

Lecture Plan 1

FACULTY: Ms Priyanka Mahani

SEMESTER: - IV

CLASS: - ECS

SUBJECT: - : Database Management Systems **UNIT:** - A

COURSE CODE: - CSE-202-F

S.No.	Topic Overview of Database Management System, Advantages of DBMS over File Processing System.	Time Allotted:-
1.	<p>Introduction</p> <p>This subject deals with the study - how to organize data in a proper way and the various tools which handle the maintenance of the data in a convenient and an efficient manner.</p> <p>Why do we need DBMS that is it tells the various drawbacks of the File Processing System and how DBMS helps us to overcome these drawbacks.</p>	05
2	<p>Division of the Topic</p> <ul style="list-style-type: none"> • Definition Of DBMS • Goals • Few Examples • Data Redundancy And Inconsistency • Difficulty In Accessing Data • Data Isolation • Integrity Problems • Atomicity Problems • Concurrent Access Anomalies • Security Problems 	35
3.	<p>Conclusion</p> <p>Date base management system is having more advantages than file processing system</p>	05
4	<p>Question / Answer –</p> <ul style="list-style-type: none"> • Why do we need DBMS? • What do you mean by Data Redundancy and Inconsistency, Difficulty in Accessing Data, Data Isolation, Integrity Problems, Atomicity Problems, Concurrent Access Anomalies, and Security Problems? 	05

Assignment to be given: - What are the Advantages of Database Management System over File Processing System.

Reference Readings:-

- Database Management Systemss.....By Korth – III Edition

Lecture Plan 2**FACULTY: Ms Priyanka Mahani****SEMESTER: - IV****CLASS: - ECS****SUBJECT: - : Database Management Systems UNIT: - A****COURSE CODE: - CSE-202-F**

S. No.	Topic Various views of data, Introduction to Data Models, .Introduction to Database Languages.	Time Allotted:-
1.	<p>Introduction</p> <p>A major purpose of a Database system is to provide user with an abstract view of data. That is the system hides certain details of the data are stored and maintained. So this topic includes the study of various levels of DBMS.</p> <p>This Data Model is a collection of conceptual tools for describing data, data relationships, data semantics, and data consistency constraints. These models provide a way to describe data at the logical level.</p> <p>This Database Languages includes the introduction of the languages which provide the facilities to implement the tools provided by the database system.</p>	05
2	<p>Division of the Topic</p> <ul style="list-style-type: none"> • Data abstraction • Instances and Schemas • Relational Model • E-R Model • Object Oriented Model • Data Definition Language • Data Manipulation Language • 	35
3.	<p>Conclusion</p> <p>Various views of data base and different languages to implement data base tools</p>	05
4	<p>Question / Answer</p> <p>Different types of languages in database. Discuss Various views of data base</p>	05

Assignment to be given: - NIL**Reference Readings:-**

- Database Management Systemss.....By Korth – III Edition

Lecture Plan 3

FACULTY: - Ms Priyanka Mahani

SEMESTER: - IV

CLASS: - ECS

SUBJECT: - : Database Management Systems UNIT:-A

COURSE CODE: - CSE-202-F

S. No.	Topic	Time Allotted:-
	Responsibilities of DBA, Three Level Architecture of Database System.	
1.	Introduction Discussion about the roles of data base Administrator Architecture of database.	05
2	Division of the Topic <ul style="list-style-type: none"> • Schema Definition • Storage Structure and access method definition • Schema and physical organization • Granting of authorization • Routine Maintenance • User • Application program • Query Processor • Storage Manager • Disk Storage 	35
3.	Conclusion The DBA plays a major role in managing database successfully.	05
4	Question / Answer What is the DBMS Architecture	05

Assignment to be given: - Describe the architecture of the DBMS**Reference Readings:-**

