

Roll No.

D-1781

**P. G. Diploma in Computer Application
(Second Semester)**

EXAMINATION, Dec.-Jan., 2020-21

(New Course)

DATABASE MANAGEMENT SYSTEMS

(PGDCA-107)

Time : Three Hours]

[Maximum Marks : 100

Note : Attempt any *two* parts from each Unit. All questions carry equal marks.

Unit—I

1. (a) What do you understand by Database ? Explain the concept of Database Management System.
- (b) Explain the roles and responsibilities of Database Administrator.
- (c) Discuss the different Data Modelings in Database Management System with examples.

Unit—II

2. (a) Explain the following with examples :
 - (i) Generalization
 - (ii) Specialization

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- (b) What is E-R model in DBMS ? Explain with example.
- (c) Explain the advantages of primary key in DBMS. Also differentiate primary key with foreign key with examples.

Unit—III

- 3. (a) Differentiate between Inner, Outer and Self join with examples.
- (b) Explain in detail the concept of Relational Algebra with example.
- (c) Discuss different types of embedded query language with example.

Unit—IV

- 4. (a) What do you understand by Normalization ? Explain different types of Normalization.
- (b) What is functional dependencies ? Also explain the advantages of multi-valued dependences.
- (c) Explain the concept of decomposition with examples.

Unit—V

- 5. (a) Consider a relation database of a hospital with the following relation :
 - (i) Doctor (Doc id, Doc name, Doc spec.)

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(ii) Patient (Patid, Patname, Patage)

(iii) Treatment (Docid, Patid, Fee)

Create the tables and insert at least 5 rows in each table.

(b) Differentiate between DDL and DML statements with examples.

(c) Explain the following with examples :

(i) Order By

(ii) Group By