Q.P. Code : **29145**

(OLD COURSE)

(3 Hours) [Total Marks : 100

N.B. : (1) Question No.1 is **compulsory.**
(2) Solve any **FOUR** out of remaining questions.
(3) Suitable assumptions can be made if required.

1. (a) Construct EER diagram for College Library System. Convert it to 10 Relational schema.
   (b) Explain left, right, outer and inner join with example. 10

2. (a) Explain with proper example nested relations in ORDBMS. 10
   (b) Explain heuristic approach of query processing with example. 10

3. (a) Explain data fragmentation techniques for distributed databases with 10 illustrative example.
   (b) Explain macro life cycle in database design methodology. 10

4. (a) Explain structured and semi-structured data with example. 10
   (b) State and Explain EER to relational schema mapping rules with 10 examples.

5. (a) How concurrency control and recovery done in distributed database. 10
   (b) Explain the types of transparencies in distributed systems. 10

6. (a) What is XML application? Explain querying and transformation of XML data. 10
   (b) Explain different architectures for parallel database. 10

7. Write Short notes on any **FOUR** : 20
   (1) Aggregate function in SQL
   (2) Database storage and access methods
   (3) Client server architecture
   (4) EXIST and NOT EXIST clause in SQL
   (5) Measure of query cost

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