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Total No. of Questions: 15

Total No. of Pages: 02

MBA (Sem. 3)
RELATIONAL DATABASE MANAGEMENT SYSTEM
Subject Code: MBA-982
Paper ID: C1179

Time: 03 Hrs.

Max. Marks: 60

INSTRUCTIONS TO CANDIDATES:

1. Attempt any FOUR questions from SECTION A. Each question carries FIVE marks.
2. There are FOUR subsections of SECTION B. Attempt ONE question from every subsection. Each question carries EIGHT marks.
3. SECTION C carries EIGHT marks.

SECTION A

1. Compare the features of relational, hierarchical and network model.
2. What are structural constraints on relation type? Explain with example.
3. List any five relation algebra operators along with their syntax and purpose.
4. Explain update anomalies with examples.
5. Explain 3NF and BCNF with suitable examples.
6. Explain the syntax of SELECT and DELETE statement in SQL.

SECTION B

SUB SECTION I

7. What is normalization of database? What are the various types of normalization? Explain with examples.
8. List and explain the Inference rules of functional dependencies.

SUB SECTION II

9. Explain Relational Algebra. Explain all the types of JOIN operation in relational algebra.
10. Compare Hierarchical, Network and Relational Data Model. What are the distinguishing features of Relational Data Model which makes it so popular?

SUB SECTION III

11. What are the various problems arising out of concurrency? How is concurrency handled in database.
12. Discuss various locking techniques in concurrency control.

SUB SECTION IV

13. Explain with neat diagram the component modules of DBMS.
14. What is database? Explain implicit properties of database.

SECTION C

15. Consider the following schema and write the Relational Algebra
SAILORS (SID, SNAME, RATING, AGE)
BOATS(BID, BNAME, COLOR)
RESERVE(SID, BID, NAME)
 - (i) Retrieve the sailors who have reserved red and green boats.
 - (ii) Retrieve the sailors name with age over 20 years and reserved black boat.
 - (iii) Retrieve the number of boats which are not reserved.
 - (iv) Retrieve the sailors names who have reserved green boat on Monday.
 - (v) Retrieve the sailors name who is the oldest sailor with rating 10.