K–323

BCA–09

Bachelor of Computer Application B.C.A. IIIrd Semester Examination Dec., 2023

DATABASE MANAGEMENT SYSTEM

Time : 2 Hours] [**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 there in. ***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. Describe the important features of ER data model in detail.

2. What is the need of normalization ? Describe 2NF, 3NF and BCNF with examples.

3. Write short notes on following :

   (a) Data independence

   (b) Functional dependency

   (c) Merits and demerits of DBMS

   (d) Characteristics of SQL

4. What is SQL ? Explain DDL and DML with example.

5. What is the difference between DBMS and RDBMS ? Explain the types of DBMS.

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. Differentiate between physical and logical data independence.

2. What is data and information ? Explain.

3. Differentiate between weak and strong entity set.

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4. What is Referential Integrity ? Explain with example.

5. Differentiate between prime attribute and nor-prime attribute with examples.

6. What do you mean by integrity constraint ?

7. Differentiate between DBMS approach and traditional file approach.

8. Explain the following terms :

   (i) Database security and database recovery

   (ii) Candidate key, Primary key, Alternate key and Foreign key

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