DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER - 2024

DATA BASE MANAGEMENT SYSTEM

(Maximum Marks:100)   (Time: 3 Hours)

PART - A
(Maximum Marks : 10)

Marks

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

1. Define schema.

2. Differentiate data and information.

3. Define candidate key.

4. Write the general syntax of INSERT command in SQL.

5. List any two advantages of a mobile database.   (5 x 2 = 10)

PART - B
(Maximum Marks: 30)

II   Answer *any five* questions from the following. Each question carries 6 marks.

1. Compare logical and physical data independence.
2. Explain the following terms.
    (i) Composite Attribute (ii) Tuple (iii) Domain (iv) Instance of a relation.
3. Describe select and project operations in relational algebra with example.
4. Discuss trigger with an example.
5. Discuss any three aggregate functions used in SQL.
6. Explain the need of normalization.
7. Describe object and object identity.   (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 the three schema architecture with diagram.   (8)

(b) Discuss the various users of a database. (7)

OR

IV (a) Describe network and relational database models. (8)

(b) Explain various DBMS languages. (7)

UNIT – II

V (a) Explain outer join operations with examples. (8)

(b) Discuss the features of enhanced E-R diagram. (7)

OR

VI (a) Explain ER diagram with its notations (8)

(b) Draw an ER diagram of online book database with entities AUTHOR (A _ ID, Name, Address, Phone, Books _Written) and BOOK (ISBN, Book _ title, Price, Year, Page _count, Category) with proper relationship. (7)

UNIT – III

VII (a) Write SQL statements to:
   (i) Create a table employee with id, name, department and salary as attributes with proper data types and constraints and insert minimum 5 records.
   (ii) Display the employee id and name with maximum salary.
   (iii) Display the total number of employees in each department (8)

(b) Discuss the use of stored procedures with an example. (7)

OR

VIII (a) Explain how views are created with an example. (8)

(b) Describe authorization on data and how privileges are granted/revoked to users. (7)

UNIT – IV

IX (a) Explain decomposition of a table with its properties. (8)

(b) Discuss the application areas of data mining. (7)

OR

X (a) Explain parallel DBMS architecture. (8)

(b) Describe data warehouse and its characteristics. (7)

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