



**B. M. S. INSTITUTE OF TECHNOLOGY AND
MANAGEMENT**
YELAHANKA, BANGALORE-064
Department of Computer Science & Engineering

COURSE FILE CONTENTS

1. Calendar of Events
2. Time Table
3. Syllabus
4. Lesson Plan
5. Course Outcomes
6. CO – PO /PSO Mapping
7. Gap Analysis, Student activity plan & Articulation
8. List of Students
9. Internal Test Papers
10. Scheme of Evaluation
11. CO – PO Analysis-Excel sheet
12. Articulation for unattained PO's
13. Three blue books, copy of assignment/Poster/PBL/reports etc



BMS Institute of Technology & Management
Avalahalli, Yelahanka, Bangalore - 560064
DEPT. OF COMPUTER SCIENCE AND ENGINEERING
Calendar of Events 2018-19 (Odd Semester)

Month	Week	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Working Days	Events	Holidays
August	1 st			1	2	3	4	5	4	1 st August Commencement of 3rd Semester, 5 th Semester B.Tech 1 st August Commencement of 1st, 3rd Semester MCA/M.Tech 2 nd - 7 th August Open Course for 3rd and 5th Semester	
	2 nd	6	7	8	9	10	11	12	6	6 th August Commencement of 7 th Semester B.Tech	
	3 rd	13	14	15	16	17	18	19	5	13 th August - 1 st September Induction Programme for 1st Sem B.Tech/M.Tech/MCA	15 th August Independence Day
	4 th	20	21	22	23	24	25	26	5	20 th August Project Orientation (Final Year) 25 th August Academic Monitoring -1 (Verification of Academic Documents)	22 nd August Bakrid
	5 th	27	28	29	30	31			6	29 th August Submission of Area of Domain of Final Year Projects	
September	5 th						1	2	6	1 st September Project Based Learning-1 (Batch Creation by Class Teacher)	
	6 th	3	4	5	6	7	8	9	5	4 th September Allocation of Project Guides for Final Year Project 4 th September Project Based Learning-1 (Guide Allocation)	
	7 th	10	11	12	13	14	15	16	5	10 th , 11 th & 12 th September IA -1 (3rd, 5 th , & 7 th Semester) 15 th September Academic Monitoring-2	13 th September Ganesh Chaturthi
	8 th	17	18	19	20	21	22	23	5	17 th September Project Based Learning - Synopsis Submission 20 th September - Entry of IA Marks in BIMS, 22 nd September Dispatch of Progress Report (Sending of SMS), 20 th September Pre Assessment of Final Year Project, 18 th and 19 th Tech Transform	21 st September Last Day Of Muhharam
	9 th	24	25	26	27	28	29	30	6	24 th September to 29 th September Remedial Classes for Weak Students 24 th September Academic Monitoring-3 25 th September Faculty Appraisal by Students -1	
October	10 th	1	2	3	4	5	6	7	5	3 rd October Submission Of Project Abstract 6 th October Parent Teacher Meeting Semaphore - 2018	2 nd October Gandhi Jayanti
	11 th	8	9	10	11	12	13	14	5	11 th , 12 th & 13 th October IA - 2 (3rd, 5 th , & 7 th Semester), IA -1 (1 st Semester) 10 th October Academic Monitoring - 4 (Verification of documents and counseling)	8 th October Mahalaya Amavasya
	12 th	15	16	17	18	19	20	21	4	17 th October Review Meeting by SPARC 20 th October Entry of IA-2 Marks in BIMS, Dispatch of Progress Report	18 th October Ayudha Pooja 19 th October Viavadashami
	13 th	22	23	24	25	26	27	28	5	24 th September to 29 th September Remedial Classes for Weak Students 25 th October Academic Monitoring - 5 (Announcement of status of Attendance)	24 th October Valmiki Jayanthi
	14 th	29	30	31					5	29 th October Open Day (College Level PBL Exhibition) 31 st October Final Evaluation of Final Year Projects	
November	14 th			1	2	3	4		5		1 st November Rajyotsava Day
	15 th	5	6	7	8	9	10	11	4	10 th November Academic Monitoring - 6 (Verification of documents and counseling)	
	16 th	12	13	14	15	16	17	18	6	12 th , 13 th & 14 th May IA - 3 (3rd, 5 th , & 7 th Semester), IA - 2 (First Semester)	
	17 th	19	20	21	22	23	24	25	5	19 th October Entry of IA-3 Marks in BIMS, 22 nd November Display of Final Attendance Dispatch of Progress Report (SMS)	21 st November Id-e-Milad
	18 th	26	27	28	29	30			5	30 th November Last Working Day for 3rd, 5th Sem B.Tech and 3rd Semester M.Tech	26 th November Kanakadas Javanthi
December	18 th						1	2			
	19 th	3	4	5	6	7	8	9	5	4 th December Last Working Day for 7 th Semester	
	20 th	10	11	12	13	14	15	16	6		
	21 st	17	18	19	20	21	22	23	6	19 th December Academic Monitoring - 7 (Verification of documents and counseling), 20 th , 21 st and 22 nd December IA-3 (First Semester)	
	22 nd	24	25	26	27	28	29	30	5		25 th December Christmas
23 rd	31	1	2	3	4	5	6	6			
24 th	7	8	9	10	11	12	13	6	7 th January Academic Monitoring - 8 (Verification of documents and counseling)		
25 th	14	15	16	17				3	Last Working Day for 1 st Semester	14 th January Sankranthi	
Total Number of Working Days									91 days for 3rd, 5th and 7th Semester B.Tech / 104 days for 1st Semester		
VTU Examination									Practical Examinations: 03.12.2018 to 14.12.2018 (III & V Sem B.E/B.Tech) 03.12.2018 to 07.12.2018 (III & V Sem MCA) 06.12.2018 to 14.12.2018 (VII Sem B.E/B.Tech) 21.01.2019 to 20.01.2019 (I Sem B.E/B.Tech)		
									Theory Examinations: 17.12.2018 to 18.01.2019 (III, V & VII Sem B.E/B.Tech) 10.12.2018 to 28.12.2018 (III & V Sem MCA) 05.12.2018 to 22.12.2018 (III Sem M.Tech) 04.02.2019 to 18.02.2019 (I Sem B.E/B. Tech)		

*Student Centric Activity - Technical Talk/Seminar/Workshop/Quiz/HANDS-ON Session on Blended Learning (OBE Related activities) to be organized by the respective departments.

**BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT**

YELAHANKA - BANGALORE - 64

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

INDIVIDUAL TIME TABLE FOR THE ACADEMIC YEAR 2018 - 19(ODD)

Name: Ms. Ambika G N	Subject: DMS, ADBMS, DMS	Semester: III-C, I M.TECH, III -Diploma	Class room: BSN-CR-304, BSN-TR-401, BSN TR-402	W.E.F:10-10-2018
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	I 8.30 - 9.30	II 9.30 - 10.30	10.30 - 10.50	III 10.50 - 11.50	IV 11.50 - 12.50	12.50 - 1.45	V 1.45 - 2.40	VI 2.40 - 3.35	VII 3.35 - 4.30	
MONDAY		ADBMS	TEA BREAK	CPL LAB- G2 (CAD LAB MECH)		LUNCH BREAK		DMS		
TUESDAY		DMS						DMS (III DIP)		
WEDNESDAY	DBMS LAB-A2 (8.30-11.30)				ADBMS					
THURSDAY	DMS			ADBMS			IOT/ADBMS LAB			
FRIDAY		DMS		DMS (III DIP)						
SATURDAY		ADBMS								

Total Workload(2T+3L)	18 Hours
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Padhee
Time table officer

[Signature]
HoD 12/10



	LESSON PLAN		Date: 1/09/2018
	Sub Code & Name: 18SCS13- Advance Database Management System		
	Semester : I	Program: M.Tech CSE	
	Academic Year: 2018-19		
	Lesson Plan Author(s) Ambika G.N		

Prerequisite: The student must be aware of basic concepts of database systems.

Course Objective:

- Define parallel and distributed databases and its applications.
- Show applications of Object Oriented database
- Explain basic concepts, principles of intelligent databases.
- Utilize the advanced topics of data warehousing and mining .
- Infer emerging and advanced data models
- Extend knowledge in research topics of databases.

Course Content

Module -1	Contact Hours
<p>Review of Relational Data Model and Relational Database Constraints: Relational model concepts; Relational model constraints and relational database schemas; Update operations, anomalies, dealing with constraint violations, Types and violations. Overview of Object-Oriented Concepts – Objects, Basic properties. Advantages, examples, Abstract data types, Encapsulation, class hierarchies, polymorphism, examples.</p> <p style="text-align: right;">RBT: L1, L2, L3</p>	10 Hours
<p>Module -2</p> <p>Object and Object-Relational Databases: Overview of OOP; Complex objects; Identity, structure etc. Object model of ODMG, Object definition Language ODL; Object Query Language OQL; Conceptual design of Object database. Overview of object relational features of SQL; Object-relational features of Oracle; Implementation and related issues for extended type systems; syntax and demo examples, The nested relational model. Overview of C++ language binding;</p> <p style="text-align: right;">RBT: L1, L2, L3</p>	10 Hours
<p>Module – 3</p> <p>Parallel and Distributed Databases: Architectures for parallel databases; Parallel query evaluation; Parallelizing individual operations; Parallel query optimizations; Introduction to distributed databases; Distributed DBMS architectures; Storing data in a Distributed DBMS; Distributed catalog management; Distributed Query processing; Updating distributed data; Distributed transactions; Distributed Concurrency control and Recovery.</p> <p style="text-align: right;">RBT: L1, L2, L3</p>	10 Hours
Module-4	

<p>Data Warehousing, Decision Support and Data Mining: Introduction to decision support; OLAP, multidimensional model; Window queries in SQL; Finding answers quickly; Implementation techniques for OLAP; Data Warehousing; Views and Decision support, View materialization, Maintaining materialized views. Introduction to Data Mining; Counting co-occurrences; Mining for rules; Tree-structured rules; ROC and CMC Curves; Clustering; Similarity search over sequences; Incremental mining and data streams; Additional data mining tasks.</p> <p style="text-align: right;">RBT: L1, L2, L3</p>	10 Hours
Module-5	
<p>Enhanced Data Models for Some Advanced Applications: Active database concepts and triggers; Temporal, Spatial, and Deductive Databases – Basic concepts. More Recent Applications: Mobile databases; Multimedia databases; Geographical Information Systems; Genome data management.</p> <p style="text-align: right;">RBT: L1, L2, L3</p>	10 Hours
<p>Question paper pattern: The question paper will have ten questions. There will be 2 questions from each module. Each question will have questions covering all the topics under a module. The students will have to answer 5 full questions, selecting one full question from each module.</p>	
<p>Text Books:</p> <ol style="list-style-type: none"> 1. Elmasri and Navathe: Fundamentals of Database Systems, Pearson Education, 2013. 2. Raghu Ramakrishnan and Johannes Gehrke: Database Management Systems, 3rd Edition, McGraw-Hill, 2013. 	
<p>Reference Books:</p> <ol style="list-style-type: none"> 1. Abraham Silberschatz, Henry F. Korth, S. Sudarshan: Database System Concepts, 6th Edition, McGraw Hill, 2010. 	

Course Schedule – Week wise

WEEK	DAYS	UNIT	MAIN TOPICS	SUB TOPICS	DELIVERY METHOD	BOOKS
1	1	1	Review of Relational Data Model and Relational Database Constraints	Relational model concepts	PPT	R1
	2			Relational model concepts	PPT	R1
	3			Relational model constraints and relational database schemas	PPT	R1
	4			Relational model constraints and relational database schemas	PPT	R1
2	1	1	Review of Relational Data Model and Relational Database Constraints	Update operations, anomalies, dealing with constraint violations	PPT	R1
	2			Types and violations	PPT	R1
	3			Object-Oriented Concepts	PPT	R1
	4			Objects, Basic properties	PPT	R1
3	1	1	Review of Relational Data Model and Relational Database Constraints	Abstract data types Encapsulation	PPT	R1
	2			Class hierarchies, polymorphism, examples	Flipped Mode	R1
	3	2	Object and Object-Relational Databases	Overview of OOP; Complex objects	PPT	R1
	4			Identity, structure	PPT	R1
4	1	2	Object and Object-Relational Databases	Object model of ODMG	Flipped Mode	R1
	2			Object definition Language ODL; Object Query Language OQL	PPT	R1
	3			Object definition Language ODL; Object Query Language OQL	PPT	R1
	4			Conceptual design of Object database, Overview of object relational features of SQL; Object-relational features of Oracle	PPT	R1
First Internal						
5	1	2	Object and Object-Relational Databases	Implementation and related issues for extended type systems	PPT	R1
	2			syntax and demo examples, The nested relational model. Overview of C++ language binding	PPT	R1

