

Roll No.

Total No. of Pages : 2

Total No. of Questions : 09

B.Tech (CSE/IT) (Sem.-5)
DATABASE MANAGEMENT SYSTEM
Subject Code : CS-305
Paper ID : [A0466]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY.**
2. **Attempt any FOUR questions from SECTION-B.**
3. **Attempt any TWO questions from SECTION-C.**

SECTION-A (10 × 2 = 20 Marks)

1. (a) What is data base management system?
(b) Describe different constraints in relational model.
(c) What is the difference between primary key and super key?
(d) What is the difference between logical data independence and physical data independence?
(e) Describe weak entity with example.
(f) What are the different set operations in relational algebra?
(g) Describe domain relational calculus.
(h) What is the difference between second normal form and third normal form.
(i) What is database audit?
(j) Describe statistical database security.

SECTION-B (4 × 5 = 20 Marks)

2. What is data model? Explain different data model in data base management system.

3. What are relationships in E - R model? Explain different relationship types and structural constraints in E -R model.
4. Explain the need of normalization in database.
5. What is transaction? Explain desirable properties of transaction.
6. Explain the difference between accidental security threats and malicious security threats.

SECTION-C

(2 × 10 = 20 Marks)

7. What is the need of data base recovery? Explain different recovery techniques with their advantages and disadvantages.
8. What is Discretionary Access Control? Explain Discretionary Access control based on granting and revoking of privileges.
9. Explain the characteristics of database approach.