011-23604414 (CPP-I/Colleges)

Speed Post

F. No. 8-160/2016 (CPP-I/C)

August, 2016

₹.7 AUG 2016

The Registrar,
Visvesvaraya Technological University
"Jnana Sangama", Machhe
Belgaum – 590 018
Karnataka
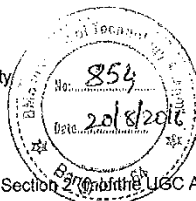
No: 854
Date 20/8/2016

Sub: - Recognition of College under Section 2 (f) of the UGC Act, 1956.

Sir,
    I am directed to refer to the letter no. BMSIT/2016-17/282 dated 11.05.2016 received from the Principal, BMS Institute of Technology & Management, Post Box No. 6443, Doddaballapura Main Road, Yelahanka, Bangalore – 560 064, Karnataka on the above subject and to say that it is noted that the College is un-aided/self-financing and temporarily affiliated to Visvesvaraya Technological University, Belgaum. I am further to say that the name of the following College has been included in the list of Colleges prepared under Section 2 (f) of the UGC Act, 1956 under the head 'Non-Government Colleges teaching upto Master's Degree':-

Name of the College	Year of Establishment	Remarks
BMS Institute of Technology & Management, Post Box No. 6443, Doddaballapura Main Road, Yelahanka, Bangalore – 560 064, Karnataka. AISHE CODE:- C-1336	2002	The college does not fulfill the requirement of permanent affiliation. Therefore, the college is not eligible to receive Central assistance under Section 12 (B) of the UGC Act, 1956.

    The Indemnity Bond and the other supporting documents submitted in respect of the above College have been accepted by the University Grants Commission.

Yours faithfully,

(Charan Dass)
Under Secretary

Copy to:-

1. The Principal, BMS Institute of Technology & Management, Post Box No. 6443, Doddaballapura Main Road, Yelahanka, Bangalore – 560 064, Karnataka.
2. The Secretary, Government of India, Ministry of Human Resource Development, Department of Higher Education, Shastri Bhavan, New Delhi – 110 001.
3. The Principal Secretary (Higher Education), Government of Karnataka, K.G.S. 6th Floor, M.S. Building, R. No. 645, Dr. B.R. Ambedkar Road, Bangalore – 560 001, (Karnataka).
4. The Deputy Secretary, UGC, South - Western Regional Office (SWRO), Prasana Kumar Block, Palace Road, Bangalore - 560 009, (Karnataka).
5. Section Officer (F.D.-III Section), U.G.C., New Delhi
6. Guard file.

(M.P. Singh)
Section Officer

Visvesvaraya Technological University, Belgaum

Name and address of the college	Status	Year of Estb.	Nature of Affiliation	Teaching Upto	Govt or Non Govt	Aided or Unaided
AMC Engineering College 18th K.M., Bannerghatta Road Bangalore – 560 083 Karnataka	2(f)	1999	Permanent	Master's	Non Government	Unaided
B.L.D.E.A.'S Dr. Bachana Pitamchar P.G. Halakatti College of Engg. & Technology Bijapur Dist. Bijapur - 586 103 Karnataka	2(f) and 12(B)	1980	Permanent	Bachelor's	Non Government	
B.M.S. College of Engineering P.B. No. 1908, Bangalore Bull Temple Road Dist. Bangalore - 560 019 Karnataka	2(f) and 12(B)	1946	Permanent	Bachelor's	Non Government	
B.V.B. College of Engg. And Technology Hubli Dist. Dharwad Karnataka	2(f) and 12(B)	1963	Permanent	Bachelor's	Non Government	
Bapuji Institute of Engineering & Technology Post Box No. 325 Davangere – 577 004 Karnataka	2(f)	1979	Permanent	Master's	Non Government	Unaided
Basaveshwar Engg. College Bagalkot Dist. Bagalkot - 587 102 Karnataka	2(f) and 12(B)	1963	Permanent	Bachelor's	Non Government	
Bheemanna Khandre Institute of Technology Bhalki – 585 328 District Bidar Karnataka	2(f)	1982	Temporary	Master's	Non Government	Unaided
BMS Institute of Technology & Management Post Box No. 6443 Doddaballapura Main Road Yelahanka Bangalore – 560 064 Karnataka	2(f)	2002	Temporary	Master's	Non Government	Unaided

