

**II-MCA/MSc.IT(T-202)-DBMS**

**2018**

Full Marks - 40

Time - 3 hours

The questions are of equal value

Answer *all* questions

1. a) What is database language ? Explain the different types of database languages with proper examples from sql.
- b) What are the basic characteristics of DBMS ? Describe properly.

OR

- c) What is an entity ? What is an attribute ? Explain the different types of attributes with proper example.
2. a) What do you mean by ACID property in database management system ? Explain the integrity constraints.

[ 2 ]

b) What is functional dependency ? Explain the full functional dependency and partial functional dependency with example.

OR

c) What is normalization ? Differentiate between 3NF and BCNF.

d) What is triggers in DBMS ? Describe in details.

3. a) What is Data model in DBMS ? Explain the different types of data models in DBMS. Describe the object oriented data model in details.

OR

b) What are the different complex types used in SQL ? Write an SQL query for creating values for complex types.

c) Why complex types are necessary for object oriented data model ? Explain with examples.

[ 3 ]

4. a) What is deadlock ? How to detect a deadlock ? Explain the deadlock avoidance mechanism with proper example.

OR

b) With neat diagram explain the database system architecture.

c) What is concurrent execution ? What is the need of concurrency control mechanism ?

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