

A-1300

Total Pages : 3

Roll No.

BCA(N)-201

(Database Management System)

3rd Semester Examination, Session December 2024

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 characteristics and advantages of a Database Management System (DBMS). Discuss the components of DBMS with examples.
2. Describe the types of data models in detail. Highlight the significance of the Entity-Relationship (ER) model with an example.
3. What is normalization ? Explain the objectives of normalization and discuss the various normal forms with examples.
4. Define the different types of keys in a database. Illustrate their importance with suitable examples.
5. Discuss the concept of database recovery. Explain the different types of database failures and recovery strategies.

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 the purpose of a database system ? How does it differ from traditional file systems ?
2. Define the relational data model. What are the key components of a relation ?
3. What is SQL ? List the basic data types and aggregate functions used in SQL.
4. What are integrity constraints ? Briefly explain entity integrity and referential integrity constraints.
5. What are the characteristics of SQL ? Mention any *two* useful relational operators in SQL.
6. Explain the use of the LIKE, BETWEEN, IS NULL, ORDER BY operators in SQL with an example.
7. What is Candidate Key ? How does a candidate key differ from super key ?
8. List and briefly explain any three types of database management systems (DBMS).
