

Roll No.

Total No. of Pages : 02

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B.Tech. (SE) (Sem.-4)
DATABASE MANAGEMENT SYSTEMS

Subject Code : SE-401-19

M.Code : 80025

Date of Examination : 12-07-22

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. Discuss Data Independence.
- b. Explain metadata.
- c. Consider a table employee with id, name, designation, salary attributes. Write select command to display id, name of all employees with salary greater than or equal to 20000.
- d. Define foreign key. Give an example.
- e. What is composite entity?
- f. Define degree of relationship.
- g. What is multivalued dependency?
- h. What is cascading rollback?
- i. Differentiate between authentication and authorization.
- j. What is checkpoint?

SECTION-B

2. Explain various operations performed on relational algebra.
3. Explain in detail various levels of database security.
4. Explain in detail object relational databases.
5. Explain ACID properties of transaction Management.
6. What is view serializability? Explain with the help of an example.

SECTION-C

7. Explain in detail storage strategies like Indices, B-Tree and Hashing.
8. Explain in detail various concurrency control protocols.
9. Describe the overall architecture of a Database Management System. Discuss each component of DBMS architecture.

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.