

III B. Tech I Semester Supplementary Examinations, July -2023
DATA BASE MANAGEMENT SYSTEMS

(Common to EEE, ME, ECE)

Time: 3 hours

Max. Marks: 70

Answer any **FIVE** Questions **ONE** Question from **Each unit**

All Questions Carry Equal Marks

UNIT-I

1. a) Define DBMS? Explain Database Applications are used in Real time Environment. [7M]
 - b) List and explain various DDL and DML Commands with example each. [7M]
- (OR)
2. a) Explain Data Independence and its types in detail. [7M]
 - b) List out the Functionalities of DBA. [7M]

UNIT-II

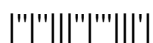
3. Write an ER diagram of hospital management system. (Minimum 4), attributes and relations. [14M]
- (OR)
4. Develop an ER diagram for keeping track of information about a company database taking into account at least five entities [14M]

UNIT-III

5. Explain the E-R to relational mapping Algorithm with suitable example for each step. [14M]
- (OR)
6. Draw an E-R Diagram for banking Enterprise. Convert it into Relational Model [14M]

UNIT-IV

7. a) Given schema Instructor (id, name, dept_name, sal), Teaches (id, course_id, sec_id, semester, year). [7M]
 Construct SQL and Relation Algebra Statements for the following queries.
 - i. List name and salary details of the Instructors who are working in IT department and whose salary is not more than 80000.
 - ii. Find the average salary of instructors in each department.
 - iii. Find the names of Instructors working in IT department along with the course_id what they teaches.
 - iv. Give the name and salary details of the highest salaried Instructor.
 - b) Describe Enforcing Integrity Constraints with an Example. [7M]
- (OR)
8. Explain the following with suitable examples [14M]
 - i) Triggers
 - ii) Nested Queries
 - iii) Views



UNIT-V

9. a) What is functional dependency? Explain its use in database design. [7M]
b) Normalize following relation up to 3NF: Bank(acno, cust_name, ac_type, bal, int_rate, cust_city, branchId, branch_nm, br_city) [7M]
(OR)
10. Normalize following relation up to 3NF: Bank(acno, cust_name, ac_type, bal, int_rate, cust_city, branchId, branch_nm, br_city) [14M]

