

A-1265

Total Pages : 3

Roll No.

BCA-09

Bachelor of Computer Application (BCA)

Database Management System

Examination February, 2026

Time : 2:00 Hrs.

Max. Marks : 70

Note :- This paper is of Seventy (70) marks divided into Two (02) Sections 'A' and 'B'. Attempt the questions contained in these Sections according to the detailed instructions given therein. *Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.*

Section-A

(Long Answer Type Questions) (2×19=38)

Note :- Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any *two* (02) questions only.

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(1)

P.T.O.

1. Explain the traditional file system approach and the database approach in detail. Compare both systems and discuss the merits and demerits of DBMS in modern applications.
2. Describe the three-level architecture of a Database Management System (DBMS). Explain external, conceptual, and internal levels with suitable examples. Also discuss the importance of data independence.
3. Define and explain different types of keys used in relational database design : Primary key, Candidate key, Composite key, Alternate key, and foreign key. Give suitable examples for each.
4. Explain functional dependencies in relational database design. What are prime and non-prime attributes ? Discuss the role of functional dependencies in decomposition of relations.
5. Write a detailed note on SQL. Explain DDL and DML commands with syntax and examples. Also discuss SELECT queries with WHERE, GROUP BY, HAVING, ORDER BY, Indexes, and Constraints.

Section–B

(Short Answer Type Questions) (4×8=32)

Note :- Section ‘B’ contains Eight (08) Short-answer type questions of Eight (08) marks each. Learners are required to answer any *four* (04) questions only.

1. Write a short note on hierarchical and Network data model. Explain the architecture of DBMS.
2. Explain any two types of normalization with an example.
3. Mention the responsibilities of DBA.
4. What is the difference between DBMS and RDBMS ?
5. What is an ER diagram ? Explain different notations used in drawing ER diagram.
6. What is a transaction ? Explain ACID properties of a transaction.
7. Write a short note on database backup and database recovery.
8. What is the difference between the WHERE and HAVING clauses in SQL ?
