C1027

Total Pages : 4   Roll No. ....

MCS-505

Database Management System

(MSCIT-21/MCA-20)

2nd Semester Examination, 2022 (June)

Time : 2 Hours]   **Max. Marks : 80**

Note : This paper is of Eighty (80) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

SECTION–A
(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Twenty (20) marks each. Learners are required to answer any Two (02) questions only.

(2×20=40)

1. Explain different types of database and write the functions of DBA.

2. Define ER Diagram and Draw an ER Diagram for University Database by considering at least 5 entities.

3. Discuss Characteristic and Basic Structure of SQL Queries. Write SQL queries for following :

   (a) Create table EMP with following attributes using suitable data types (Eno, Ename, Deptname, Salary, designation, Joining_Date).

   (b) Display names of employee whose name start with alphabet 'A'.

   (c) Display names of employee who joined before '1/1/2000'.

   (d) Increase the salary of employees by 20% who joined after '1/1/2005'.

   (e) Explain grant and revoke command with syntax and example.

4. Discuss BCNF with example. How does it differ from 3NF?

5. Define the following with an example :

   (a) AND Operator.

   (b) OR Operator.

   (c) Combining AND and OR Operators.

   (d) IN Operator.

   (e) BETWEEN Operator.

SECTION–B

(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Ten (10) marks each. Learners are required to answer any Four (04) questions only. (4×10=40)

1. Draw and explain the detailed system architecture of DBMS.

2. Define the following with an example :

(a) Super Key.

(b) Candidate Key.

(c) Primary Key.

(d) Alternate Key.

(e) Composite Key.

3. Summarize the steps involved in converting the ER constructs to corresponding relational tables.

4. By considering an example describe various data update operations in SQL.

5. Explain the importance of Null values in Relational Model.

6. What is Normalization and Its Objectives?

7. What is a view? How views are implemented?

8. Explain the various database recovery techniques, with examples.

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