- Database Management Systemss.....By Korth – III Edition

Lecture Plan 4

FACULTY: Ms Priyanka Mahani

SEMESTER: - IV

CLASS: - ECS

SUBJECT: - : Database Management Systems **UNIT:** - A

COURSE CODE: - CSE-202F

S. No.	Topic	Time Allotted:-
1.	Mapping Constraints, Keys, E-R diagram Introduction Study of mapping constraints that is how the entities are related with each other. And how do they effect the selection of a primary key. Study of various keys used in DBMS The various symbols used in an E-R diagram. And the study of various designs Issues.	05
2	Division of the Topic <ul style="list-style-type: none">• One to One Mapping• One to Many Mapping• Many to One Mapping• Many to Many Mapping• Primary Key• Candidate key• Super Key• Entity Sets• Attributes• Relationship Sets	30
3.	Conclusion The selection of primary key of the relationship table depends on the mapping cardinalities.	10
4	Question / Answer Describe various keys What are the issues in designing a DBMS	05

Assignment to be given: - NIL

Reference Readings:-

- Database Management Systemss.....By Korth – III Edition

Lecture Plan 5**FACULTY: Ms Priyanka Mahani****SEMESTER: - IV****CLASS: ECS****SUBJECT: - : Database Management Systems UNIT: - A****COURSE CODE: - CSE-202F**

S. No.	Topic	Time Allotted:-
	Banking Example of E-R Diagram	
1.	Introduction Applying the concepts of E-R diagram using Banking System	10
2	Division of the Topic <ul style="list-style-type: none"> • Strong entity set • Weak entity Set • Multi value Attributes 	30
3.	Conclusion Verified the concepts	05
4	Question / Answer Difference between strong and weak entity set	05

Assignment to be given: - NIL**Reference Readings:-**

- Database Management Systemss.....By Korth – III Edition
- Database Management Systems.....By C.J.Date
- Database Management Systemss.....By Bipin C. Desai

Lecture Plan 6

FACULTY: Ms Priyanka Mahani

SEMESTER: - IV

CLASS: ECS

SUBJECT: - : Database Management Systems **UNIT:** - A

COURSE CODE: - CSE-202F

S. No.	Topic	Time Allotted:-
1.	Introduction Applying the concepts of E-R diagram using Banking System	10
2	Division of the Topic <ul style="list-style-type: none">• .Specialization• Generalization• Aggregation	30
3.	Conclusion Verified the concepts	05
4	Question / Answer What are : <ul style="list-style-type: none">• Strong entity set• Weak entity Set• Multi value Attributes	05

Assignment to be given:-

Design the E-R diagram for hospital enterprise

Reference Readings:-

- Database Management Systemss.....By Korth – III Edition
- Database Management Systems.....By C.J.Date
- Database Management Systemss.....By Bipin C. Desai

Lecture Plan 7

FACULTY: Ms Priyanka Mahani

SEMESTER: - IV

CLASS: ECS

SUBJECT: - : Database Management Systems **UNIT:** - A

COURSE CODE: - CSE-202F

S. No.	Topic Reduction of E-R Diagram into Tables	Time Allotted:-
1.	Introduction This involves conversion of E-R Diagram in to Tables	05
2	Division of the Topic <ul style="list-style-type: none">• Strong entity set• Weak entity Set• Multi value Attributes• .Specialization• Generalization• Aggregation	35
3.	Conclusion Converted in to tables according to the concepts	05
4	Question / Answer How to construct tables using following constrains <ul style="list-style-type: none">• Strong entity set• Weak entity Set• Multi value Attributes• .Specialization• Generalization• Aggregation	05

Assignment to be given:-

Convert the E-R diagram for hospital enterprise in to tabular form

Reference Readings:-

- Database Management Systemss.....By Korth – III Edition
- Database Management Systemss.....By Bipin C. Desai

Lecture Plan 8**FACULTY: Ms Priyanka Mahani****SEMESTER: - IV****CLASS: ECS****SUBJECT: - : Database Management Systems UNIT: - B****COURSE CODE: - CSE-202F**

