

DDMCA DEGREE EXAMINATION**Third Semester****DMCA 303 DATABASE MANGEMENT SYSTEMS****Part A**

Answer any *Ten* Questions
Each Question carries 3 marks.

1. What are the advantages of Database Management system over File system?
2. Explain the features of E-R Model.
3. What are the main responsibilities of a database administrators?
4. Explain primary key and foreign key with an example.
5. Briefly explain about the relational algebra operators.
6. What are the different DML commands with example?
7. Explain about the aggregate operators in SQL.
8. What is BCNF?
9. What is meant by functional dependency?
10. What are ACID properties?
11. Explain ARIES?
12. What are the different levels of abstraction? (10*3=30 marks)

Part B

All Questions carry Equal marks.

13. a) Explain the structure of a DBMS with a neat diagram.

Or

- b) With a neat sketch, explain the E-R Model.

14. a) Explain in detail about relational algebra operators.

Or

- b) How to translate E-R model to relational model with an example.

- 15.a) Explain trigger with an example.

Or

- b) Consider the employee database employee.

(Employee – name, street, city)

Works (Employee-name, company-name, salary)

Company (Company-name, city)

Manager (Employee-name, Manager-name)

Where the primary keys are underlined. Give the SQL expression for the following:

- a) Find the names and cities of residence of all employees who work for the first bank corporation.
- b) Find the names, street address and cities of residence of all employees who work for the first bank corporation and earn more than \$10,000.
- c) Find all the employees in the database who live in the same cities as the companies for which they work.
- d) Find all the employees in the database who live in the same cities and on the same streets as do their managers.

16. a Explain in detail about first and second normal form with example.

Or

b) Explain in detail about third and fourth normal form with example.

17. a) Explain in detail about Lock Based protocol.

Or

b) How to identify and avoid deadlock.

(5*9=45)

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