Roll No. ……..

BCA-C–301

B. C. A. (Third Semester)

EXAMINATION, 2024-25

DATABASE MANAGEMENT SYSTEMS

Time : $2\frac{1}{2}$ Hours

Maximum Marks : 60

Note : All questions have to attempted.

Section–A

1. Multiple Choice Type Questions : 1 each

(a) What are the characteristics of DBMS ?

(CO1, BL-1)

(i) Data redundancy

(ii) Data inconsistency

(iii) Data isolation

(iv) Data integrity

P. T. O.

(b) What is primary key ? (CO1, BL-1)

(i) Unique key and not null key

(ii) Accesses database

(iii) Joins table

(iv) Encrypts data

(c) Which is not a SQL command ? (CO2, BL-2)

(i) DDL

(ii) DML

(iii) DCL

(iv) DQL

(d) Which of normal form is based on the concept of full functional dependency ? (CO4, BL-3)

(i) 1NF

(ii) 2NF

(iii) 3NF

(iv) 5NF

(e) What are the type of join in SQL ?

(CO3, BL-3)

(i) inner join

(ii) outer join

(iii) cross join

(iv) All of the above

(f) What is a transaction in database ?

(CO2, BL-2)

(i) To delete the data

(ii) To update the data

(iii) To retrieve the data

(iv) A single unit of work performed in DB

(g) Which is not type of database model ?

(CO2, BL-2)

(i) Network model

(ii) Q-O model

(iii) Hierarchical Model

(iv) Relational Model

(h) What is the purpose of data normalization ?

(CO5, BL-2)

(i) To reduce redundancy

(ii) To increase redundancy

(iii) To create tables

(iv) To delete tables

(i) Which SQL clause is used to filter records ?

(CO4, BL-2)

(i) Where

(ii) Having

(iii) Group by

(iv) Order by

(j) What is JOIN clause ? (CO4, BL-2)

(i) To combine rows of two tables

(ii) To combine data rows in 1 table

(iii) To delete data row from table

(iv) To update data from the table

(k) What is relational database ? (CO1, BL-1)

(i) A data stored in files

(ii) A data stored in tables

(iii) A data stored in lists

(iv) A data stored in arrays

(l) What is SQL ORDER BY clause ?

(CO3, BL-3)

(i) To fill in records

(ii) To group records

(iii) To join records

(iv) To sort the result set of a query

2. Attempt any *four* questions. 3 each

(a) Explain the concept of DBMS. (CO2, BL-1)

(b) Describe architecture of DBMS. (CO1, BL-2)

(c) What is normalization ? Why is it important ?

(CO5, BL-2)

(d) What is ACID property of transaction ?

(CO4, BL-2)

(e) Explain the concept of VIEW in SQL.

(CO3, BL-3)

Section–B

(Long Answer Type Questions)

3. Attempt any *two* questions. 6 each

(a) What is functional dependency in data normalization ? (CO3, BL-3)

(b) What are different integrity constraints in database ? (CO2, BL-2)

(c) Explain the concept of relational algebra.

(CO3, BL-4)

4. Attempt any *two* questions. 6 each

   (a) What is ER diagram ? Explain with examples.

   (CO2, BL-5)

   (b) Explain different types of keys in relational database. (CO1, BL-3)

   (c) Explain the concept of data independence.

   (CO3, BL-2)

5. Attempt any *two* questions. 6 each

   (a) What are different types of datamodels in DBMS ? (CO2, BL-3)

   (b) What is a schema and instances in database ?

   (CO4, BL-3)

   (c) What are the advantages of DBMS over traditional file system ? (CO3, BL-3)