	3	3	Parallel and Distributed Databases	Architectures for parallel databases	PPT	R1
	4			Parallel query evaluation; Parallelizing individual operations	PPT	R1
6	1	3	Parallel and Distributed Databases	Parallel query evaluation; Parallelizing individual operations	Flipped Mode	R1
	2			Parallel query optimizations	PPT	R1
	3			Introduction to distributed databases; Distributed DBMS architectures	PPT	R1
	4			Introduction to distributed databases; Distributed DBMS architectures	PPT	R1
7	1	3	Parallel and Distributed Databases	Storing data in a Distributed DBMS; Distributed catalog management	PPT	R1
	2			Distributed Query processing; Updating distributed data; Distributed transactions; Distributed Concurrency control and Recovery	PPT	R1
	3	4	Data Warehousing, Decision Support and Data Mining	Introduction to decision support; OLAP, multidimensional model; Window queries in SQL	PPT	R1
	4			Finding answers quickly; Implementation techniques for OLAP	PPT	R1
8	1	4	Data Warehousing, Decision Support and Data Mining	Data Warehousing; Views and Decision	PPT	R1
	2			View materialization, Maintaining materialized views	PPT	R1
	3			Introduction to Data Mining; Counting co-occurrences	PPT	R1
	4			Mining for rules; Tree-structured rules; ROC and CMC	PPT	R1
Second Internal						
9	1	4	Data Warehousing, Decision Support and Data Mining	Clustering; Similarity search over sequences	PPT	R1
	2			Incremental mining and data streams; Additional data mining tasks	Flipped Mode	R1
	3	5			Flipped Mode	R1
	4				PPT	R1

10	1	5	Enhanced Data Models for Some Advanced Applications	Active database concepts	PPT	R1
	2			Active database concepts	PPT	R1
	3			triggers	PPT	R1
	4			triggers	PPT	R1
11	1	5	Enhanced Data Models for Some Advanced Applications	Temporal Databases	PPT	R1
	2			Spatial Databases	PPT	R1
	3			Deductive Databases	PPT	R1
	4			Deductive Databases	PPT	R1
12	1	5	Enhanced Data Models for Some Advanced Applications	Mobile databases	PPT	R1
	2			Mobile databases	PPT	R1
	3			Multimedia databases	PPT	R1
	4			Geographical Information Systems; Genome data management	PPT	R1
Third Internal						

Reference Books:

1. Elmasri and Navathe: Fundamentals of Database Systems, Pearson Education, 2013.
2. Raghu Ramakrishnan and Johannes Gehrke: Database Management Systems, 3rd Edition, McGraw-Hill, 2013.

Course Delivery Plan

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	I II	I II	I II	I II	I II	I II	I II	I II	I II	I II	I II	I II	I II	I II	I II	I II
Units	← 1 →		← 2 →		← 3 →			← 4 →		← 5 →						

Course Unitization for Internals and Semester End Examination

Part	Chapter		Teaching Hours	No. of Questions in		
				Internals I	Internals II	Compensatory Internals
Unit 1	1	Review of Relational Data Model and Relational Database Constraints	10	4+1*		
Unit 2	2	Object and Object-Relational Databases	10	2+1*	1	
Unit 3	3	Parallel and Distributed Databases	10		3+1*	
Unit 4	4	Data Warehousing, Decision Support and Data Mining	10		2+1*	2+1*
Unit 5	5	Enhanced Data Models for Some Advanced Applications	10			4+1*

*Represents Innovative and Case Study questions from the units

IA Scheme

Assessment	Weightage in Marks
3 IA test	50
Best two IA average	50 (20)
Assignment	20
Total	40

ADVANCES IN DATA BASE MANAGEMENT SYSTEMS

[As per Choice Based Credit System (CBCS) scheme]

(Effective from the academic year 2018 -2019)

SEMESTER – I

Subject Code	18SCE252 / 18SCS13 / 18SIT14 / 18SSE151	IA Marks	40
Number of Contact Hours/Week	04	Exam Marks	60
Total Number of Contact Hours	50	Exam Hours	03

CREDITS – 04

Course objectives: This course will enable students to

- Define parallel and distributed databases and its applications.
- Show applications of Object Oriented database
- Explain basic concepts, principles of intelligent databases.
- Utilize the advanced topics of data warehousing and mining .
- Infer emerging and advanced data models
- Extend knowledge in research topics of databases.

Module 1

Contact Hours

Review of Relational Data Model and Relational Database Constraints: Relational model concepts; Relational model constraints and relational database schemas; Update operations, anomalies, dealing with constraint violations, Types and violations. Overview of Object-Oriented Concepts – Objects, Basic properties. Advantages, examples, Abstract data types, Encapsulation, class hierarchies, polymorphism, examples.

10 Hours

RBT: L1, L2, L3

Module 2

Object and Object-Relational Databases: Overview of OOP; Complex objects; Identity, structure etc. Object model of ODMG, Object definition Language ODL; Object Query Language OQL; Conceptual design of Object database. Overview of object relational features of SQL; Object-relational features of Oracle; Implementation and related issues for extended type systems; syntax and demo examples, The nested relational model. Overview of C++ language binding;

10 Hours

RBT: L1, L2, L3

Module 3

Parallel and Distributed Databases: Architectures for parallel databases; Parallel query evaluation; Parallelizing individual operations; Parallel query optimizations; Introduction to distributed databases; Distributed DBMS architectures; Storing data in a Distributed DBMS; Distributed catalog management; Distributed Query processing; Updating distributed data; Distributed transactions; Distributed Concurrency control and Recovery.

10 Hours

RBT: L1, L2, L3

Module 4

Data Warehousing, Decision Support and Data Mining: Introduction to decision support; OLAP, multidimensional model; Window queries in SQL; Finding answers quickly; Implementation techniques for OLAP; Data Warehousing; Views and Decision support, View materialization, Maintaining materialized views. Introduction to Data Mining; Counting co-occurrences; Mining for rules; Tree-structured rules; ROC and CMC Curves; Clustering; Similarity search over sequences; Incremental mining and data streams; Additional data mining tasks.

10 Hours

RBT: L1, L2, L3

Module 5

<p>Enhanced Data Models for Some Advanced Applications: Active database concepts and triggers; Temporal, Spatial, and Deductive Databases – Basic concepts. More Recent Applications: Mobile databases; Multimedia databases; Geographical Information Systems; Genome data management.</p> <p style="text-align: right;">RBT: L1, L2, L3</p>	<p>10 Hours</p>
<p>Course Outcomes</p>	
<p>The students should be able to:</p> <ul style="list-style-type: none"> • Select the appropriate high performance database like parallel and distributed database • Infer and represent the real world data using object oriented database • Interpret rule set in the database to implement data warehousing of mining • Discover and design database for recent applications database for better interoperability 	
<p>Question paper pattern: The question paper will have ten questions. There will be 2 questions from each module. Each question will have questions covering all the topics under a module. The students will have to answer 5 full questions, selecting one full question from each module.</p>	
<p>Text Books:</p> <ol style="list-style-type: none"> 1. Elmasri and Navathe: Fundamentals of Database Systems, Pearson Education, 2013. 2. Raghu Ramakrishnan and Johannes Gehrke: Database Management Systems, 3rd Edition, McGraw-Hill, 2013. 	
<p>Reference Books:</p> <ol style="list-style-type: none"> 1. Abraham Silberschatz, Henry F. Korth, S. Sudarshan: Database System Concepts, 6th Edition, McGraw Hill, 2010. 	