As on 31.08.2016   CPP-I/C   Page 445 of 1308
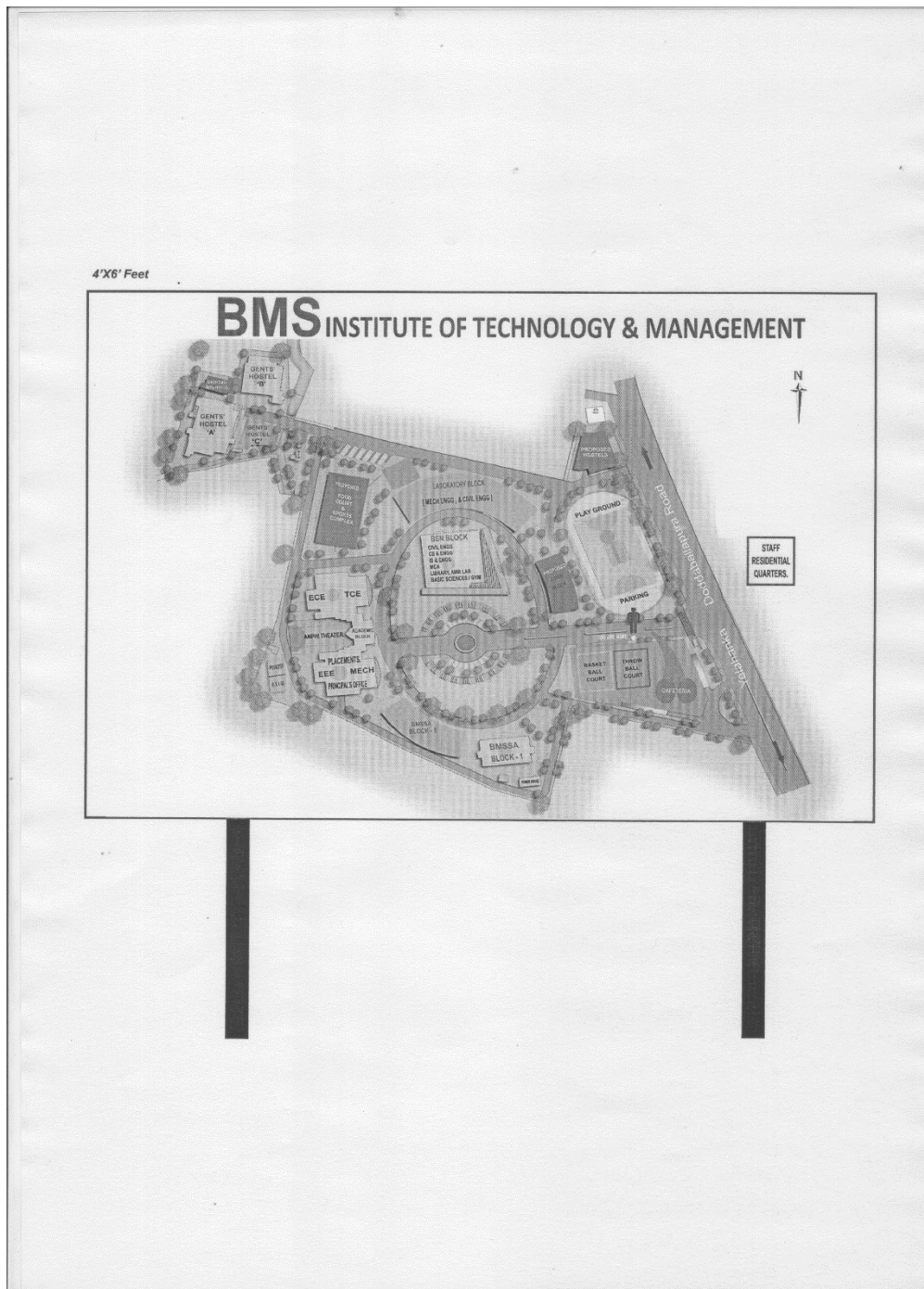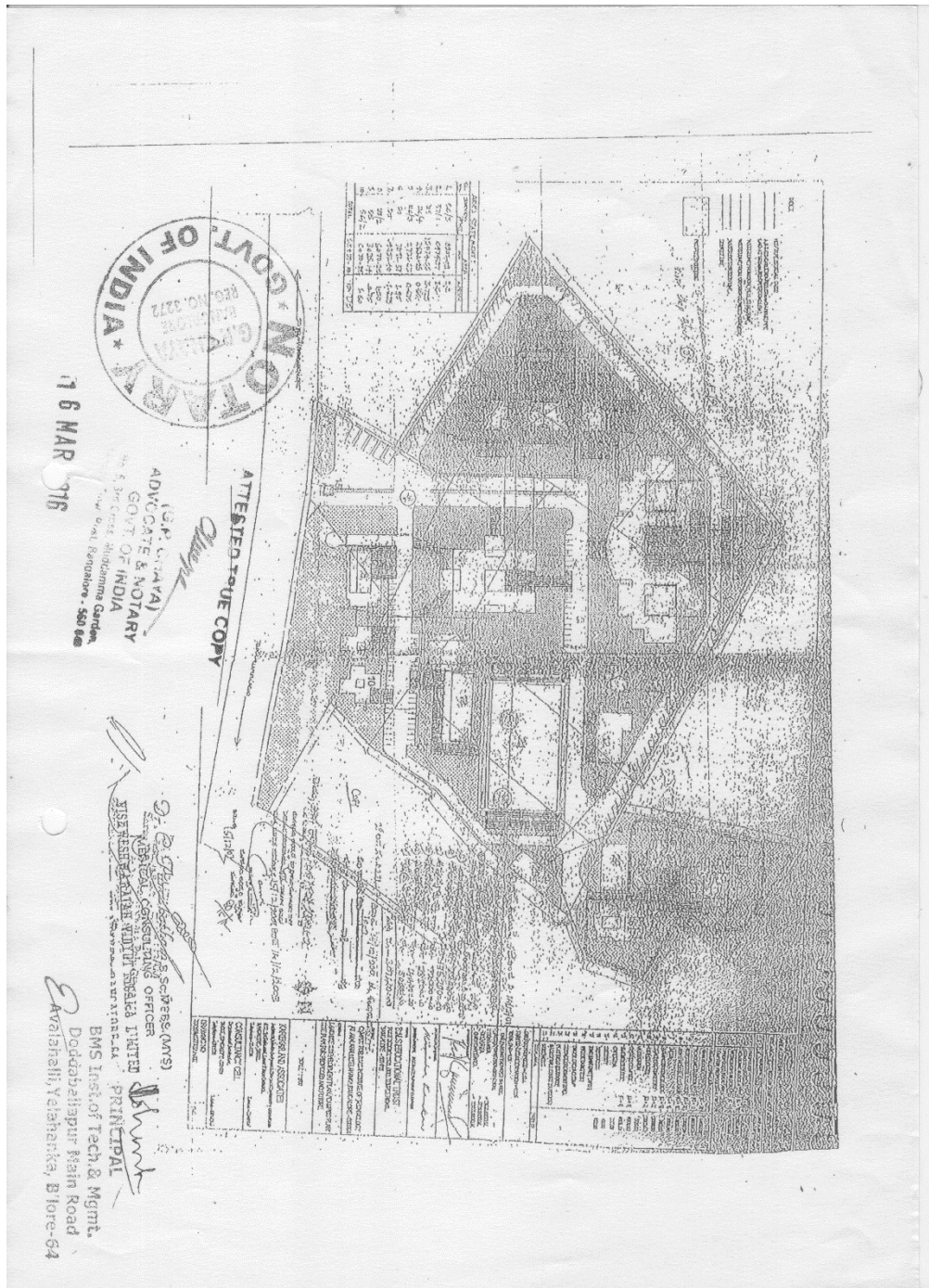
4'X6' Feet

BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

"Jnana Sangama", Belagavi - 590 018, Karnataka State, INDIA

Phone : (0831) 2405468
Fax : (0831) 2405467
Email : registrar@vtu.ac.in
website : www.vtu.ac.in

Dr. H. N. Jagannatha Reddy B.E., M.E., Ph.D.
Registrar

Ref: VTU/Aca/2016-2017/A-3/7773   Date: 16 JAN 2017

To,
The Principal,
BMS Institute of Technology & Management,
Bengaluru – 560 064

Sir,

Sub: Permanent Affiliation status for the academic year 2016-2017 – reg.
Ref: Your fax letter No. BMSIT&M/2016-17/2711, dt: 04.01.2017.
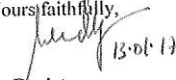
With reference to the above subject, you are hereby informed that, the following courses are recommended for Permanent Affiliation from the academic year 2016-2017 to 2021-2022 and the recommendations of VTU sent to State Government through our office letter dt. 21.10.2016.
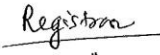
UG:
1. B.E. Computer Science & Engineering
2. B.E. Information Science & Engineering
3. B.E. Electrical & Electronics Engineering
4. B.E. Telecommunication Engineering

Further, after the receipt of the State Government order, the Notification for the Permanent Affiliation to the above mentioned courses will be issued.

Thanking you,

Yours faithfully,

Registrar

Visvesvaraya Technological University

"Jnana Sangama"
Belagavi - 590 018, Karnataka State

Dr. K.E. Prakash, B.E, M.E, Ph.D.
REGISTRAR

Phone : (0831) 2498100
Fax : (0831) 2405467

Ref: VTU/Gen(4)/2015-16/ 7969

Date : 8 DEC 2015

To,
The Principal,
BMS Institute of Technology,
Post Box No. 6443,
Doddaballapur Main Road,
Yelayanaka,
Benagluru – 560 064

No: 14619
Date: 10|12|15

Sir/Madam,

Sub: Permanent Affiliation status for the academic year 2015-16 – reg..

Ref: Your letter BMSIT/2015-16/6849 dt: 18-11-2015

With reference to the above, this is inform you that the following courses are recommended for Permanent Affiliation from the academic year 2015-16 to 2020-2021 and the recommendations of VTU were sent to State Government through our letter dated 5-10-2015.

1. B.E. Electronics & Communication Engineering
2. B.E. Mechanical Engineering
3. MCA

Further, after receipt of the State Government order, VTU notification for the Permanent Affiliation will be issued.

Yours faithfully,

Registrar

Reg
d
10|12|15

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ
"Jnana Sangama", Belagavi - 590 018, Karnataka State, INDIA

Phone : (0831) 2405468
Fax : (0831) 2405467
Email : registrar@vtu.ac.in
website : www.vtu.ac.in

ಡಾ. ಹೆಚ್.ಎನ್.ಜಗನ್ನಾಥ ರೆಡ್ಡಿ ಬ.ಇ.,ಎಂ.ಇ. ಪಿಹೆಚ್.ಡಿ. ೫036
ಕುಲಸಚಿವರು

ಖುಲ್ಲೇ ಖ ಸಂ:ವಿತಾವಿ/ಶೈಕ್ಷಣಿಕ/೨೦೧೬–೨೦೧೭/ಎ೨/

ದಿನಾಂಕ: 21 DEC 2016

ಅಧಿಸೂಚನೆ

ವಿಷಯ : 2016-2017ನೇ ಸಾಲಿಗಾಗಿ ಮುಂದುವರಿಕೆ: ವಿಸ್ತರಣಾ ಸಂಯೋಜನೆ
ಮಂಜೂರಾತಿ ಕುರಿತು.

ಉಲ್ಲೇಖ : ೧) ಅರ್ಜಿ ದಿನಾಂಕ: ೦೨–೦೨–೨೦೧೬
೨) ಅನುಸರಣಾ ವರದಿ ಸಮಿತಿಸಭೆ ದಿನಾಂಕ:೧೮–೧೧–೨೦೧೬ & ೧೯–೧೧–೨೦೧೬
೩) ಕುಲಪತಿಗಳ ಆದೇಶ ದಿನಾಂಕ : ೦೨–೦೨–೨೦೧೬.

ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯದ ಅಧಿನಿಯಮ ೧೯೯೪ರ ೪ರ (೯)ನೇ ಪ್ರಕರಣದಡಿ ತಮ್ಮ ಮಹಾವಿದ್ಯಾಲಯದಲ್ಲಿರುವ ಪ್ರಸ್ತುತ ಈ ಕೆಳಗೆ ಕಾಣಿಸಿದ ಕೋರ್ಸುಗಳನ್ನು ಬೋಧಿಸಲು 2016-2017ನೇ ಶೈಕ್ಷಣಿಕ ಸಾಲಿಗಾಗಿ ಸಂಯೋಜನಾ ಮಂಜೂರಾತಿ ಅಧಿಸೂಚನೆಯನ್ನು ಅನುಸರಣಾ ವರದಿ ಸಮಿತಿ ಸಭೆಯ ವಿಧಿಸಿರುವ ಷರತ್ತುಗಳಿಗೆ ಒಳಪಟ್ಟು ಹಾಗೂ ವಿತಾವಿ ತನಿಖಾ ಸಮಿತಿಯು ಶೈಕ್ಷಣಿಕ ವರ್ಷ 2017-2018ನೇ ಸಾಲಿಗೆ ಭೇಟಿ ನೀಡುವ ಪೂರ್ವದಲ್ಲಿ ಪೂರ್ಣಗೊಳಿಸುವ ನಿರ್ಬಂಧನೆಗೊಳಪಟ್ಟು ನೀಡಲಾಗಿದೆ.

ನಿರ್ಬಂಧನೆಗಳು:

1. Recruiting the faculties as per LIC observations- As informed vide this office letter VTU/Aca/2016-17/A-11/3330(a) dt.25-08-2016
2. ಎಐಸಿಟಿಯು ಕಡ್ಡಾಯಗೊಳಿಸಿರುವ ಎಲ್ಲಾ ತರಹದ ನಿಯತಕಾಲಿಕೆಗಳನ್ನು ಹೊಂದುವ ಷರತ್ತಿಗೊಳಪಟ್ಟು ನೀಡಲಾಗಿದೆ.

1	೧೦ದ 4ನೇ ವರ್ಷದ ಪದವಿ ಕೋರ್ಸಗಳು	ಅನು	ಕೋರ್ಸಗಳು
		1.	Civil Engineering

ಅಡಕ : 2016-17ನೇ ಸಾಲಿನ ಹೊಸ ವಿಷಯ / ವಿದ್ಯಾರ್ಥಿ ಪ್ರಮಾಣ ವ್ಯತ್ಯದ ಕುರಿತು ವಿ.ತಾ.ವಿಯ ಶಿಫಾರಸ್ಸಿನ ಪ್ರತಿಯನ್ನು ಲಗತ್ತಿಸಲಾಗಿದೆ.

• M.Tech. in Computer Science & Engg. & M.Tech. in Machine Design ಕೋರ್ಸಗಳು ೨೦೧೪-೧೫ನೇ ಸಾಲಿನಿಂದ ಪ್ರಾರಂಭವಾಗಿದ್ದು, ಆದರೆ, ರಾಜ್ಯ ಸರ್ಕಾರದಿಂದ ಇಲ್ಲಿಯವರೆಗೆ ಆದೇಶಬಂದಿರುವುದಿಲ್ಲ. ಆದ್ದರಿಂದ ಸರ್ಕಾರದಿಂದ ಆದೇಶ ಪಡೆದು ವಿ.ತಾ.ವಿಗೆ ಕಳುಹಿಸಿದ ನಂತರ ಮುಂದಿನ ಕ್ರಮಕೈಗೊಳ್ಳಲಾಗುವುದು.

ವಿಶೇಷ ಸೂಚನೆ : ಸದರಿ ವಿತಾವಿಯ ಶಿಫಾರಸ್ಸುಗಳು ಸರ್ಕಾರ / ಎಐಸಿಟಿಯಿಂದ ಅನುಮೋದಿತವಾದಲ್ಲಿ ಮಾತ್ರ ಅನ್ವಯಿಸುತ್ತವೆ. ಈ ವಿಷಯದಲ್ಲಿ ವಿತಾವಿಯ ಶಿಫಾರಸ್ಸುಗಳು ಯಾವುದೇ ಹಕ್ಕುಬಾಧ್ಯತೆಗೆ ಅನ್ವಯಿಸುವುದಿಲ್ಲವೆಂದೂ/ ಮಹಾವಿದ್ಯಾಲಯ ಯಾವುದೇ ಅಧಿಕಾರಿವರ್ಗಕ್ಕೆ ಈ ಶಿಫಾರಸ್ಸಿನ ಮೇಲೆ ಅರ್ಜಿ ಸಲ್ಲಿಸಲು ಬಾಧ್ಯತೆ ಇಲ್ಲವೆಂದು ತಿಳಿಸಲಾಗಿದೆ.

ಕುಲಸಚಿವರು 21.12.16

Registrar
24/12

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ
"Jnana Sangama", Belagavi - 590 018, Karnataka State, INDIA

Phone : (0831) 2405468
Fax : (0831) 2405467
Email : registrar@vtu.ac.in
website : www.vtu.ac.in

ಇವರಿಗೆ,
ಪ್ರಾಂಶುಪಾಲರು,
ಬಿ.ಎಂ.ಎಸ್. ಇನ್ಸ್ಟಿಟ್ಯೂಟ್ ಆಫ್ ಟೆಕ್ನಾಲಜಿ,
ಬೆಂಗಳೂರು–೫೬೦ ೦೦೬೪.