S. No.	Topic	Time Allotted:-
	Sequential Files, Indexed Sequential Files	
1.	Introduction These are various methods to store data in files in the sequential manner.	5
2	Division of the Topic <ul style="list-style-type: none"> • Indexing • Limit indexing • Grouping 	35
3.	Conclusion Indexed sequential files are better than sequential files as they take less time to access the data	05
4	Question / Answer Explain the following : <ul style="list-style-type: none"> • .Specialization • Generalization • Aggregation 	05

Assignment to be given: - NIL**Reference Readings:-**

- Database Management Systems.....By C.J.Date
- Database Management Systemss.....By Bipin C. Desai

Lecture Plan 9**FACULTY: Ms Priyanka Mahani****SEMESTER: - IV****CLASS: ECS****SUBJECT: - : Database Management Systems UNIT: - B****COURSE CODE: - CSE-202F**

S. No.	Topic	Time Allotted:-
1.	Introduction This includes the application of the hashing function while storing and accessing the data.	05
2	Division of the Topic <ul style="list-style-type: none"> • Hash Function • Static hashing • Dynamic hashing. 	30
3.	Conclusion Hashing results in faster access and manipulation of data	10
4	Question / Answer Discuss difference between : <ul style="list-style-type: none"> • Indexing • Limit indexing • Grouping 	05

Assignment to be given: - NIL**Reference Readings:-**

- Database Management Systems.....By C.J.Date
- Database Management Systemss.....By Bipin C. Desai

Lecture Plan 10**FACULTY: Ms Priyanka Mahani****SEMESTER: - IV****CLASS: ECS****SUBJECT: - : Database Management Systems UNIT: - B****COURSE CODE: - CSE-202F**

S. No.	Topic Direct Files, Hashing	Time Allotted:-
1.	Introduction This includes the application of the hashing function while storing and accessing the data .this also includes the manipulation of data.	10
2	Division of the Topic <ul style="list-style-type: none"> • Hash indices • Queries and updates • Comparison with other organization schemes. 	30
3.	Conclusion Hashing results in faster access and manipulation of data	05
4	Question / Answer What are the advantages of hashing over indexed sequential files	05

Assignment to be given: - NIL**Reference Readings:-**

- Database Management Systems.....By C.J.Date
- Database Management Systemss.....By Bipin C. Desai

Lecture Plan 11**FACULTY: Ms Priyanka Mahani****SEMESTER: - IV****CLASS: ECS****SUBJECT: - : Database Management Systems UNIT: - B****COURSE CODE: - CSE-202F**

S. No.	Topic	Time Allotted:-
1.	Introduction The B+ tree index structure is the most widely used. This takes the form of a balanced tree in which every path from the root of the tree to a leaf of the tree is of the same length	05
2	Division of the Topic <ul style="list-style-type: none"> • Structure of a B+tree • Update • Queries 	35
3.	Conclusion B+ tree structure imposes performance overhead on insertion and deletion and adds space overhead.	05
4	Question / Answer Explain the following <ul style="list-style-type: none"> • Hash indices • Queries and updates • Comparison with other organization schemes. 	05

Assignment to be given:-

Explain the deletion and insertion of data in a B+ tree using suitable examples.

Reference Readings:-

- Database Management Systems.....By C.J.Date

Lecture Plan 12

FACULTY: Ms Priyanka Mahani

SEMESTER: - IV

CLASS: ECS

SUBJECT: - : Database Management Systems **UNIT:** - B

COURSE CODE: - CSE-202F

S. No.	Topic	Time Allotted:-
1.	Introduction B-trees allow search-key values to appear only once. So they are able to store the index in fewer tree nodes	10
2	Division of the Topic <ul style="list-style-type: none">• Structure of a B tree• Update• Queries	30
3.	Conclusion Primary difference between B & B+ trees is that B tree eliminates the redundant storage of search key values.	05
4	Question / Answer Difference in Structure of a B+tree & B tree	05