BMS INSTITUTE OF TECHNOLOGY, YELAHANKA, BANGALORE-64

The list of students provisionally admitted to I year Computer Science (M.Tech) for the academic year 2018-19 :

Batch: 2018-19

SEM: I

PG COURSE : COMPUTER SCIENCE AND ENGINEERING

PROVISIONAL LIST

SL. NO	USN	NAME OF THE CANDIDATE
1.	1BY18SCS01	BHAGYASHREE A V
2.	1BY18SCS02	CHAITHRASHREE H S
3.	1BY18SCS03	DIVYASHREE S
4.	1BY18SCS04	FASIHA KAUSAR
5.	1BY18SCS05	KAVERI T HOMBAL
6.	1BY18SCS06	NAVEENKUMAR K V
7.	1BY18SCS07	P PRAJWALA
8.	1BY18SCS08	PURUSHOTHAM NAIDU V
9.	1BY18SCS09	RAJESHWARI N
10.	1BY18SCS10	RAMYA P L
11.	1BY18SCS11	RANJINI N
12.	1BY18SCS12	SNEHA S
13.	1BY18SCS13	SRIVATSA RAJU S
14.	1BY18SCS14	SUDHANSHU GUPTA
15.	1BY18SCS15	VIJAYALAKSHMI HOLIMATH


PRINCIPAL

BMS Inst.of Tech.& Mgmt.
Doddaballapur Main Road

Ayatanalli, Yelahanka, B'lore-64



BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT
YELAHANKA - BENGALURU - 64
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

FIRST INTERNAL ASSESSMENT TEST, NOVEMBER - 2018 (CBCS)

Subject: ADBMS
 Max. Marks : 30

Subject Code: 18SCS13
 Date: 20- 11 - 2018

Semester : I Mtech (CSE)
 Time: 9:30 AM to 11.00 AM

Answer FIVE full questions choosing 3 questions from Part A. Part B is compulsory.

Part A			
1	Describe the violation of constraints with respect to insert and Update operations.	6 Marks	(CO1) (K2)
OR			
2	a) Show the characteristics of Relations. b) Illustrate three main types of constraints in a relational model with suitable examples.	3 Marks 3 Marks	(CO2) (K3)
3	Write the Primary characteristics' of an OID. Interpret its advantages and disadvantages.	6 Marks	(CO2) (K3)
OR			
4	Write an example how OID concept is different from Primary key concept of Relational Model.	6 Marks	(CO2) (K3)
5	Show the mapping of EER schema into ODL schema with brief explanation.	6 Marks	(CO2) (K3)
OR			
6	Write the Comparison between Object relational features of SQL and Object relational features of Oracle	6 Marks	(CO3) (K3)
7	Use the types in ORDB and describe with an example how do you create User defined Types and a relational table to the types.	6 Marks	(CO4) (K3)
8	Identify the concepts used in Bank Schema and explain the nested relational model of the same.	6 Marks	(CO5) (K4)
Course Outcomes (COs)			
<i>Students will be able to</i>			
CO1	Describe parallel and distributed databases and its applications. (K2)		
CO2	Illustrate basic concepts, principles of intelligent databases. (K3)		
CO3	Use the advanced topics of data warehousing and mining. (K3)		
CO4	Discover knowledge in research topics of databases (K3)		
CO5	Analyze the given problem and solve using the concepts of ADBMS (K4)		
Bloom's Taxonomy			
K1- Remembering, K2 - Understanding, K3 - Applying, K4 - Analyzing, K5 - Evaluating, K6 - Creating			

End

Subject :- Advances in DBMS

21/11/2018

code :- 183CS13

Scheme :- first Internal Assessment

① The operations of relational model can be categorized into retrievals and updates. The relational Algebra operations, which can be used to specify retrievals. 3 marks

● ex :- insert < 'a', 'F', 'abc', null, '123456', '657', null, 4 > into employee.

→ The insertion violated the entity integrity constraint. So it is rejected. Similarly give the examples for Delete and update operations. 3 marks

② characteristics of Relations

① ordering the tuple in a relation

ex :- Entity Student has a name, SSN, age, dept; so on. 3 marks

② ordering value with in the tuple. & alternative defn of relation

③ values ex and nulls in the relation

- (b)
- (1) Inherent or Implicit
 - (2) Schema based or explicit 3 marks
 - (3) Semantic or application based constraint
with brief explanation

(3) Definition of Object Identifier } 2 marks
OID characteristics

- (1) immutable
 - (2) OID can be used only once
 - (3) Advantages of OID
 - (1) efficient
 - (2) fast
 - (3) Independent of content
 - (4) Invisible
- } 2 marks

Disadvantages — 2 marks

(4) (1) primary key is a part of the table row.
 → OID is meta information about the object. 6 marks

→ A reference to the information in the row moves around whenever you move the thing.

→ A reference to an OID has to be updated when you move the thing. with examples

5) An ODL has

ODMS (Object data Management systems)
ODMS meet some of the needs of
more complex applications

→ Specify : Structure of complex objects
operations that can be applied
to these objects. — 6 marks

→ Origins in OO programming languages
objects has two components

→ State (value) and behaviour (operations)

→ operation is defined in two parts
Signature (interface) and implementation
(method)

Collection types :

Set
Bag
List

}

Array
Dictionary

ODL

used to define object
types for a particular
database application.

6) Object Relational features of SQL

1) Type constructors

3 marks

2) Object Identifiers for referencing

3) Encapsulation

4) Inheritance

5) Object oriented Relational features of Oracle

1) Multivalued attributes

2x CREATE TYPE PH-TYPE AS OBJECT
(phno Number); 3 Marks for

2) Matching of attributes :- Examples

3) object view

4) Large object Storage

5) Index data tables

6) Partition table and Index

7) user defined data can be created
ORDB using row type and array
types

CREATE TYPE Rowtype - name AS [ROW]
(
); 6 Marks

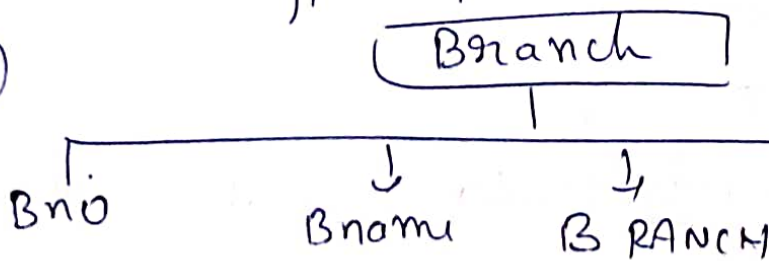
The keyword Row is optional

create TYPE ADDRESS - TYPE AS
(Street varchar (10);
City varchar (6);

create type ph-type as object
(phno, Number);

create type PH-LIST AS A TABLE OF ph-type

8)



write Bank
Schema with a
net diagram
ACCOUNT 6 marks



BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT
YELAHANKA - BENGALURU - 64
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

SECOND INTERNAL ASSESSMENT TEST, DECEMBER - 2018 (CBCS)

Subject: ADBMS
Max. Marks : 30

Subject Code: 18SCS13
Date: 20- 12 - 2018

Semester : I M.Tech (CSE)
Time: 9:30 AM to 11.00 AM

Answer FIVE full questions choosing 3 questions from Part A. Part B is compulsory.

