



**II Semester B.C.A. Examination, June/July 2025**  
**(NEP Scheme)**  
**COMPUTER APPLICATIONS**  
**Paper – 2.3 : Database Management Systems**

Time : 2½ Hours

Max. Marks : 60

***Instruction : Answer all the questions.***

**PART – A**

I. Answer any four questions. Each question carries two marks. **(4×2=8)**

- 1) What is database ? List few applications of database.
- 2) Define Attribute and Entity.
- 3) What is Primary Key ? Give an example.
- 4) What is primary and secondary storage ?
- 5) What is cascading delete ?
- 6) What are insertion and delete anomalies ?

**PART – B**

II. Answer any four questions. Each question carries five marks. **(4×5=20)**

- 7) Write a note on functions of DBMS.
- 8) What is ER diagram ? Explain different notations used in database schema diagram.
- 9) Explain different states of transaction with a neat diagram.
- 10) Discuss Aggregate functions with syntax and examples.
- 11) Write a note on SELECT and PROJECT operators in DBMS.
- 12) Explain TCL (COMMIT, ROLLBACK, SAVEPOINT) with example.



## PART – C

- III. Answer any four questions. Each question carries eight marks. (4×8=32)
- 13) Define data model. Explain different data model with example.
  - 14) Write a note on types of Join.
  - 15) Define normalization. Explain 1NF, 2NF, 3NF with example.
  - 16) Create two tables and perform UNION and INTERSECTION operations.
    - a) Create table student 1, student 2.
    - b) Enter five tuples into each file.
    - c) Display all the tuples from table.
    - d) Perform UNION and INTERSECTION operations.
  - 17) Explain :
    - a) Primary key
    - b) Foreign key
    - c) Candidate key
    - d) Super key with examples.
  - 18) Discuss different relational algebra operations with example.