Assignment to be given:-

Explain various file organization schemes with suitable examples

Reference Readings:-

- Database Management Systems.....By C.J.Date
- Database Management Systemss.....By Bipin C. Desai

Reference Readings:-

Lecture Plan 13**FACULTY: Ms Priyanka Mahani****SEMESTER: - IV****CLASS: ECS****SUBJECT: - : Database Management Systems UNIT: - B****COURSE CODE: - CSE-202F**

S. No.	Topic	Time Allotted:-
1.	Introduction Relational data base consists of the collection of the tables which has some relation Between each other.	05
2	Division of the Topic <ul style="list-style-type: none"> • Basic structure • Data base schema • Keys • Schema diagram 	35
3.	Conclusion Preparing a data base to implement various DBMS tools	05
4	Question / Answer Discussed various concepts of E-R diagram	05

Assignment to be given: - NIL**Reference Readings:-**

- Database Management Systems.....By C.J.Date
- Database Management Systemss.....By Bipin C. Desai

Lecture Plan 14**FACULTY: Ms Priyanka Mahani****SEMESTER: - IV****CLASS: ECS****SUBJECT: - : Database Management Systems UNIT: - B****COURSE CODE: - CSE-202F**

S. No.	Topic	Time Allotted:-
	Relational Algebra & Various Operations	
1.	Introduction This is a procedural query language which consists of set of operations that take relations as input and produce a new relation as result.	10
2	Division of the Topic <ul style="list-style-type: none"> • Select operation & examples • Project operations • Union • Set difference • Cartesian product • Rename 	30
3.	Conclusion Manipulated and accessed the data according to the above operations	05
4	Question / Answer What are the : <ul style="list-style-type: none"> • Basic structure • Data base schema • Keys • Schema diagram 	05

Assignment to be given: - NIL**Reference Readings:-**

- Database Management Systemss.....By Korth – III Edition

Lecture Plan 15

FACULTY: Ms Priyanka Mahani

SEMESTER: - IV

CLASS: ECS

SUBJECT: - : Database Management Systems **UNIT:** - B

COURSE CODE: - CSE-202F

S. No.	Topic	Time Allotted:-
1.	Introduction This is a procedural query language which consists of set of operations that take one or two relations as input and produce a new relation as result.	05
2	Division of the Topic <ul style="list-style-type: none">• Set intersection operation• Natural join• Division operator• Assignment operator• Aggregate functions	35
3.	Conclusion Manipulated and accessed the data according to the above operations	05
4	Question / Answer Apply the operations on the data in the table : <ul style="list-style-type: none">• Select operation & examples• Project operations• Union• Set difference• Cartesian product	05

Assignment to be given: - NIL

Reference Readings:-

- Database Management Systemss.....By Korth – III Edition
- Database Management Systems.....By C.J.Date
- Database Management Systemss.....By Bipin C. Desai

Lecture Plan 16**FACULTY: Ms Priyanka Mahani****SEMESTER: - IV****CLASS: ECS****SUBJECT: - : Database Management Systems UNIT: - B****COURSE CODE: - CSE-202F**

S. No.	Topic Tuple Relational Calculus	Time Allotted:-
1.	<p>Introduction</p> <p>This is non –procedural query language which describes the desired information without giving a specific procedure for obtaining that information .this can be expressed as</p> $\{t / P(t)\}$	10
2	<p>Division of the Topic</p> <ul style="list-style-type: none"> • Syntax of the query • And operator • Or Operator • Except operator 	30
3.	<p>Conclusion</p> <p>Manipulated and accessed the data by using the above mentioned operators</p>	05
4	<p>Question / Answer</p> <p>Apply the relational operators on the tables</p> <ul style="list-style-type: none"> • Set intersection operation • Natural join • Division operator • Assignment operator • Aggregate functions • 	05

