MCA–07/PGDCA–07/M. Sc (IT)–07

Fundamentals of Database Management System

Master of Computer Applications/P. G. Diploma in Computer Applications/Master of Science in Information Technology

(MCA/PGDCA/M. Sc. IT-11/12/16/17)

Second Semester, Examination, 2017

Time : 3 Hours **Max. Marks : 80**

Note : This paper is of **eighty (80)** marks containing **three (03)** Sections A, B and C. Attempt the questions contained in these Sections according to the detailed instructions given therein.

Section–A

(Long Answer Type Questions)

Note : Section 'A' contains four (04) long answer type questions of nineteen (19) marks each. Learners are required to answer *two* (02) questions only.

1. What do you mean by Normalization ? Explain the different Normal forms with the help of example.
2. Define Entity Relationship Diagram. Write down types of attribute with example.

3. Discuss file processing system over Database System.
4. Explain the following SQL command with the help of example :
   (a) Insert Command
   (b) Delete Command
   (c) Update Command

Section–B

(Short Answer Type Questions)

Note : Section 'B' contains eight (08) short answer type questions of eight (8) marks each. Learners are required to answer *four* (04) questions only.

1. What do you understand by anomalies of unnormalized database ?
2. What is the difference between GROUP BY and ORDER BY ?
3. What are the *two* types of Data Independence ?
4. What are the operation on File ? Also explain primary file organization.
5. How many commands are available in DDL ?
6. What are the responsibility of DBA ?
7. Define the term Foreign Key and Primary Key.
8. State any *two* advantage of SQL.

Section–C

(Objective Type Questions)

Note : Section 'C' contains ten (10) objective type questions of one (01) mark each. All the questions of this Section are compulsory.

1. The minimal set of super key is called :
   (a) Primary key

(b) Secondary key

(c) Candidate key

(d) Foreign key

2. A functional dependency between two or more non-key attributes in called :

(a) Transitive dependency

(b) Partial transitive dependency

(c) Function dependency

(d) Partial functional dependency

3. A lock that allows concurrent transactions to access different rows of the same table is known as a :

(a) Field-level lock

(b) Row-level lock

(c) Table-level lock

(d) Database-level lock

4. A transaction completes its execution is said to be :

(a) Saved

(b) Loaded

(c) Rolled

(d) Committed

5. In an Entity-Relationship Diagram "Ellipses" represent :

(a) Attributes

(b) Weak entity set

(c) Relationship sets

(d) Multi-valued attributes

6. Logical design of database is called :
   (a) Database Instance
   (b) Database Snapshot
   (c) Database Scheme
   (d) All of the above
7. The term ..... is used to refer to a row.
   (a) Attribute
   (b) Tuple
   (c) Field
   (d) Instance
8. The term attribute refers to a ..... of a table.
   (a) Record
   (b) Column
   (c) Tuple
   (d) Key
9. Full form of DML :
   (a) Data Manipulation Language
   (b) Design Manipulation Language
   (c) Data Management Language
   (d) None of these
10. Who is the founder of Relational DBMS ?
   (a) Charles Bachmann
   (b) Edgar Codd
   (c) Both (a) and (b)
   (d) None of these