Part A			
1	Write the issues that motivate the data distribution.	6 Marks	(CO2) (K3)
OR			
2	Show with an example how do you parallelize the individual operations?	6 Marks	(CO3) (k3)
3.	Illustrate Semi Joins and Bloom Joins in distributed database.	6 Marks	(CO3) (k3)
OR			
4	Sketch an Architecture proposed for building parallel DBMS	6 Marks	(CO2) (k3)
5	Write the features of multi-dimensional data model with an example.	6 Marks	(CO3) (k3)
OR			
6	Relate the classification rules for decision Trees and Illustrate with an example.	6 Marks	(CO3) (k3)
7	Write a Dataflow Network of Operators for executing the join operations parallel in distributed database	6 Marks	(CO3) (K3)
8	Differentiate between the data partitioning algorithms and also Point out which is the best data partitioning algorithm.	6 Marks	(CO5) (K4)
Course Outcomes (COs)			
<i>Students will be able to</i>			
CO1	Describe parallel and distributed databases and its applications. (K2)		
CO2	Illustrate basic concepts, principles of intelligent databases. (K3)		
CO3	Use the advanced topics of data warehousing and mining.(K3)		
CO4	Discover knowledge in research topics of databases(K3)		
CO5	Analyze the given problem and solve using the concepts of ADBMS (K4)		
Bloom's Taxonomy			
K1- Remembering, K2 - Understanding, K3 - Applying, K4 - Analyzing, K5 - Evaluating, K6 - Creating			

Shree,

Subject :- ADDBMS

Code :- 18SCS13

21/12/2018

Scheme :- Second IA

- ①
- (a) increased Availability
 - (b) Distributed access to data 3 marks
 - (c) Analysis of distributed data
 - (d) increased performance.
- (e) Semi Join and Bloom's JOIN
with Brief explanation of one and
the above — 3 marks

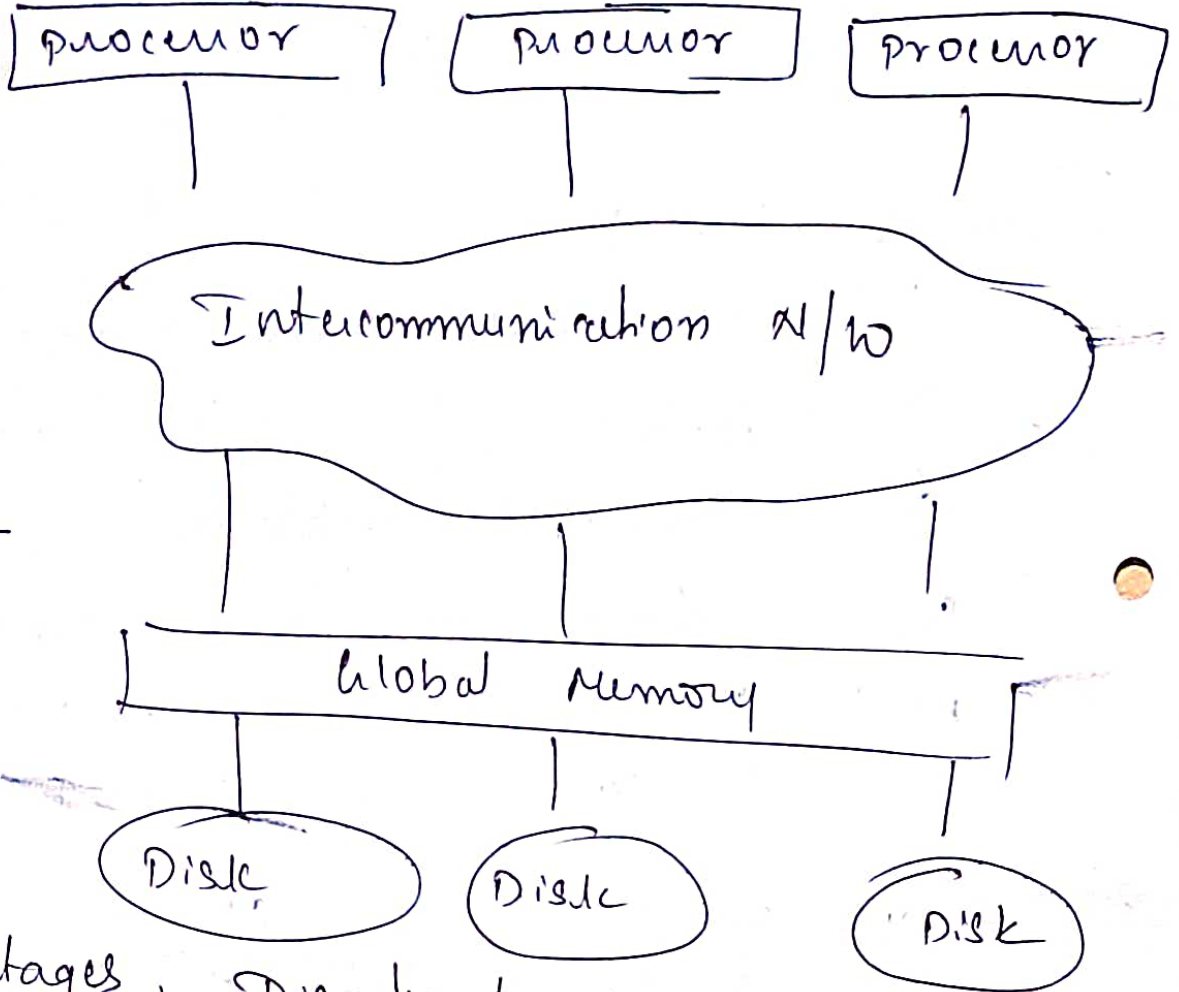
- ②
- Partitioning of data across multiple disks for parallel I/O
 - Individual relational operations (eg, sort, join, aggregation) can be executed in parallel
 - Queries are expressed in high level language (SQL) 3 marks
 - Different queries can be run in parallel with each other. 3 marks
with examples

- ③ Differentiate b/w Semi Join & Bloom Join — 6 marks

4

1) Shared memory s/m Dyn :- 3 marks

2)



3 marks

Advantages, Disadvantages

3) Features of Multidimensional Data

- Distributed data.
- Increased availability.
- Replication
- Increased performance.
- Data partitioning

with
Brief Explanation

listing 3 marks

explanation 3 marks

6 marks

⑥ Classification Rules

① IF part of the rule is called rule antecedent or precondition

② The THEN part of the rule is called rule consequent

③ The antecedent part the condition consists of one or more attribute tests and these tests are logically ANDed

→ The consequent part consists of 6 marks class prediction.