Assignment to be given: NIL**Reference Readings:-**

- Database Management Systemss.....By Korth – III Edition
- Database Management Systemss.....By Bipin C. Desai

Lecture Plan 17

FACULTY: Ms Priyanka Mahani

SEMESTER: - IV

CLASS: ECS

SUBJECT: - : Database Management Systems **UNIT:** - B

COURSE CODE: - CSE-202F

S. No.	Topic	Time Allotted:-
1.	Introduction This is non –procedural query language which describes the desired information without giving a specific procedure for obtaining that information .this can be expressed as $\{t / P(t)\}$	10
2	Division of the Topic <ul style="list-style-type: none">• Examples• Formal Definition• Safety of Expressions	30
3.	Conclusion Manipulated and accessed the data by using the above mentioned operators	05
4	Question / Answer Apply the relational operators on the tables <ul style="list-style-type: none">• Syntax of the query• And operator• Or Operator• Except operator	05

Assignment to be given: - NIL

Reference Readings:-

- Database Management Systemss.....By Korth – III Edition
- Database Management Systemss.....By Bipin C. Desai

Lecture Plan 18

FACULTY: Ms Priyanka Mahani

SEMESTER: - IV

CLASS: ECS

SUBJECT: - : Database Management Systems **UNIT:** - B

COURSE CODE: - CSE-202F

S. No.	Topic	Time Allotted:-
1.	Tuple Relational Calculus Introduction This is non –procedural query language which describes the desired information without giving a specific procedure for obtaining that information .this can be expressed as $\{t / P(t)\}$	10
2	Division of the Topic <ul style="list-style-type: none">• Examples	30
3.	Conclusion Manipulated and accessed the data by using the above mentioned operators	05
4	Question / Answer Explain the following in context with tuple relational calculus <ul style="list-style-type: none">• Formal Definition• Safety of Expressions	05

Assignment to be given:

Consider the following database and Write the following expressions in relational algebra:

Employee (emp_name, street,city)
Works(emp_name, comp_nm,salary)
Company(comp_name,city)
Manages(emp_name,manager_name)

- Modify the database so that Jones now lives in Newtown
- Give all the managers in the database a 10% raise.
- Find the names of all the employees who lives in the same city as the company for which they work.
- Find the names of all the employees who live in the same city as do their managers.
- Find the names of all the employees who earn more than every employee of Small Bank Corporation

Reference Readings:-

- Database Management Systemss.....By Korth – III Edition
- Database Management Systems.....By C.J.Date

Lecture Plan 19**FACULTY: Ms Priyanka Mahani****SEMESTER: - IV****CLASS: ECS****SUBJECT: - : Database Management Systems UNIT: - B****COURSE CODE: - CSE-202F**

S. No.	Topic	Time Allotted:-
	Tuple Relational Calculus	
1.	Introduction This is non –procedural query language which describes the desired information without giving a specific procedure for obtaining that information .this can be expressed as $\{t / P(t) \}$	05
2	Division of the Topic Made the students to Practice the different operations in writing various queries.	35
3.	Conclusion Explained the queries.	05
4	Question / Answer Discussed various operators.	05

Assignment to be given:-

Consider the following database and Write the following expressions in tuple relational calculus algebra:

Employee (emp_name, street,city)
 Works(emp_name, comp_nm,salary)
 Company(comp_name,city)
 Manages(emp_name,manager_name)

- Modify the database so that Jones now lives in Newtown
- Give all the managers in the database a 10% raise.
- Find the names of all the employees who live in the same city as the company for which they work.
- Find the names of all the employees who live in the same city as do their managers.
- Find the names of all the employees who earn more than every employee of Small Bank Corporation

Reference Readings:-

- Database Management Systemss.....By Korth – III Edition
- Database Management Systems.....By C.J.Date

