Roll No ....

MCADD-305

M.C.A. (Dual Degree/Integrated Course), III Semester

Examination, November 2018

Database Management System

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

     ii) All questions carry equal marks.

1. a) Describe the structure of DBMS in detail.

    b) What is a data model? Describe different data models.

2. a) Discuss disadvantage of File Processing System that are resolved by the database approach.

    b) Draw E-R diagram of student admission in university.

3. a) Explain the mechanisms of maintaining referential integrity based on foreign keys (foreign key rules), considering that null values are not allowed.

    b) What is a view? Discuss the differences between a view and a base relation. Explain what happens when a user accesses a database through a view.

4. a) What is normalization? Explain 2NF, 3NF and BCNF.

   b) What do you understand by dependency preservation?

5. Consider the following tables:

Employee (Emp_no, Name, Emp_city)

Company (Emp_no, Company_name, Salary)

   i) Write a SQL query to display Employee name and company name.

   ii) Write a SQL query to display employee name, employee city, company name and salary of all the employees whose salary > 10000

   iii) Write a query to display all the employees working in 'XYZ' company.

6. a) What are the ACID properties of a transaction?

   b) Explain the purpose of checkpoint mechanism. How often should checkpoints be performed?

7. a) What do you understand by distributed databases? Give the various advantages and disadvantages of distributed database management system.

   b) Discuss the basic idea of RAID.

8. a) Explain B tree. How B tree is differ from B+ tree.

   b) Define data mining. How it is different from DBMS?

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