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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Artificial Intelligence & Machine Learning/CSE) (Sem.–5)

DATABASE MANAGEMENT SYSTEMS

Subject Code : BTCS-501-18

M.Code : 93171

Date of Examination : 21-11-2023

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 :

- a) What is database management system?
- b) What is SQL and how does it relate to relational database?
- c) Define a database transaction.
- d) What is RABC in database security?
- e) Differentiate between object oriented and relational database.
- f) What do you mean by atomicity?
- g) What do you mean by recoverability?
- h) Discuss about querying relational data.
- i) What is the role of DBMS? What are its advantages over file system?
- j) Compare hierarchical data model and relational data models.

SECTION-B

2. Discuss two phase locking protocol. Explain all its variants with necessary schedules.
3. Why entity integrity and referential are important in database? Explain in detail.
4. Why normalization necessary in the database system and also explain database anomalies in detail.
5. Define Database? Explain the three level Architecture of DBMS in detail.
6. Discuss the various roles of Database Administrator in detail.

SECTION-C

7. What are constraints? What are different types of constraints? Explain.
8. When can a view be updated? Explain the syntax of updating a view? Also state the difference between views and table.
9. What do you mean by DML, DDL, DCL, TCL Commands? Explain with examples.

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.