



NP – 319

II Semester B.C.A. Examination, August/September 2023
(NEP Scheme)

COMPUTER SCIENCE

Paper – 2.3 : Database Management System

Time : 2½ Hours

Max. Marks – 60

Instruction : Answer all Sections.



SECTION – A

I. Answer any four questions. Each question carries two marks.

(4×2=8)

- 1) Define Database. Mention any two advantages of DBMS.
- 2) What is Data Model ?
- 3) What do you mean by an entity and an attribute ?
- 4) Define the terms tracks and sector.
- 5) What is the purpose of GRANT and REVOKE statement ?
- 6) Define two phase locking.

SECTION – B

II. Answer any four questions. Each question carries five marks.

(4×5=20)

- 7) Describe the three schema architecture of DBMS with a neat diagram.
- 8) Define relationship. Explain the different types of relationships with an example.
- 9) Explain key constraints with an example.
- 10) Explain outer join with syntax and an example.
- 11) Differentiate between DBMS and RDBMS.
- 12) What is transaction ? Explain the ACID properties of transaction.

P.T.O.



SECTION – C

- III. Answer **any four** questions. **Each** question carries **eight** marks. **(4×8=32)**
- 13) a) Define DBA. Explain the roles and responsibilities of DBA. 4
 b) What is data independence ? Explain the two types of data independence. 4
- 14) Construct an ER diagram of company database. 8
- 15) a) Explain selection and projection with syntax and an example. 6
 b) What is domain constraint ? 2
- 16) What is normalization ? Mention all normal forms with an example. 8
- 17) a) Explain DML statements with syntax and an example. 4
 b) Explain datatypes in SQL. 4
- 18) a) Explain concurrency control based on time stamp ordering. 4
 b) Explain binary locking. 4

SECTION – B

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

- 1) Describe the three schema architecture of DBMS with a neat diagram.
- 2) Define relationship. Explain the different types of relationship with an example.
- 3) Explain key constraints with an example.
- 4) Explain outer join with syntax and an example.
- 5) Differentiate between DBMS and RDBMS.