R20

II B. Tech I Semester Supplementary Examinations, July - 2023
DATABASE MANAGEMENT SYSTEMS
(Com to IT,CSE(AIML),AI,DS,CSE(AIDS),AIML,CSD, CSE(AI) CSE(DS), AIDS)

Time: 3 hours   Max. Marks: 70

Answer any **FIVE** Questions each Question from each unit
All Questions carry **Equal** Marks
~~~~~~~~~~~~~~~~~~~~~~~~~

UNIT-I

1   a)   Define DBMS? Discuss in brief about the applications of DBMS.   [7M]

   b)   Describe in detail about two-tier client-server architecture for the database.   [7M]

Or

2   a)   What is DBA? Mention the functionalities of DBA.   [7M]

   b)   Explain the concept of Data independence.   [7M]

UNIT-II

3   a)   Enumerate the concept of domain, key and Integrity constraints with a suitable   [7M]
         example.

   b)   What is SQL single row function? By means of suitable examples illustrate the   [7M]
         usage of SQL date, character and number functions

Or

4   a)   Write short notes on   [7M]
         i) DDL   ii) DML   iii) Database Schema.

   b)   Explain Logical operations of SQL with a suitable examples.   [7M]

UNIT-III

5   a)   What is a weak entity type? How to model it? Explain with suitable example.   [7M]

   b)   How we can translate E-R diagram with aggregation? Explain.   [7M]

Or

6   a)   Differentiate between independent and correlated nested queries   [7M]

   b)   What is a group function? List and explain how to use group functions in SQL   [7M]
         with appropriate example.

UNIT-IV

7   a)   What is meant by functional dependencies? Discuss about second normal form   [7M]
         with suitable example.

   b)   Explain fourth normal form in detail.   [7M]

Or

8   a)   What are the steps to be followed to convert a relation in 3NF to BCNF?   [7M]

   b)   With a suitable example, illustrate the concept of dependency preserving   [7M]
         decomposition.

UNIT-V

9   a)   Discuss about failure with loss of nonvolatile storage.   [7M]

   b)   What is schedule? Explain about serial and non serial schedule.   [7M]

Or

10 a)   How the concurrency control is done in B+ trees? Explain.   [7M]

   b)   How the lock manager implements lock and unlock requests? Explain   [7M]