CS/CYS 224 (R-22)

Total No. of Questions : 10] [Total No.of Pages : 02

II/IV B. Tech. DEGREE EXAMINATIONS, AUGUST - 2024

Second Semester

CS / CYS

DATA BASE MANAGEMENT SYSTEMS

Time : **Three Hours** Maximum : **70** Marks

Answer ONE Question from each Unit. 5x14=70 M

All Questions carry equal marks.

UNIT - I

1. a) Compare and contrast file systems with database systems ?

   b) Explain the characteristics of data base systems.

(OR)

2. a) Explain the client server architecture for the database with necessary diagram.

   b) Discuss about different types of Data models.

UNIT - II

3. a) Explain different symbols used in E-R model with example.

   b) Distinguish strong entity set with weak entity set ? Draw an ER diagram to illustrate weak entity set.

(OR)

4. a) Define the following terminology with examples (i) entity (ii) entity set (iii) relationship (iv) relationship set (v) cardinality.

   b) Discuss about key constraints for Ternary Relationships ?

UNIT - III

5. a) Define the terms with examples.

   (i) Domain (ii) Attribute (iii) Tuple (iv) Relation (v) Constraint.

   b) Explain about constraints in detail with examples.

P.T.O.

(OR)

6. a) What is the importance of NULL values in a database ?

   b) Demonstrate how to add a NOTNULL column to a table ?

UNIT - IV

7. a) Define functional dependency ? How can you compute the minimal cover for a set of functional dependencies ? Explain it with an example.

   b) Solve schema R = (A, B, C, G, H, I) and the set F of functional dependencies $\{A \rightarrow B,\ A \rightarrow C,\ CG \rightarrow H, CG \rightarrow I, B \rightarrow H\}$. Compute the candidate key soft schema. Compute the closure of the same.

(OR)

8. a) Explain the problems related to decomposition.

   b) Explain BCNF and the properties of decompositions.

UNIT - V

9. a) Explain properties of a transaction.

   b) Discuss about view serializability.

(OR)

10. a) Explain two phase locking protocol.

    b) Explain about Recoverability in Transactions.