

**A-0790**

Total Pages : 3

Roll No. ....

**BCA-09**

**Bachelor of Computer Application (BCA)**

**(Database Management System)**

Examination, June 2025

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.

1. Explain the architecture of a Database Management System (DBMS). Discuss the roles of its components, including the database, DBMS software, and query processor, with a detailed diagram.
2. What is normalization in a database ? Explain the different normal forms (1NF, 2NF, 3NF, BCNF) with examples.
3. Discuss the different types of database models. Compare and contrast hierarchical, network, relational, and object-oriented database models with examples.
4. What is SQL (Structured Query Language) ? Explain the different types of SQL commands (DDL, DML, DCL, TCL) with examples of each.
5. Describe the concept of database transactions. Explain the ACID properties (Atomicity, Consistency, Isolation, Durability) and their importance in ensuring reliable database operations.

### **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. What is a database ?
2. Define DBMS and give an example.
3. What is the purpose of a primary key in a database table ?
4. What is a foreign key ?
5. Name any two database models.
6. Name two applications of DBMS in the healthcare industry.
7. How is DBMS used in e-Commerce ?
8. Mention one example of a DBMS used in banking.

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