Lecture Plan 20

FACULTY: Ms Priyanka Mahani

SEMESTER: - IV

CLASS: ECS

SUBJECT: - : Database Management Systems **UNIT:** - C

COURSE CODE: - CSE-202F

S. No.	Topic	Time Allotted:-
1.	Introduction IBM developed the original version of SQL at its San Jose Research Laboratory. includes the DML & the basic DDL features of SQL	10
2	Division of the Topic <ul style="list-style-type: none">• Select clause• Where clause• From clause• Rename operator• String operation• Set operation –Union, intersection	30
3.	Conclusion The queries were implemented using the above operators and clauses.	05
4	Question / Answer Assignment given in the previous class was discussed	05

Assignment to be given: - NIL

Reference Readings:-

- Database Management Systemss.....By Korth – III Edition
- Database Management Systems.....By C.J.Date

Lecture Plan 21

FACULTY: Ms Priyanka Mahani

SEMESTER: - IV

CLASS: ECS

SUBJECT: - : Database Management Systems **UNIT:** - C

COURSE CODE: - CSE-202F

S. No.	Topic	Time Allotted:-
1.	Structured Query Language Introduction Discussed the various tools provided by the SQL.	05
2	Division of the Topic <ul style="list-style-type: none">• Except operation• Aggregate functions• Null values• Set Membership• Nested queries• Insertion / Deletion• Natural join	35
3.	Conclusion The queries were implemented using the above operators and clauses.	05
4	Question / Answer How do we use these : <ul style="list-style-type: none">• Select clause• Where clause• From clause• Rename operator	05

Assignment to be given:-

Consider the following database and Write the following expressions in SQL:

Employee (emp_name, street, city)

Works(emp_name, comp_nm, salary)

- Modify the database so that Jones now lives in Newtown
- Give all the managers in the database a 10% raise.

Reference Readings:-

- Database Management Systemss.....By Korth – III Edition
- Database Management Systemss.....By Bipin C. Desai

Lecture Plan 22

FACULTY: Ms Priyanka Mahani

SEMESTER: - IV

CLASS: ECS

SUBJECT: - : Database Management Systems **UNIT:** - C

COURSE CODE: - CSE-202F

S. No.	Topic	Time Allotted:-
1.	Introduction Integrity constraints ensure that changes made to the data base by authorized users do not result in the loss of data consistency. Different types of constraints. Functional dependency is a type of constraint that is a generalization of the notion of the key. They allow us to express facts about the enterprise that we are modeling with our data base	05
2	Division of the Topic <ul style="list-style-type: none">• Domain Constraints• Referential Integrity• Assertions• Triggers	35
3.	Conclusion We can specify the specification that we want our data base to satisfy.	05
4	Question / Answer Discuss these topics <ul style="list-style-type: none">• Set Membership• Nested queries• Insertion / Deletion	05

Assignment to be given:-

Explain when and how you use the following with suitable examples:-

- Referential Integrity
- Assertions
- Triggers

Reference Readings:-

- Database Management Systems.....By Korth – III Edition
- Database Management Systems.....By C.J.Date
- Database Management Systems.....By Bipin C. Desai

Lecture Plan 23

FACULTY: Ms Priyanka Mahani

SEMESTER: - IV

CLASS: ECS

SUBJECT: - : Database Management Systems **UNIT:** - C

COURSE CODE: - CSE-202F

S. No.	Topic	Time Allotted:-
1.	Introduction The goal of relational data base design is to generate a set of relational schemas that allows us to store information without unnecessary redundancy, yet also allows information easily	05
2	Division of the Topic <ul style="list-style-type: none">• First normal form• Second normal form• Third normal form• Fourth normal form• Boyce –Codd normal form	30
3.	Conclusion Data could be stored satisfying all the constrains.	10
4	Question / Answer How and when do we use the following <ul style="list-style-type: none">• Domain Constrains• Referential Integrity• Assertions• Triggers	05

Assignment to be given:-NIL

Reference Readings:-

- Database Management Systems.....By Korth – III Edition
- Database Management Systems.....By C.J.Date

