



Database Management Systems

(Civil Engineering)

Maximum Marks: 70

Date:25.04.2024 Duration: 3 hours

- Note:**
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10X2M=20 Marks)

- 1 List the Database Applications.
- 2 Define Entity Relationship.
- 3 Define SELECT operation in Relational algebra.
- 4 What is the use of group by clause?
- 5 Define BCNF.
- 6 List different Normal Forms.
- 7 Define Two Phase Commit Protocol.
- 8 Define a checkpoint.
- 9 What is an index? Give an example.
- 10 What is meant by secondary index?

Part-B

Answer All the following questions.

(5X10M=50Marks)

- 11 Name the main steps in the Database design. What is the goal of each step? In which steps is the ER model mainly used? [10M]
OR
- 12 Explain about Database users and Administrators? [10M]
- 13 Explain about Aggregate operators in sql with examples? [10M]
OR
- 14 Discuss correlated nested queries. [10M]
- 15 What is normalization? What are the conditions are required for a relation to be in 2NF, 3NF and BCNF explain with examples. [10M]
OR
- 16 Describe briefly about Integrity Contrants. [10M]
- 17 Explain in detail about the two-phase locking protocol? [10M]
OR
- 18 Explain in detail about Serializability. [10M]
- 19 Explain about Hash based Indexing and Tree based Indexing. [10M]
OR
- 20 Explain in detail about ISAM. [10M]