



**DCCA – 301**

**III Semester B.C.A. Degree Examination, February/March 2024  
(NEP Scheme) (Freshers and Repeaters)**

**COMPUTER APPLICATIONS  
Database Management Systems**

Time : 2½ Hours

Max. Marks : 60

**Instruction :** Answer *all* the Sections.

**SECTION – A**

I. Answer **any 6** questions. **Each** question carries **2** marks. **(6×2=12)**

- 1) Define Database.
- 2) Mention any two roles of DBA.
- 3) What are weak entity types ?
- 4) What is Partial key ?
- 5) What is a save point ?
- 6) Write short notes on Join operations in Relational algebra.
- 7) Write short note on Cartesian product.
- 8) Define functional dependency.
- 9) Define Transaction processing system.



**SECTION – B**

II. Answer **any 4** questions. **Each** question carries **6** marks. **(4×6=24)**

- 10) Explain the 3-schema architecture of DBMS.
- 11) Explain the characteristics of Database approach.
- 12) Explain the Cardinality Ratio with example.
- 13) What are procedures in PL/SQL ? Give an example.
- 14) Explain the Boyce-Codd normal form with an example.
- 15) Explain 3NF in detail.

P.T.O.



## SECTION – C

III. Answer **any 3** questions. **Each** question carries **8** marks.

(3×8=24)

- 16) a) List and describe any 3 Users of database system. 4  
b) Define Data Models. List and describe any 2 data models. 4
- 17) a) Draw ER diagram for company database. 4  
b) Define Attribute. Describe the types of attributes. 4
- 18) a) Describe the Relational model constraints. 4  
b) Describe the following SQL commands with syntax and example. 4  
a) alter table  
b) update.
- 19) a) Write a short note on single user and multi user systems. 4  
b) Describe the anomalies in Relational database design. 4
- 20) a) Describe the ACID properties of Transaction. 4  
b) Define Lock. Explain briefly Binary Locks. 4