Lecture Plan 24

FACULTY: Ms Priyanka Mahani

SEMESTER: - IV

CLASS: ECS

SUBJECT: - : Database Management Systems **UNIT:** - D

COURSE CODE: - CSE-202F

S. No.	Topic	Time Allotted:-
1.	Introduction Distributed Data base system consists of loosely coupled sides that share no physical Components and the parallel processors are tightly coupled and constitute a single Base system	10
2	Division of the Topic <ul style="list-style-type: none">• Homogeneous and heterogeneous data bases• Data fragmentation• Data replication• I/O parallelism• Partitioning techniques	30
3.	Conclusion The main difference between centralized and distributed data base system is that in the former the data reside in one single location ,where as in the latter the data reside in several locations	05
4	Question / Answer Discuss different types of Normalization	05

Assignment to be given:-

Discuss with suitable examples the different types of Normalization

Reference Readings:-

- Database Management Systemss.....By Korth – III Edition
- Database Management Systems.....By C.J.Date
- Database Management Systemss.....By Bipin C. Desai

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FACULTY: Ms Priyanka Mahani

SEMESTER: - IV

CLASS: ECS

SUBJECT: - : Database Management Systems UNIT: - D

COURSE CODE: - CSE-202F

S. No.	Topic	Time Allotted:-
1.	Introduction Data mining refers loosely to the process of semi automatically analyzing large data bases to find useful patterns Data ware house is a repository of information gathered from multiple sources , stored in a unified schema , at a single site	10
2	Division of the Topic <ul style="list-style-type: none">• Application of data mining• Classification of data mining• Components of data ware house• Ware house schemas.	30
3.	Conclusion Concept of data warehouse and mining was discussed	05
4	Question / Answer What are the following <ul style="list-style-type: none">• Homogeneous and heterogeneous data bases• Data fragmentation• Data replication• I/O parallelism• Partitioning techniques	05

Assignment to be given:-NIL

Reference Readings:-

- Database Management Systemss.....By Korth – III Edition
- Database Management Systems.....By C.J.Date
- Database Management Systemss.....By Bipin C. Desai

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FACULTY: Ms Priyanka Mahani

SEMESTER: - IV

CLASS: ECS

SUBJECT: - : Database Management Systems **UNIT:** - D

COURSE CODE: - CSE-202F

S. No.	Topic	Time Allotted:-
1.	Introduction In network model the data is stored in the form of graph In the hierarchy model data is stored in the form of Trees	10
2	Division of the Topic <ul style="list-style-type: none">• Basic concept• Structured representation of data	30
3.	Conclusion These are different methods to manage data conveniently and efficiently	05
4	Question / Answer Discuss the following <ul style="list-style-type: none">• Application of data mining• Classification of data mining• Components of data ware house• Ware house schemas	05

Assignment to be given: - NIL

Reference Readings:-

- Database Management Systemss.....By Korth – III Edition
- Database Management Systems.....By C.J.Date
- Database Management Systemss.....By Bipin C. Desai

Lecture Plan 27

FACULTY: Ms Priyanka Mahani

SEMESTER: - IV

CLASS: ECS

SUBJECT: - : Database Management Systems UNIT: - D

COURSE CODE: - CSE-202F

S. No.	Topic	Time Allotted:-
1.	Concurrency Control and Recovery System Introduction Concurrency Control Scheme controls the interactions among concurrent transactions by application of some protocols Recovery scheme can restore the data base to the consistence stage that existed before the failure	10
2	Division of the Topic <ul style="list-style-type: none">• Lock base protocols• Granting of locks• Storage structure• Recovery and atomicity• Lock based recovery	30
3.	Conclusion The topics were discussed	05
4	Question / Answer Discussed the various questions asked by the students.	05

Assignment to be given:-NIL

Reference Readings:-

- Database Management Systemss.....By Korth – III Edition
- Database Management Systems.....By C.J.Date
- Database Management Systemss.....By Bipin C. Desai