ಪ್ರತಿ <u>ಸಾದರಪೂರ್ವಕವಾಗಿ ಮಾಹಿತಿಗಾಗಿ ರವಾನಿಸಲಾಗಿದೆ:</u>
೧) ನಿರ್ದೇಶಕರು ತಾಂತ್ರಿಕ ಶಿಕ್ಷಣ ಇಲಾಖೆ, ಬೆಂಗಳೂರು – ೧.
೨) ಕುಲಸಚಿವರು (ಮೌಲ್ಯಮಾಪನ), ವಿ.ತಾ.ವಿ. ಬೆಳಗಾವಿ,
೩.) ವಿಶೇಷಾಧಿಕಾರಿಗಳು, ವಿ.ತಾ.ವಿ. ಪ್ರಾದೇಶಿಕ ಕಛೇರಿ, ಬೆಂಗಳೂರು.

ಪ್ರತಿ <u>ಮಾಹಿತಿಗಾಗಿ:</u> ಕುಲಪತಿಗಳ ಕಾರ್ಯದರ್ಶಿಗಳು, ವಿ.ತಾ.ವಿ, ಬೆಳಗಾವಿ.

ಕುಲಸಚಿವರು 21·12·16

BMS
INSTITUTE OF TECHNOLOGY & MGMT.
Approved by AICTE, New Delhi &
Affiliated to Visvesvaraya Technological University,
Belagavi, Karnataka.

Date : 7.02.2017

Ref : BMSIT & M/2016-17/

Encl :

Post Box No. 6443
Doddaballapura Main Road,
Yelahanka, Bengaluru - 560 064.
INDIA

Translated Letter

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ
"Jnana Sangama", Belagavi - 590 018, Karnataka State, INDIA

Phone : (0831) 2405408
Fax : (0831) 2405467
Email : registrar@vtu.ac.in
website : www.vtu.ac.in

Dr. H. N. Jagannatha Reddy B.E., M.E., Ph.D.
Registrar

Dr. H.N. Jagannatha Reddy B.E., M.E., Ph.D.
Registrar

Ref: VTU/Aca/2016-17/A-2/7036   Date: 21 Dec 2016

NOTICE

Subject: Affiliation Status Extension for 2016-17 – reg.

Ref: 1. Application Dated: 05/02/2016

2. Committee Notification Dated: 18/11/2016 & 19/11/2016

3. Vice-chancellor's Order Dated: 3/12/2016

Under the regulations of the Visvesvaraya Technological University, 1994, section 40 (9), your institution is permitted to teach the following courses for the academic year 2016-17 with the conditions as laid down by competent authority and completing all the requirements before the visit of Local Inquiry Committee during the academic year 2017-18.

Conditions:

1. Recruiting the faculties as per LIC observations – As informed vide this office letter VTU/Aca/2016-17/A-11/3330(a) dt. 25/08/2016.
2. This order is subject to all the conditions specified by AICTE

1	1 to 4 year degree courses	Sl. No.	Courses
		1.	Civil Engineering

Note: Copy of VTU recommendation for starting of new programme / variation in intake in 2016-17 is enclosed.

Pg - 1/2

Ph. : Office : + 91-80-28561576, Fax : + 91-80-28567186,
E-mail : principal@bmsit.in, principal_bmsit1@rediffmail.com Website : www.bmsit.in

Date :

Ref :

Encl :

BMS
INSTITUTE OF TECHNOLOGY & MGMT.
Approved by AICTE, New Delhi &
Affiliated to Visvesvaraya Technological University,
Belagavi, Karnataka.

Post Box No. 6443
Doddaballapura Main Road,
Yelahanka, Bengaluru - 560 064.
INDIA

- M.Tech in Computer Science & Engg. & M.Tech in Machine Design courses have started from academic year 2014-15, but directions from the State Government has not been received yet. Further action will be taken after obtaining the directions from the Govt. and submitting the same to VTU.

Special note: The present VTU recommendations are subject to approval of State Govt. / AICTE. It is to inform that the VTU recommendations will not be applicable to any of the rights in this matter and that the institute does not have the right to submit any application to any authority on the basis of this recommendation.

To,

Principal
B.M.S. Institute of Technology
Bengaluru- 560 064
CC to:

1. Director of technical Education, Bengaluru- 1
2. Registrar (Evaluation) V.T.U, Belagavi
3. Special Officer, V.T.U Regional Office, Bengaluru.

For information: Secretary to Vice-Chancellor, V.T.U Belagavi.

Registrar

Signature of the Head of the Institution

➤ PRINCIPAL ➤
BMS Inst.of Tech.& Mgmt.
Doddaballapur Main Road
Avalahalli,Yelahanka, B'lore-64

Pg - 2/2

Ph. : Office : + 91-80-28561576, Fax : + 91-80-28567186,
E-mail : principal@bmsit.in, principal_bmsit1@rediffmail.com Website : www.bmsit.in

Visvesvaraya Technological University
"*Jnana Sangama*" , *Belagavi-590 018, Karnataka State*

Dr. H.N. Jagannatha Reddy, B.E.,M.E.,Ph.D.   Phone : (0831) 2498100
Registrar   Fax   : (0831) 2405467

Ref: VTU/Aca/2016-17/A2/ 8932   Date: 1 5 FEB 2017
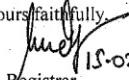
To,
The Principal,
BMS Institute of Technology,
Bengaluru.