⑦ Diagram of Network of operators for parallel JOINS — 3 marks

and explanation — 3 marks

⑧ Data Partitioning Algorithms

① Round Robin

② Hashing

③ Range based Partitioning

} explanation
3 marks

Applications 3 marks



**BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT
YELAHANKA - BENGALURU - 64
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

THIRD INTERNAL ASSESSMENT TEST, JANUARY - 2019 (CBCS)

Subject: ADBMS
Max. Marks : 30

Subject Code: 18SCS13
Date: 22-01-2019

Semester : IMtech (CSE)
Time: 9:30 AM to 11.00 AM

Answer FIVE full questions choosing 3 questions from Part A. Part B is compulsory.

Part A			
1	Write the role of metadata repository in data ware house. Illustrate the functions of back end tools and utilities in data warehouse.	6 Marks	(CO2) (k3)
OR			
2	Produce the steps associated with Knowledge discovery process? Write the important measures for an association rule.	6 Marks	(CO3) (k3)
3	Illustrate a window query and produce the significance of it.	6 Marks	(CO4) (k3)
OR			
4	Use the phases of decision tree used to write the induction schema.	6 Marks	(CO3) (k3)
5	Write the role of metadata repository in data ware house. Illustrate the functions of back end tools and utilities in data warehouse.	6 Marks	(CO3) (k3)
OR			
6	Write a note on Multimedia Databases.	6 Marks	(CO3) (k3)
7	Analyze B+ tree index and spatial index; provide the comparison between B+ tree index and spatial index. When would you use a B+ tree index over a spatial index for point data? When would you use a spatial index over a B+ tree index for point data?	6 Marks	(CO5) (K4)
8	Infer the Super market database and select the Apriori algorithm to find the frequent item sets.	6 Marks	(CO5) (K4)
Course Outcomes (COs) <i>Students will be able to</i>			
CO1	Describe parallel and distributed databases and its applications. (K2)		
CO2	Illustrate basic concepts, principles of intelligent databases. (K3)		
CO3	Use the advanced topics of data warehousing and mining. (K3)		
CO4	Discover knowledge in research topics of databases (K3)		
CO5	Analyze the given problem and solve using the concepts of ADBMS (K4)		
Bloom's Taxonomy			
K1 - Remembering, K2 - Understanding, K3 - Applying, K4 - Analyzing, K5 - Evaluating, K6 - Creating			

End

Subject :- ADBMS

23/1/2019

1 Sem

code :- 18SCSI3

M.Tech

Scheme :- Third IA

② " issues that motivate the data distribution

① Data Selection

② Data Mining

③ Data creation

④ evaluation

Explanation

3 + 3

marks

① → Role of metadata Repository on data & ware house - 2 marks

→ Discussing the functions of back end tools and utilities in data ware house } 4 marks

③ Window Query :- defn - 2 marks

Window functions allow access to data in the records right before and after the current record.

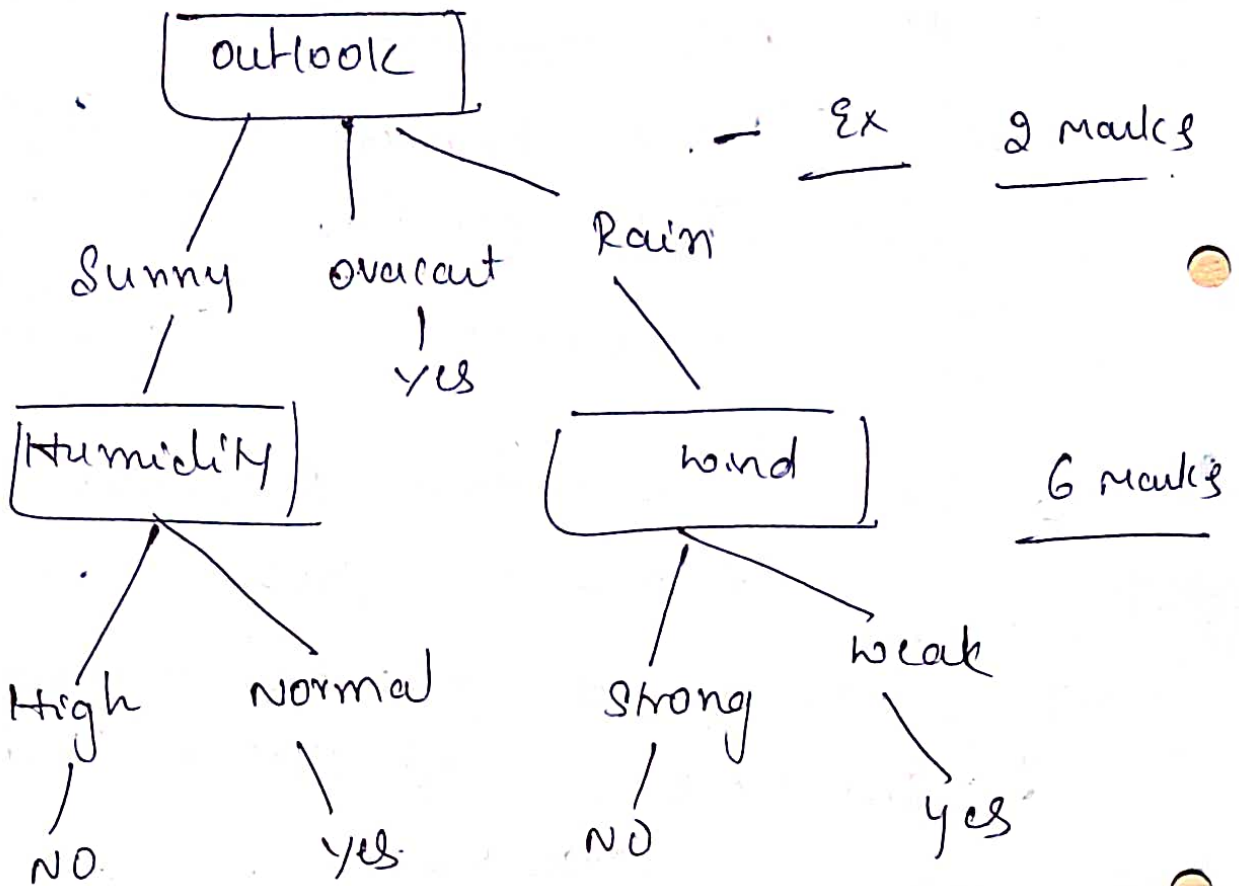
→ window function defines a frame or window of rows with a given length around the current row. 3 marks

Ex :- 3 marks

4

Decision tree :

is a flowchart like tree structure where each internal node denotes a test on a attribute each branch represents an outcome of the test
- 2 marks



