

--	--	--	--	--	--	--	--	--	--



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

M.Tech II Semester End Examinations (Supplementary) - January, 2019

Regulation: IARE-R16

ADVANCED DATABASE MANAGEMENT SYSTEM (CSE)

Time: 3 Hours

Max Marks: 70

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

UNIT – I

- (a) Explain (i) inheritance (ii) Abstraction mechanism in DBMS? [7M]

(b) Define views and specify the commands for creating, destroying, and altering view tables. For following entities create a view SeniorEmp with the columns as sname, sage, salary from the given tables and implement update delete operations on the viewtable. Emp (eid: integer, ename: string, age: integer, salary: real) Works (eid: integer, did: integer, pct time: integer) Dept(did: integer, budget: real, managerid:integer) [7M]
- (a) Define ER Diagram and draw the ER Model for online railway reservation system ? [7M]

(b) What are structured data types and describe its operations, create a table PERSON which consists of three columns where two are of regular data types and other one should be abstract type. [7M]

UNIT – II

- (a) Differentiate Relational Data Base Management System and Object Relational Data Base Management System. [7M]

(b) Given $n \times n$ array of objects, assume that you can fit 100 objects on a disk page. Describe a way to layout (Chunk) the array into pages so that retrievals of square $m \times m$ sub regions of the array are efficient. [7M]
- (a) Differentiate horizontal and vertical partitioning techniques with examples [7M]

(b) Explain query optimization mechanism with suitable examples. [7M]

UNIT – III

- (a) Differentiate centralized databases verses distributed databases . [7M]

(b) Draw the reference architecture for distributed database and explain the components of distributed data bases. [7M]
- (a) Explain the types of data fragmentation techniques in distributed databases. [7M]

- (b) Write an update application program for distributed transparency mechanism. [7M]

UNIT – IV

7. (a) Write steps involved in transforming global queries into fragmental query. [7M]
(b) Give an example of bank application, accessing a database which is distributed over the branches of the bank, in which the relevant predicates for data distribution in the text of application program. [7M]
8. (a) Draw and explain framework for distributed database design [7M]
(b) Give an example of global schema, fragmentation schema and additional semantic knowledge such that all this information can be used for deducing the simplification of a query? [7M]

UNIT – V

9. (a) Explain Information Retrieval Model with example scenarios [7M]
(b) Explain the procedure for creation of join queries, general queries and non-join queries in a distributed DBMS? [7M]
10. (a) Describe Querying XML data and the procedure of efficient evaluation for XML queries. [7M]
(b) Demonstrate the cost-based query optimization technique in distributed databases? [7M]

— o o ○ o o —