Or

Explain different operations used in Relational Algebra.

8. What is the use of Oracle ? Explain different features of Oracle. **6**

Or

Explain aggregate function in SQL with syntax.

9. Explain transaction processing system in detail. **6**

Or

What is Serializability ? Explain different types of serializability.

Section D

10. Explain database language in detail. **8**

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B.C.A. EXAMINATION, 2026

(Second Semester)

(From 2019-20 Onwards)

(Re-appear Only)

DATABASE MANAGEMENT SYSTEM

Time : 3 *Hours*] [*Maximum Marks :* 80

Before answering the question-paper, candidates must ensure that they have been supplied with correct and complete question-paper. No complaint, in this regard will be entertained after the examination.

Note : All questions in Section A and Section B are compulsory. Attempt *one* question out of two alternatives for each question in Section C and Section D.

Section A

1. Explain the following : **12×1=12**

(a) DBMS

(b) Advantages of DBMS

(c) Schema

(d) Entity Types

(e) Relational Algebra

(f) Primary Key

(g) DCL

(h) Network Data Model

(i) Applications of ORACLE

(j) 3 NF and BCNF

(k) Normalization

(l) Transaction.

Section B

2. Explain characteristics of database approach in detail. **3**

3. Explain the various types of keys supported by database. **3**

4. Explain DCL in detail. **3**

5. Explain the various properties of transaction. **3**

Section C

6. Draw and explain the architecture of database. **6**

Or

Compare and contrast file system with database system.

7. Explain Structural Constraint in detail. **6**

Or

Explain DBMS functions in detail.

11. Draw various components of ER-Diagram. **8**

Or

Explain the following :

(a) Purpose of ER model

(b) Entity types.

12. Explain views and queries in SQL. **8**

Or

Explain hierarchical data model in detail.

13. Explain 4 NF and 5 NF with suitable example. **8**

Or

Explain functional dependency in detail.

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