DCCS – 401

# IV Semester B.Sc. Degree Examination, July/August 2024
## (NEP Scheme) (Freshers and Repeaters)
## COMPUTER SCIENCE
## DSC4 : 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 DBMS.
2) What is DBA ?
3) What is composite attribute ?
4) Define primary key.
5) What is DDL ?
6) What is functional dependency ?
7) Expand BCNF.
8) What is Dirty-read problem in transaction ?
9) What is lock ?

SECTION – B

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

10) Explain the characteristics of DBMS.
11) What is DML ? Explain its commands with examples.
12) Write an ER diagram for HOSPITAL database.
13) Explain different types of constraints in relational database.
14) Explain aggregate functions in SQL.
15) Explain states of transaction.

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## SECTION – C

III. Answer **any 3** questions. **Each** question carries **8** marks. **(3×8=24)**

16) a) Explain the three levels of DBMS architecture with diagram. **4**

b) Write a note on Data independence. **4**

17) a) Explain the types of attributes. **4**

b) Explain different types of relationships used in DBMS. **4**

18) Explain the different types of joins with example. **8**

19) What is normalization ? Explain 1NF and 2NF. **8**

20) a) Explain different types of DBMS transaction failures. **4**

b) Write a note on single-user system and multi-user system. **4**