

Roll No.

Total No. of Pages : 02

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B.Tech. (CSE / AI&ML) (Sem-5)
DATABASE MANAGEMENT SYSTEMS
Subject Code : BTCS-501-18
M.Code : 93171
Date of Examination : 01-06-2023

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A** is **COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION-A

1. Write briefly :

- Explain the term Data Independence.
- Explain any two DML commands with examples.
- Differentiate between open source and commercial DBMS.
- What is Query processing? List steps of Query processing.
- What is Relational Algebra? What are the unary operations in Relational Algebra?
- Differentiate between static and dynamic hashing.
- What is Serializability of schedules? Explain in brief.
- Explain in brief about Time stamping based Schedulers.
- Explain the term authorization in reference to database security.
- Write at least two advantages of Distributed databases.

SECTION-B

2. List and explain various Data Definition Language (DDL) commands.
3. Explain in detail about Relational Algebra.
4. Write a detailed note on Indices.
5. Write a detailed note on SQL injection.
6. Explain in detail about Multi-version concurrency control schemes.

SECTION-C

7. Write a detailed note on Relational and Object Oriented Data Models.
8. Define normalization. Explain the different normal forms with examples.
9. Write a detailed note on Logical Databases.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.