

ADVANCE DATABASE MANAGEMENT SYSTEM

Time : 3 Hours

Min. Passing Marks : 24

Maximum Marks : 80

Instruction to Candidates :

Attempt any five questions, selecting one question from each unit. All questions carry equal marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.)

Unit-I

1. (a) Define query optimization and explain its significance for DBMS. [8]
 (b) How heuristic query optimization is performed? Explain with the help of a suitable example. [8]

OR

1. (a) Explain cost based query optimization. [8]
 (b) Discuss different types of parameters that are used in cost functions. Where this information is kept? [8]

Unit-II

2. (a) State and explain primary characteristics of ODB. [8]
 (b) Explain following terms in Object Oriented Database System.
 (i) Method
 (ii) Signature
 (iii) Message
 (iv) Extent [8+2×4]

OR

2. (a) State the differences between ownership semantics and reference semantics in structured complex objects. [8]
 (b) Discuss the design differences of a relational data base and an object database. [8]

Unit-III

3. (a) How distributed Database-Base management System (DDBMS) is evolved form centralized DBMS? Discuss advantages and disadvantages of DDBMS. [8]

- (b) Why data replication is used in DDBMS? What typical units of data are replicated? [8]

OR

3. (a) Discuss problem area sin DDBMS in concurrency control and recovery. [5]
 (b) Explain voting and election in DDBMS. [5]
 (c) Explain horizontal and vertical partitioning of a relation in DDBMS. [6]

Unit-IV

4. (a) List and explain common threats to database security. [8]
 (b) Explain control measures used to provide security to data-Base. [8]

OR

4. (a) What is Statistical Data-base? Discuss security. [8]
 (b) Explain flow control as security measure. Discuss types of flow control. [8]

Unit-V

5. Write technical note on:
 (a) Types of XML documents. [8]
 (b) Use of tags in XML versus HTML. [8]

OR

5. Write technical note on:
 (a) Statistical structure of DTD document. [8]
 (b) Difference between XML schema and XML DTD. [8]