UE-2425

BACHELOR OF COMPUTER APPLICATION

B. C. A. (Sem. - II) Examination,
June - 2025

Database Management System

Paper - BCA - 2002T

Time Allowed : **Three Hours**

Maximum Marks : **70**

Min. Marks : **28**

*This question paper contains **two** sections as under :*

Section-A ***Max. Marks-20***

*This section will have 10 questions, having **02** questions from each unit with no internal choice. Answer in about **20** words. All questions will have equal marks. **(02×10=20)***

Section-B ***Max. Marks-50***

*This section will have **10** questions, having **02** questions from each unit, one question to be attempted from each unit. Word limit approximately **400-500** words. Questions may have sub divisions. All questions will have equal marks. **(10×05=50)***

SECTION - A

1 (i) What is the purpose of data base management system?

(ii) Briefly explain the concept of data manipulation language.

(iii) What is the difference between an entity and an attribute in an E.R. diagram?

(iv) Explain the concept of mapping constraints.

(v) Define the term candidate key and give its example also.

(vi) Explain the concept of referential integrity in a relational database.

(vii) What is the purpose of data definition language? Explain.

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(viii) Briefly explain the role of Data Retrieval Language (DRL) in SQL.

(ix) What is the purpose of an index in a database system.

(x) Name and briefly describe two different file organization methods.

SECTION - B

UNIT - I

2 Define the three-schema architecture of a DBMS. What are the different level of data abstraction and how does this useful in DBMS?

OR

Define the various categories of database users. Elaborate on responsibilities of a database administrator highlighting their roles.

UNIT - II

3 What is an E-R model? Describe the basic components of an ER diagram: entities, attributes and relationship.

OR

Explain the different types of mapping cardinalities that can exist between two entity sets.

UNIT - III

4 What is relational data integrity? Explain the different integrity constraints, focussing on entity integrity, referential integrity and domain constraints.

OR

Define the different types of keys in the relational model. Differentiate between super key, candidate key, primary key and foreign key with clear definition and example for each.

UNIT - IV

5 What is SQL? Describe the major components of the SQL Language. Also discuss :

(i) DDL (ii) DML

(iii) DCL

OR

What are data base views? Explain the process of creating and using views in SQL.

UNIT - V

6 What is a B-tree? Describe the structure and properties of a B-trree index file.

OR

Describe the concept of an index file in a data base. Differentiate between a primary index, a secondary index and a clustered index.