A23 -08860

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE, APRIL- 2023

DATABASE MANAGEMENT SYSTEM

[Maximum marks: 100]   (Time: 3 Hours)

PART – A

Maximum marks : 10

I (Answer *all* the questions in one or two sentences. Each question carries 2 marks)

1. Define database schema.

2. Distinguish between candidate key and super key.

3. State the use of triggers.

4. List any four data types in SQL.

5. State the need of normalization.   (5 x 2 = 10)

PART – B

Maximum marks : 30

II (Answer any *five* of the following questions. Each question carries 6 marks)

1. Describe Data Independence and its types with a diagram.

2. List any six application areas of DBMS.

3. Discuss strong entity set and weak entity set with an example.

4. Explain the various ER diagram symbols and its meaning.

5. List and explain the desirable properties of a transaction.

6. List any four characteristics of mobile databases.

7. Compare homogeneous and heterogeneous distributed dbms.   (5 x 6 = 30)

PART – C

Maximum marks : 60

(Answer one full question from each unit.. Each full question carries 15 marks)

UNIT –I

III. (a) Explain hierarchical network and relational models.   (9)

(b) Describe different DBMS languages. (6)

OR

IV.(a) Explain three schema architecture with a diagram. (9)

(b) List the duties of a database administrator. (6)

UNIT-II

V.(a) Describe generalization and specialization with an example. (8)

(b) Explain the following relational model concepts-Attributes, Domain, Tuples, Degree. (7)

OR

VI. (a) Describe the unary operations in relational algebra. (9)

(b) Explain left, right and full outer joins in relational model. (6)

UNIT-III

VII.(a) Discuss DML commands with syntax. (8)

(b) Explain how views are created and used. (7)

OR

VIII.(a) Describe different aggregate functions with suitable examples. (8)

(b) Explain granting and revoking of privileges with the help of an example. (7)

UNIT-IV

IX. (a) Compare data mining with data warehousing. (8)

(b) Describe the object structure in object oriented database. (7)

OR

X. (a) Describe decomposition and types of decomposition. (9)

(b) Explain parallel database architectures. (6)

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