Sir,

Sub: Reg. NBA & NAAC Peer team Visit on Accreditation during.
Ref: Your fax letter No. BMSIT&M/2016-17/2008, dtd: 14/02/2017.

With reference to the above subject, Please find enclosed herewith the affiliation status of all the programmes for the academic year 2016-2017 of your college in the prescribed format as per your request.

Yours faithfully,

Registrar

Encl: Above said

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi - 590 018, Karnataka State, INDIA

Phone:
Fax:
Email:
website:

Dr. H. N. Jagannatha Reddy
Registrar

Ref: VTU/Aca/2016-17/A1/ 8932   Date: 1 5 FEB 2017

TO WHOM IT MAY CONCERN

This is to certify that BMS Institute of Technology, Post Box No. 6443,Doddaballapur Main Road, Yelahanka, Bengaluru-560064 is affiliated to the Visvesvaraya Technological University, Belagavi Since 2002 and the following Courses/Subjects are taught is the said College as per approval.

Sl No.	Name of the Course(s) and Duration	Affiliation		Period of Validity for the year(s)
		Perm anent	Temp orary	
I)	Master of Computer Applications –(3 years)	Permanent		2015-2016 to 2020-2021
II)	M.Tech. Courses in * Computer Science & Engineering –(2 years) * Machine Design – (2 years)		Temporary	2016-17

Registrar
REGISTRAR
Visvesvaraya Technological University,
BELAGAVI - 590 018.

(1

अखिल भारतीय तकनीकी शिक्षा परिषद्
ALL INDIA COUNCIL FOR TECHNICAL EDUCATION
(भारत सरकार का एक सांविधिक संस्थान) (A STATUTORY BODY OF THE GOVERNMENT OF INDIA)

F.No.: 06\06\KTK\ENGG\2002\019

The Secretary, Education Department,
Govt. of Karnataka, M.S. Building
Bangalore-560001

Sub: AICTE approval to BMS EDUCATIONAL TRUST POST BOX NO.1908, BULL TEMPLE ROAD,
BANGALORE - 560 019.   for establishment of BMS INSTITUTE OF TECH. & MANAGEMENT
AVALABALTI, YELAHANKA, BANGALORE - 560 064.

Sir,
I am directed to state that based on the consultations with the concerned State Govt., the concerned affiliating body and on recommendations of the Regional Committee, the Expert Committee constituted by the Council and as per the provisions of AICTE Act and Regulations, the All India Council for Technical Education (AICTE), is pleased to accord approval to BMS EDUCATIONAL TRUST POST BOX NO.1908, BULL TEMPLE ROAD, BANGALORE - 560 019.   for establishment of BMS INSTITUTE OF TECH. & MANAGEMENT AVALABALTI, YELAHANKA, ANGALORE - 560 064.   for the academic year 2002-2003, for course(s) and intake as given below with specific condition that admission shall be made through the Central Counseling by the Government of KARNATAKA only. This proval is valid only for the academic years 2002-2003 and cannot be extended for the next year 2003-2004. In the event the establishment of the institutions having not been operationalised, this approval is not valid unless AICTE specifically revalidates.

COURSE(S)	INTAKE	LEVEL	DURATION (YEARS)	PERIOD OF APPROVAL
COMPUTER SCIENCE & ENGG.	60.	Degree	4	2002-03
ELECTRONICS & COMMUNICATION ENGG.	60.	Degree	4	2002-03
MECHANICAL ENGINEERING	60.	Degree	4	2002-03
Total	180			

This approval has been accorded subject to fulfillment of general conditions and as per the Norms and Standards of the AICTE, and also specific conditions .

The attention of the management is drawn to the fact that the approval given now is only for one academic session fore the end of which an expert committee shall visit to assess if the norms and standards as stipulated by AICTE are fulfilled, and only then will the continuation or otherwise shall be intimated.

The admission will be made in accordance with Regulations notified by the AICTE vide GSR 476(E) dated 20.05.1994 based on the Hon'ble Supreme Court Judgement dated 04.02.1993 with regard to WP(C) No. 607 of 1992 in the case of Unni Krishanan JP and other etc. V/s. State Government of Andhra Pradesh and others etc. and later judgements. No Management/Institute/Trust or Society shall announce admissions directly under any circumstances. Any action by the institute contrary to any provisions laid down by the Council and concerned State Government shall make it liable for actions.

Contd\2...

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इंदिरा गांधी खेल परिसर, इंद्रप्रस्थ एस्टेट, नई दिल्ली - 110 002
Indira Gandhi Sports Complex, I.P. Estate, New Delhi-110 -102

F.NO.06\06\KTK\ENGG\2002\019

- 2 -

In the event of infringement/contravention or non-compliance of the provisions of AICTE Regulations, Guidelines or the norms and standards as prescribed by the AICTE, the Council shall take further action to withdraw approval, and the liability arising out of such withdrawal of approval will be solely that of Management/Trust/Society and/or Institution.

The Council may inspect/ visit the Institution any time it may deem fit to verify the progress/ compliance.

You are requested to kindly monitor the progress made by this institution towards fulfilling the norms and standards prescribed by the Council and keep the concerned Regional Office and AICTE, New Delhi informed.

Yours faithfully,

(P.N. Razdan)
Advisor (UG)

Copy to :

1. The Regional Officer, AICTE, Southern West Regional Office, Health Centre Building, Bangalore University Campus, Bangalore.

