Roll No. ....

ED–2863

B. C. A. (Part II) EXAMINATION, 2021

Paper Second

DATABASE MANAGEMENT SYSTEM

Time : Three Hours

Maximum Marks : 80

Minimum Pass Marks : 27

Note : Attempt any *two* parts (each 5 marks) from each question. All questions carry equal marks.

Unit—I

1. (a) Define the DBMS. Explain the overall strucute of DBMS.

    (b) What is Data Model ? Explain the differnet types of data models.

    (c) Explain the advantages of DBMS over file processing system.

Unit—II

2. (a) What is E-R diagram ? Explain Entity Set, relationship set and attributes.

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(b) Explain the process of specialization, generalization and aggregation.

(c) Explain the concept of key and describe the following keys :

    (i) Primary Key

    (ii) Candidate Key

    (iii) Alternate Key

    (iv) Foreign Key

Unit—III

3. (a) What is Join ? Explain the different types of join.

    (b) What is relational algebra ? Explain there different operation with example.

    (c) Differentiate between simple and complex queries. Explain with example.

Unit—IV

4. (a) What is normalization ? Explain the objectives of the normalization.

    (b) What are the pitfalls in relational database design ? Explain with suitable example.

    (c) Write short notes on the following :

    (i) Functional dependency

    (ii) Dependency preservation.

Unit—V

5. (a) What is the use of the following in table :

    (i)   Group function

    (ii) Having

    (iii) Order by

    (iv) View

    (b) What is the query ? Explain the nested sub queries.

    (c) Explain integrity, security and recovery with example.

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