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13MCA25

Second Semester MCA Degree Examination, June/July 2016
Database Management Systems

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

1. a. What are the advantages of using DBMS approach? (06 Marks)
b. Discuss in detail, the component modules of DBMS and their interactions, with neat diagram. (10 Marks)
c. What are the responsibilities of DBA? (04 Marks)
2. a. What is data model? Discuss the main categories of data models. (06 Marks)
b. Explain the three-schema architecture with neat diagram. (06 Marks)
c. Describe the classification of DBMS. (08 Marks)
3. a. Define the following with examples :
i) Cardinality ratio
ii) Multivalued attribute
iii) Composite attribute
iv) Recursive relationship
v) Binary relationship
b. Discuss the ER-to-Relational mapping algorithm. (10 Marks)
(10 Marks)
4. a. Define the following terms:
i) Super key ii) candidate key iii) schema. (06 Marks)
b. Explain the referential integrity constraints with suitable examples. (04 Marks)
c. List any five relational algebra operators along with their purpose and syntax of using them. (10 Marks)
5. a. Explain the various DCL, DDL and DML commands in SQL with an example. (12 Marks)
b. Explain the following : i) embedded SQL ii) dynamic SQL. (08 Marks)
6. a. Discuss UPDATE and DELETE statements in SQL programming. (06 Marks)
b. What is cursor? Discuss the use of cursor in SQL programming. (04 Marks)
c. Discuss insertion, deletion, updation anomalies by taking suitable examples. (10 Marks)
7. a. Explain 1NF, 2NF and 3NF with suitable examples. (10 Marks)
b. What is PL/SQL? Discuss the conditional control statement with syntax and example. (10 Marks)
8. Write the short notes for the following :
a. Data independence
b. Views
c. Triggers
d. Sequence control statements in PL/SQL. (20 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

(20 Marks)