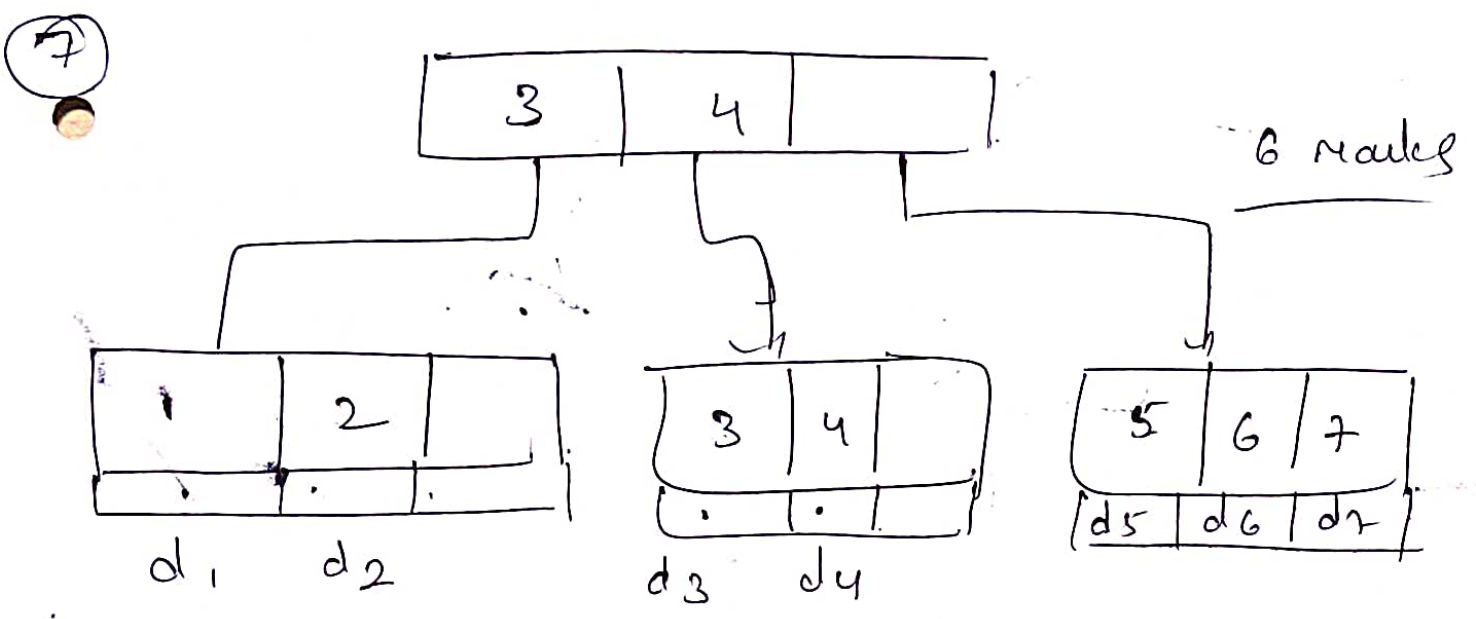
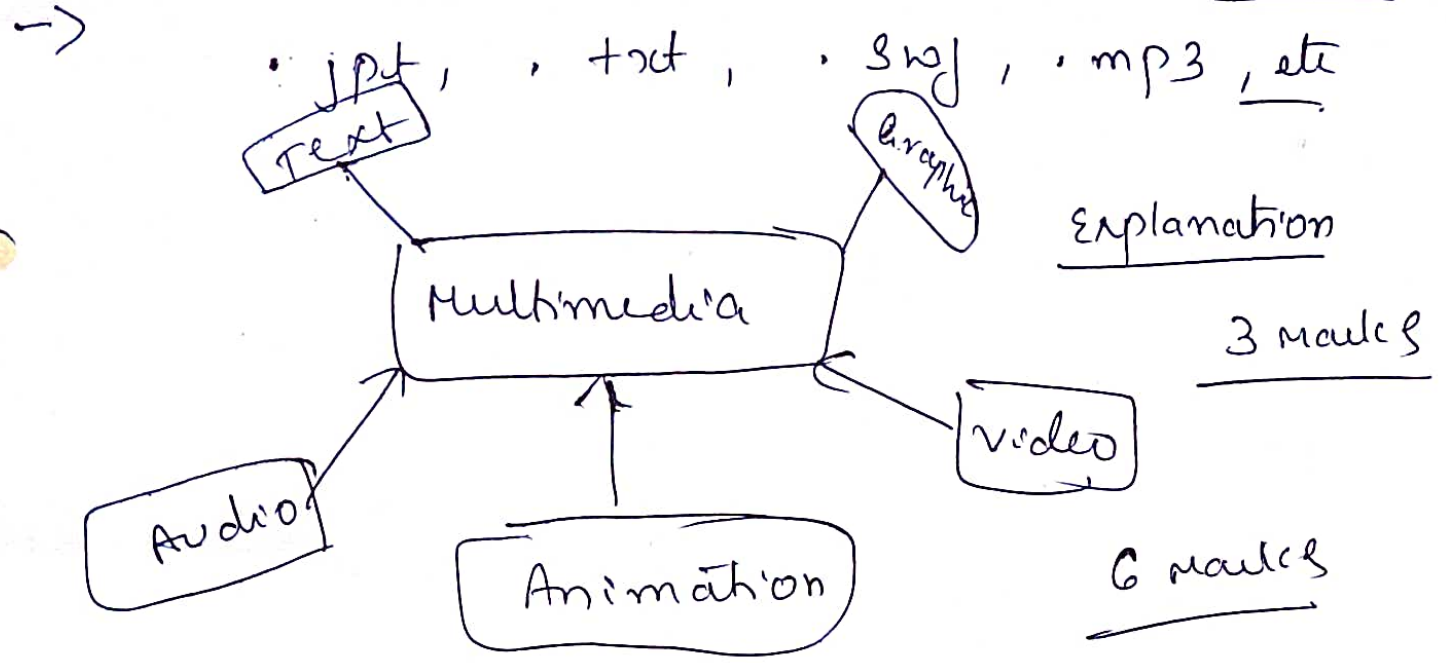
- 1 Building phase. — 2 marks
- 2 pruning phase

- 5 Definition of a Trigger — 2 marks
- Syntax — 2 marks
- Example and Significance — 2 marks

6) Multimedia Databases

→ Multimedia DB is a collection of related multimedia data.

→ MMDB stores data in the form of text, images, graphic animation, audio and video



1) Spatial index

2) Spatial state which represents the object type model on the earth.

8

Apriori Algorithm

→ Apriori Algorithm is a Algorithm which is used to find the frequent item set in the dataset.

Ex :- Market basket analysis of any data. or Market

Identify the customers who has bought the items frequently.
and How do you suggest the frequently bought items.

Note :- Market is given based on the Analysis of Data with Ex.



BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT

Avalahalli, Doddaballapur Main Road, Bengaluru – 560064
Department of Computer Science and Engineering

SUBJECT: ADVANCES IN DATABASE MANAGEMENT SYSTEM (18SCS13)

BATCH	2018	SEM	I
SUBJECT	ADVANCES IN DATABASE MANAGEMENT SYSTEM.		
FACULTY INCHARGE	AMBIKA G.N		

COURSE OUTCOMES	ATTAINMENT - I A	ATTAINMENT - VTU	OVERALL ATTAINMENT
CO1	3.00	0.00	1.20
CO2	3.00	0.00	1.20
CO3	3.00	0.00	1.20
CO4	3.00	0.00	1.20
CO5	3.00		1.20

CO-PO Mapping

CO'S	CO RESULT	PO1	PO2	PO3	PO4	PO5	PO6
CO1: Summarize parallel and distributed databases and its applications. (K2)	3						
CO2: Illustrate basic concepts, principles of intelligent databases. (K3)	3			1			
CO3: Use the advanced topics of data warehousing and mining. (K3)	3			2			
CO4: Discover knowledge in research topics of databases (K3)	3			2			
CO5: Analyze the given problem and solve using the concepts of ADBMS (K4)	3		2	3	3	2	3



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Department of Computer Science and Engineering

CO'S	CO RESULT	PO1	PO2	PO3	PO4	PO5	PO6
CO1: Summarize parallel and distributed databases and its applications. (K2)	1.20	0	0	0	0	0	0
CO2: Illustrate basic concepts, principles of intelligent databases. (K3)	1.20	0	0	0.4	0	0	0
CO3: Use the advanced topics of data warehousing and mining. (K3)	1.20	0	0	0.8	0	0	0
CO4: Discover knowledge in research topics of databases(K3)	1.20	0	0	0.8	0	0	0
CO5: Analyze the given problem and solve using the concepts of ADBMS (K4)	1.20	0	0.8	1.2	1.2	0.8	1.2
Final Attainment		0	0.8	0.8	1.2	0.8	1.2


Course Coordinator

**BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT,
AVALAHALLI, BENGALORE-64**

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

A Brief Report on Student Centric Activity

Name of the Activity/Topic	Seminar on advance concepts of Database Management system
Class/Semester	I Sem M.Tech
Resource Person/s	NIL
Relevance of the topic	-
Faculty member in-charge	Mrs. Ambika G.N
Date and Time	28/12/2018
Venue	M.Tech Class room
Description (Separate Annexure may be enclosed, if the description is exceeding)	Conducted seminar on Advance topics of Database. Students referred some IEEE papers for presentation.
No. of students attended	15
Learning outcome	The outcome of the Activity is students gained more knowledge on recent topics of DBMS.
POs achieved/mapped	PO2 and PO5
Total Expenditure in Rs.	NIL


Faculty in-charge



BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT
YELAHANKA, BENGALURU – 560064
Department of Computer Science and Engineering

Date: 28th Nov 2018

Course Name: Advances in Database Management System

Faculty: Ambika G.N

Type of Assignment: Seminar

Assignment list for ADBMS 18SCS13 2018-19

Sl. No.	USN	Student Name	Topic Name	BT	CO	PO1	PO2	PO3	PO4	PO5	PO6
1.	1BY18SCS01	BHAGYASHREE A.V	Design and implementation of virtual database management system based on XML	K4	CO5		√	√	√	√	√
2.	1BY18SCS02	CHAITRASHREE H.S	Database systems: Implementation of a distributed database management system to support logical sub networks	K4	CO5		√	√	√	√	√
3.	1BY18SCS03	DIVYA SHREE S	Workload Management in Database Management System: A Taxonomy (Extended Abstract)	K4	CO5		√	√	√	√	√
4.	1BY18SCS04	FASIHA KAUSAR	Advanced query model design concept to support multi-dimensional data analytics for relational database management systems	K4	CO5		√	√	√	√	√
5.	1BY18SCS05	KAVERI T HOMBAL	Web technologies integrated with advance database management system: A laboratory experience	K4	CO5		√	√	√	√	√



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6.	1BY18SCS06	NAVEEN KUMAR KV	MANDATE: MANaging Networks Using DAtabase TEchnology	K4	CO5		√	√	√	√	√
7.	1BY18SCS07	PRAJWALA P	A Survey on Educational Data Mining and Research Trends	K4	CO5		√	√	√	√	√
8.	1BY18SCS08	PURUSHOTHAM NAIDU V	Development of an Online Integrated Library Management Information System: Case Study	K4	CO5		√	√	√	√	√
9.	1BY18SCS09	RAJESWARI N	Applications Of Cloud Computing for Library Management System	K4	CO5		√	√	√	√	√
10.	1BY18SCS10	RAMYA P.L	Data Warehouse Applications	K4	CO5		√	√	√	√	√
11.	1BY18SCS11	RANJINI N	Developing Multithreaded Database Application Using Java Tools and Oracle Database Management System in Intranet Environment	K4	CO5		√	√	√	√	√
12.	1BY18SCS12	SNEHA S	Digital Library Billing Management System Design and Implementation	K4	CO5		√	√	√	√	√
13.	1BY18SCS13	SRIVATSA RAJU S	Architecture of a Database System	K4	CO5		√	√	√	√	√
14	1BY18SCS14	SUDHANSHU GUPTA	Digital Library Billing Management System Design and Implementation	K4	CO5		√	√	√	√	√



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Rubrics

Parameter	Maximum Marks	High	Medium	Low
Introduction		Good study of the existing System. Collects great deal of information.	Moderate study of the existing System. Collects some basic Information.	Poor/ Inadequate study of the existing System.
	5	4-5 pts	2-3 pts	
Scope and Objectives of the paper		All objectives of the proposed Work are well defined..	Incomplete justification to the Objectives proposed.	Objectives & Scope are not clearly specified
	5	4-5 pts	2-3 pts	0-1 pts
Presentation Skills		Contents of presentations are appropriate and well Delivered.	Contents of presentations are Appropriate but not well delivered.	Contents of presentations are not appropriate and not well delivered.
	5	4-5 pts	2-3 pts	0-1
Report Submission		Report is coherently organized and the logic is easy to follow. There is no spelling or grammatical errors and terminology is clearly defined. Writing is clear and concise and persuasive.	Report is generally well organized and most of the argument is easy to follow. There is only a few minor spelling or grammatical errors, or terms are not clearly defined. Writing is mostly clear but may lack conciseness.	Report is poorly organized and difficult to read – does not flow logically from one part to another. There are several spelling and/or grammatical errors; technical terms may not be defined or are poorly defined. Writing lacks clarity and conciseness.



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Grading policies:

- The last date for the submission of the assignment is on or before 30 Dec 2018 (hard deadline).
- A 15 slides ppt must be presented within 5 working days from the submission date.
- Grading will be based on punctual submission of the assignment.

Course Coordinator Signature:

