5E5044

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B.Tech. V Semester (Main/Back) Examination, Nov./Dec. - 2017
Electrical & Electronics Engineering
5EX4A Database Management System
Common With EE

Time : 3 Hours

Maximum Marks : 80

Min. Passing Marks : 26

Instructions 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) What is DBMS? What are the need and goals of DBMS. (8)

   b) Explain relational data model in detail. (8)

OR

1. a) What is the concept of ER diagram? Differentiate between Entity sets and Relationship sets. (8)

   b) Explain primary, foreign and candidate key in detail. (8)

Unit - II

2. a) What do you mean by functional dependency? (8)

   b) Differentiate between primitive and composite datatype. (8)

OR

2. a) What is Normalization? Explain Boyce-codd normal form and 3 NF in detail. (8)

   b) Explain the concept of physical and logical databases in detail. (8)

Unit - III

3. a) Differentiate the functionality of SQL and dynamic SQL. (8)

   b) What is JDBC? Explain in detail. (8)

3. a) Explain the following :

   i) Triggers   ii) DDL

   iii) Group By   iv) Database Mirroring

   b) How does SQL query is useful for form management and report writing? Explain in detail.   (8)

Unit - IV

4. a) What is RDBMS? Why is it called relational database?   (8)

   b) Explain multilist structures in detail.   (8)

OR

4. a) What are indexes in SQL? Explain Non-clustered index in detail.   (8)

   b) What are random and hashed files?   (8)

Unit - V

5. a) What is Serializability? Explain conflict and views serializability in detail. (10)

   b) What is data concurrency?   (6)

OR

(2 × 8 = 16)

5. Write short note on (Any 2) :

   a) Transaction management

   b) Deadlock handling

   c) Recovery techniques in database.

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