

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2018

DATABASE MANAGEMENT SYSTEM

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

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

1. Define database.
2. List any two advantages of DBMS.
3. Define foreign key.
4. Write the SQL command to define the structure of a relation with an example.
5. State Data Mining Technology. (5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Define database models. Describe the various classifications of database models.
2. Discuss strong entity set and weak entity set with examples.
3. Define keys.
4. Distinguish between inner join and outer join.
5. Explain the different states of a transaction.
6. Explain functional dependency.
7. Write short notes on Mobile databases. (5×6 = 30)

PART — C

(Maximum marks : 60)

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

UNIT — I

- III (a) Describe the different database users. 8
(b) Explain the component modules architecture of DBMS. 7

OR

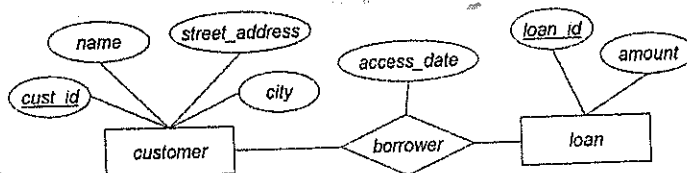
- IV (a) List the various application areas of database systems. 8
 (b) Distinguish between centralized and client-server database systems. 7

UNIT — II

- V (a) Explain the following relational operations with examples. 8
 (i) SELECT (ii) PROJECT (iii) RENAME
 (b) Explain Union, Intersection and Minus operation on sets with examples. 7

OR

- VI (a) Distinguish between Specialization and Generalization. 8
 (b) Map the E-R model into relational model.



UNIT — III

- VII (a) A company database contains the following tables.
 Employee (empid, empname, job, deptid, salary)
 Department (deptid, deptname, location)
 Write SQL statements:
 (i) To create tables with suitable keys
 (ii) To list employees in the descending order of salary
 (iii) To list number of employees in each department
 (iv) To list the minimum, maximum and average salary for each job. 8
 (b) Explain stored procedures with an example. 7

OR

- VIII (a) Explain aggregate functions with examples. 8
 (b) Explain granting and revoking of privileges with the help of an example. 7

UNIT — IV

- IX (a) Define normalization. Explain the need of normalization. 8
 (b) Explain the goals of Data Mining Technology. 7

OR

- X (a) Explain dependency preservation and lossless join properties of decomposition. 8
 (b) Explain the object oriented database concepts. 7