**TED (21)3133**
**(Revision – 2021)**

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**Reg. No……**
**Signature…….**

# DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER – 2025

## DATABASE MANAGEMENT SYSTEMS

[Maximum Marks: **75**] [Time: **3** Hours]

### PART-A

**I. Answer '*all*' the following questions in one word or one sentence. Each question carries *'one'* mark.**

**(9 x 1 = 9 Marks)**

| | | Module Outcome | Cognitive level |
|---|---|---|---|
| 1. | The structure of a database is called---------- | M1.01 | R |
| 2. | In relational database model, a row is known as---------- | M1.03 | R |
| 3. | Name any two database interfaces. | M1.02 | R |
| 4. | What is the command that adds data in to a relation? | M2.01 | R |
| 5. | The---------- aggregate function returns the number of rows in a query. | M2.02 | R |
| 6. | Entity types that do not have any key attributes are called--------- | M3.02 | R |
| 7. | What symbol denotes an entity in an ER diagram? | M3.01 | R |
| 8. | Which normal form is based on multi-valued dependency? | M4.02 | R |
| 9. | Which ACID property ensures that a transaction is either executed completely or not at all? | M4.04 | R |

### PART-B

**II. Answer any '*eight*' questions from the following. Each question carries *'three'* marks.**

**(8 x 3 = 24 Marks)**

| | | Module Outcome | Cognitive level |
|---|---|---|---|
| 1. | Explain network data model. | M1.01 | U |
| 2. | Define Data Definition Language. Tell any two DDL commands in SQL. | M1.02 | R |
| 3. | Choose suitable primary key for the relation CAR (Name, Registration Number, Model, Color). Justify your answer. | M1.03 | A |
| 4. | Consider the relation PRODUCT(Prod_Id, Name, Price, Category). Build SQL query to retrieve<br>i) The unique category of products.<br>ii) All details of product of the product Id is 1012 | M2.01 | A |
| 5. | Summarize views in SQL. | M2.02 | U |
| 6. | Define the terms entity and relationship. | M3.01 | R |
| 7. | Outline the concept of normalization in databases. | M4.02 | U |
| 8. | Define the term concurrency control. | M4.03 | R |
| 9. | Apply 3NF in the relation EMPLOYEE where Emp_Id is the primary key.<br>Emp_Id \| Name \| Dept_Id \| Dept_Name \| Dept_Head | M4.02 | A |
| 10. | List any three advantages of mobile databases. | M4.05 | R |

## PART-C

**Answer '*all*' questions from the following. Each question carries *'seven'* marks.**

**(6 x 7 = 42 Marks)**

| | | Module Outcome | Cognitive level |
|---|---|---|---|
| III. | Classify the different types of users interact with databases. | M1.01 | U |
| | **OR** | | |
| IV. | Explain the three schema architecture with a diagram. | M1.02 | U |
| V. | Show any three integrity constraints with suitable examples. | M2.01 | U |
| | **OR** | | |
| VI. | Explain triggers in SQL. | M2.02 | U |
| VII. | Solve the following questions with SQL commands.<br>i) Build a table STUDENT with attributes Stud_Id, Name, DOB, Gender, Email, Course with Stud_Id as primary key. Name and DOB should not be NULL. Also set the default value of Course as 'Diploma'. (3 Marks)<br>ii) Modify the Email Id of a student with a new value when Stud_Id is given. (2 Marks)<br>iii) Show the students details whose name begins with 'A'. (2 Marks) | M2.01 | A |
| | **OR** | | |
| VIII. | Solve the following questions with SQL commands.<br>i) Build the tables Book(Book_Id, Title, PublisherId, Price) with Book_Id as primary key and Publisher(PublisherId, Name, Address). Also set PublisherId as foreign key. (4 Marks)<br>ii) Show all the books along with publisher details. (3 Marks). | M2.02 | A |
| IX. | Illustrate the notation of any three attribute types in ER model with suitable examples. | M3.02 | U |
| | **OR** | | |
| X. | Explain specialization and generalisation in Enhanced ER model. | M3.03 | U |
| XI. | Illustrate the attribute types in the ER diagram corresponding to the relation CUSTOMER(Cust_ld(primary key), Name, Email, PhoneNumber(multi-valued attribute), Address(composite attribute)). | M3.02 | U |
| | **OR** | | |
| XII. | Explain how to map the ER model to the relational model. | M3.04 | U |
| XIII. | Explain INF and 2NF with suitable examples. | M4.02 | U |
| | **OR** | | |
| XIV. | Illustrate the states of transaction execution with a diagram. | M4.04 | U |

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