He is requested to monitor compliance with the Norms and Standards and conditions stipulated by the Council and keep the concerned Regional Committee and the AICTE informed of the same.

He is also requested to ensure the receipt of notorised undertaking as specified by the Council from the institution/management concerned within the stipulate time frame.

2. The Registrar VISVESWARAIAH TECHNOLOGICAL UNIVERSITY.

He is requested to complete the process of affiliation for facilitating admissions.

3. The Principal BMS INSTITUTE OF TECH. & MANAGEMENT AVALABALTI, YELAHANKA, BANGALORE - 560 064.

(i) The institution should submit a notorised undertaking on non-judicial stamp paper as per format given in Annexure II to the concerned Regional Office, AICTE with a copy to the Headquarters, AICTE, New Delhi within one month from the date of receipt of this approval letter.

(ii) The institution/management should also submit a notorised undertaking from the Governing Body to the concerned Regional Office, AICTE with a copy to Headquarters, AICTE, New Delhi and to the concerned State Government, that all the infrastructural and instructional facilities shall be in place as per the norms of AICTE prior to the admissions of any student for the academic year 2001-2002.

4. Guard File

(P.N. Razdan)
Advisor (UG)

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All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

F.No. South-West/1-2816291599/2016/EOA   Date: 25-Apr-2016

To,

The Principal Secretary (Hr. & Tech Education)
Govt. of Karnataka, K. G.S., 6th Floor,
M.S. Building, R. N. 645,Dr. B. R. Ambedkar Road,
Bangalore-560001

Sub: Extension of approval for the academic year 2016-17

Ref: Application of the Institution for Extension of approval for the academic year 2016-17

Sir/Madam,

In terms of the provisions under the All India Council for Technical Education (Grant of Approvals for Technical Institutions)
Regulations 2012 notified by the Council vide notification number F-No.37-3/Legal/2012 dated 27/09/2012 and norms standards,
procedures and conditions prescribed by the Council from time to time, I am directed to convey the approval to

Regional Office	South-West	Application Id	1-2816291599
Name of the Institute	BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT	Permanent Id	1-4152591
Name of the Society/Trust	BMS EDUCATIONAL TRUST	Institute Address	POST BOX NO.6443, AVALAHALLI, DODDABALLAPURA MAIN ROAD, YELAHANKA, BANGALORE - 560064 , BANGALORE, BANGALORE URBAN, Karnataka, 560064
Institute Type	Unaided - Private	Society/Trust Address	POST BOX NO. 1908, BULL TEMPLE ROAD, BASAVANGUDI, BANGALORE-19,BASAVANGUDI,BANGALORE URBAN,Karnataka,560019

Opted for change from Women to Co-ed and Vice versa	No	Opted for change of name	No	Opted for change of site	No
Change from Women to Co-ed approved and Vice versa	Not Applicable	Change of name Approved	Not Applicable	Change of site Approved	Not Applicable

To conduct following courses with the intake indicated below for the academic year 2016-17

Application Id: 1-2816291599			Course	Full/Part Time	Affiliating Body	Intake 2015-16	Intake Approved for 2016-17	NRI Approval status	PIO / FN / Gulf quota Approval status	Foreign Collaboration/Twin.org Program Approval status
Program	Shift	Level								
ENGINEERIN	1st Shift	POST	COMPUTER SCIENCE AND	FULL TIME	Visvesvaraya Technological	18	18	NA	NA	NA

Application Number: 1-2816291599   Page 1 of 3
Note: This is a Computer generated Report.No signature is required.   Letter Printed On:28 April 2016

Printed By : AE3046875

G AND TECHNOLOGY		GRADUATE	ENGINEERING		University, Belagaum					
ENGINEERING AND TECHNOLOGY	1st Shift	POST GRADUATE	MACHINE DESIGN	FULL TIME	Visvesvaraya Technological University, Belagaum	18	18	NA	NA	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	CIVIL ENGINEERING	FULL TIME	Vesveswaraiah Technological University, Belgaum	60	60	NA	Yes	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	COMPUTER SCIENCE AND ENGINEERING	FULL TIME	Vesveswaraiah Technological University, Belgaum	90	90	NA	Yes	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	ELECTRICAL AND ELECTRONICS ENGINEERING	FULL TIME	Vesveswaraiah Technological University, Belgaum	60	60	NA	Yes	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	ELECTRONICS & COMMUNICATION ENGG	FULL TIME	Vesveswaraiah Technological University, Belgaum	90	90	NA	Yes	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	INFORMATION SCIENCE AND ENGINEERING	FULL TIME	Vesveswaraiah Technological University, Belgaum	60	60	NA	Yes	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	MECHANICAL ENGINEERING	FULL TIME	Vesveswaraiah Technological University, Belgaum	60	60	NA	Yes	NA
ENGINEERING AND TECHNOLOGY	1st Shift	UNDER GRADUATE	TELECOMMUNICATION ENGINEERING	FULL TIME	Vesveswaraiah Technological University, Belgaum	60	60	NA	Yes	NA
MCA	1st Shift	POST GRADUATE	MASTERS IN COMPUTER APPLICATIONS	FULL TIME	Vesveswaraiah Technological University, Belgaum	60	60	NA	Yes	NA

Application Number: 1-2816291599
Note: This is a Computer generated Report.No signature is required.
Printed By : AE3046875

Page 2 of 3
Letter Printed On:28 April 2016

All India Council for Technical Education
(A Statutory body under Ministry of HRD, Govt. of India)

7th Floor, Chandralok Building, Janpath, New Delhi- 110 001
PHONE: 23724151/52/53/54/55/56/57 FAX: 011-23724183 www.aicte-India.org

The above mentioned approval is subject to the condition that BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT shall follow and adhere to the Regulations, guidelines and directions issued by AICTE from time to time and the undertaking / affidavit given by the institution along with the application submitted by the institution on portal.

