

Roll No.

DIT-05

Database Management System

Diploma in Information Technology (DIT-17)

Second Semester, Examination, 2018

Time : 3 Hours

Max. Marks : 80

Note : This paper is of **eighty (80)** marks containing **three (03)** Sections A, B and C. Learners are required to 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 is DBMS ? Explain the architecture and modeling techniques of DBMS.
2. Explain concept of keys. Differentiate primary key, composite key, candidate key and alternate key with the help of example.
3. What do you mean by Good and Bad decompositions ? Explain different anomalies you remove while going from 1NF to 2NF and then from 2NF to 3NF. What do you mean by Boyce-Codd Normal Form ?
4. What is Functional Dependency ? Explain six inference rules for functional dependency.

(B-93) P. T. O.

Section-B**(Short Answer Type Questions)**

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

1. What do you understand by domain constraints ? Explain.
2. What is the difference between Prime and Non-prime attribute ? Explain.
3. What are the different constraints of SQL ? Explain.
4. What do you understand by subqueries ? Give suitable examples.
5. What is database recovery ? Explain.
6. What are the goals of database security ? Explain.
7. What are the different DDL commands in SQL ?
8. What do you understand by universal relation in database design ?

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. 'AS' clause is used in SQL for :
 - (a) Selection operation
 - (b) Rename operation
 - (c) Join operation
 - (d) Projection operation

2. The database schema is written in :
 - (a) HLL
 - (b) DML
 - (c) DDL
 - (d) DCL
3. To delete a particular column in a relation the command used is :
 - (a) UPDATE
 - (b) DROP
 - (c) ALTER
 - (d) DELETE
4. Which two files are used during operation of the DBMS ?
 - (a) Query languages and utilities
 - (b) DML and query language
 - (c) Data dictionary and transaction log
 - (d) Data dictionary and query language
5. A table joined with itself is called :
 - (a) Join
 - (b) Self Join
 - (c) Outer Join
 - (d) Equi Join
6. Cartesian product in relational algebra is :
 - (a) A Unary operator
 - (b) A Binary operator
 - (c) A Ternary operator
 - (d) Not defined

7. In an E-R diagram an relationship is represent by a :
 - (a) Rectangle
 - (b) Ellipse
 - (c) Diamond box
 - (d) Circle
8. Database Architecture can be represented as :
 - (a) Two levels
 - (b) Four levels
 - (c) Three levels
 - (d) One level
9. Which of the following can be a multivalued attribute ?
 - (a) Phone number
 - (b) Name
 - (c) Date of birth
 - (d) All of the mentioned
10. In the architecture of a database system internal level is the :
 - (a) Physical level
 - (b) Logical level
 - (c) Conceptual level
 - (d) View level