Roll No. ....

MCA-13/M.Sc.(IT)-14
Advanced Database Management System

Master of Computer Applications/Master of Science in Information Technology (MCA/MSc. IT-11/12/16/17)

Fourth Semester
Examination, 2019

Time : 3 Hours   *[Maximum 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 Fifteen (15) marks each. Learners are required to answer any three (03) questions only.   **(3×15=45)**

P.T.O.

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1. What are the different forms of normalization? Explain by giving example. How BCNF differ from 2NF and 3NF?

2. What is Generalization? Differentiate disjoint and overlapping generalization with suitable example.

3. What are views ? How is it defined? Explain with suitable example. Discuss problem of insert, delete and update through views.

4. What is functional dependency? How many types of functional dependencies are there? What is the relation of functional dependency with Database Management System?

5. What are SQL operators? Create a SQL table called "STUDENT" using SQL querries with the following fields :

   Roll No (Primary Key), NAME, AGE, ADDRESS, PERCENTAGE and use SQL commands to create a program to display the data of various students.

   Note : (Input : Fill the data into the STUDENT table accordingly)

Section–B

(Short-Answer-Type Questions)

Note : Section 'B' contains Eight (08) short-answer-type questions of Seven (07) marks each. Learners are required to answer any Five (05) questions only. **(5×7=35)**

1. What are the Codd's rule? Discuss the Codd's rule for the designing an efficient Database.

2. Describe the three schema architecture with the help of diagram?

3. What do you understand by 2 phase locking techniques for concurrency control. Explain?

4. What is transaction processing? What are the desirable properties of transaction?

5. How will you write SQL querries and sub querries? Give suitable example.

6. What do you understand by data models. Explain?

7. What are the different database security issues. Why security is important?

8. What is the difference between Encryption and Decryption?