In case of any differences in content in this Computer generated Extension of Approval Letter, the content/information as approved by the Executive Council / General Council as available on the record of AICTE shall be final and binding.

Strict compliance of Anti-Ragging Regulation:- Approval is subject to strict compliance of provisions made in AICTE Regulation notified vide F. No. 37-3/Legal/AICTE/2009 dated July 1, 2009 for Prevention and Prohibition of Ragging in Technical Institutions. In case Institution fails to take adequate steps to Prevent Ragging or fails to act in accordance with AICTE Regulation or fails to punish perpetrators or incidents of Ragging, it will be liable to take any action as defined under clause 9(4) of the said Regulation.

Note: Validity of the course details may be verified at www.aicte-india.org

Dr. Avinash S Pant
Vice - Chairman, AICTE

Copy to:
1. The Regional Officer,
    All India Council for Technical Education
    Health Centre Building
    Bangalore University Campus
    Bangalore - 560 009, Karnataka

2. The Director Of Technical Education,
    Karnataka

3. The Registrar,
    Visvesvaraya Technological University, Belagaum

4. The Principal / Director,
    BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT
    POST BOX NO.6443, AVALAHALLI,
    DODDABALLAPURA MAIN ROAD,
    YELAHANKA, BANGALORE - 560064.,
    BANGALORE,BANGALORE URBAN,
    Karnataka,560064

5. The Secretary / Chairman,
    BMS EDUCATIONAL TRUST
    POST BOX NO. 1908, BULL TEMPLE ROAD, BASAVANGUDI, BANGALORE-19,
    BASAVANGUDI,BANGALORE URBAN,
    Karnataka,560019

6. Guard File(AICTE)

Application Number: 1-2816291599
Note: This is a Computer generated Report.No signature is required.
Printed By : AE3046875

Page 3 of 3
Letter Printed On:28 April 2016

BMS Institute of Technology and Management Mail - LOI Acceptance   https://mail.google.com/mail/u/0/?ui=2&ik=71ba778cc1&view=p...

BMSIT&M

Dr.Balachandra T.C <balachandratc@bmsit.in>

LOI Acceptance
3 messages

CAPU SOUTH <capusouth@gmail.com>   Thu, Feb 16, 2017 at 4:08 PM
To: Principal - <principal@bmsit.in>, balachandratc@bmsit.in

Dear Principal,

Greetings from NAAC

This has reference to your LOI bearing Track ID **KACOGN26961** dated 01/02/2017. As your LOI is accepted on 16/02/2017 you are advised to proceed further for submission of SSR. Acceptance of your SSR is subject to strict adherence to the timelines and procedural formalities of NAAC as given below:

· Must submit **five** hard copies and **one** soft copy (CD) of SSR along with the applicable A&A fee to NAAC within **two weeks from the date of acceptance of the LoI**. Kindly note that hard copies of SSR/SAR should be submitted by post/ courier only. SSR/SAR will not be accepted by hand in NAAC office.

· **There will be no relaxation in the time schedules for submission of hard copies of SSR**

· Before submitting the hard copies of SSR you are requested to ensure, that the uploaded SSR and the hard copies of the SSR are as per the prescribed manual/formats of NAAC and mandatorily includes the following:

1. Preface and covering letter from the Head of the Institution
2. Executive Summary – The SWOC analysis of the institution
3. Profile of the Institution
4. Criteria-wise analytical report
5. Inputs from each of the Department in the format provided.
6. Declaration by the Head of the Institution
7. Compliance certificate

In case, all the inputs as listed above are not included or the SSR is not in the prescribed format your SSR will be rejected without any further notice and your application will be closed. In case of rejection of your SSR, you have to follow the process of assessment all again by submitting the online LOI and paying the Registration fees.

· Quote your assigned track **ID KACOGN26961** in all your future online/offline submissions and correspondence with NAAC.

· "Only Government and Govt-Aided colleges covered under 2f and 12 B of UGC Act, 1956, and getting General development grants during XII Plan" are eligible for exemption of Accreditation fees subject to the production of valid documentary evidence (Please note that the name of the institution in the UGC records should be the same as that in LOI for claiming exemption of fees). All other colleges have to pay the Accreditation fees as per the revised NAAC fees structure.

·

Please note that, if at any point of time while processing your application, NAAC finds that the information provided by the institution in the LOI, IEQA, SSR or in the supporting documents is incorrect or misleading your application for assessment and accreditation will be rejected. NAAC will not be liable for the consequences arising out of such a rejection including refund of the fees or any other expenditure incurred by the institution in the process.

For any further clarification kindly log on to NAAC website www.naac.gov.in or contact the Help Desk Phone Numbers 080-23005192 / 080-23005193 and may also contact CAPU-NAAC through e-mail capusouth@gmail.com

BMS Institute of Technology and Management Mail - LOI Acceptance   https://mail.google.com/mail/u/0/?ui=2&ik=71ba778cc1&view=p...

Yours sincerely

For CAPU