BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE
(AUTONOMOUS)
II - B. Tech II-Semester Supplementary Examinations (BR23), Aug - 2025
Database Management System (CSE&AIML)

Time: 3 hours   Max. Marks: 70

Question Paper consists of Part-A and Part-B
*Answer **ALL** the question in **Part-A and Part-B***

PART–A (10X2 = 20M)

		Marks	CO	BL
1. a)	Differentiate between file systems and DBMS	(2M)	CO1	BL2
b)	Draw the Diagram of Levels of Abstraction in a DBMS	(2M)	CO1	BL2
c)	Define Foreign Key	(2M)	CO2	BL3
d)	Write a SQL Query for print today date	(2M)	CO2	BL3
e)	What is a Weak Entity	(2M)	CO3	BL3
f)	Describe the structure of SQL UPDATE statement with where clause	(2M)	CO3	BL3
g)	Define 1NF	(2M)	CO4	BL3
h)	What is the purpose of normal forms	(2M)	CO4	BL3
i)	Compare Atomicity and Durability	(2M)	CO5	BL3
j)	Explain about Problems Caused by Redundancy	(2M)	CO5	BL4

PART–B (5X10 = 50M)

2a.	Explain about Data Models in DBMS	5(M)	CO1	BL2
b.	Explain about Three tier schema architecture for data independence	5(M)		

(OR)

3a.	Draw ER Diagram for A Ternary Relationship Set and explain	5(M)	CO1	BL2
b.	Discuss abut Relationships And Relationship Sets	5(M)		

4a.	Discuss about different DML operations	5(M)	CO2	BL3
b.	Write SQL Queries for the above DML operations (two Queries for each)	5(M)		

(OR)

5a.	Explain about Foreign Key Constraints in Integrity Constraints	5(M)	CO2	BL3
b.	Consider the following relation schema:			

Emp(eid: integer, ename: string, age: integer, sala1l1: real)   5(M)

Works(eid: integer, did: integer, peLtime: integer)

Dept(did: integer, dname: string, budget: real, managerid: integer)

Write the following queries in SQL.

1. Give an example of a foreign key constraint that involves the Dept relation. What are the options for enforcing this constraint when a user attempts to delete a Dept tuple?

2. Write the SQL statements required to create the preceding relations, including appropriate versions of all primary and foreign key integrity constraints.

6a.	Explain different types of joins with suitable SQL queries(3 joins)	5(M)	CO3	BL3
b.	Discuss Set Operations with SQL queries	5(M)		

(OR)

7a.	Discuss Selection and Projection with SQL queries	5(M)	CO3	BL3
b.	Discuss about Sub Queries with suitable SQL queries	5(M)		

8a.	Explain Functional Dependencies	5(M)	CO4	BL3
b.	Explain Boyce Codd Normal Form with example	5(M)		

(OR)

9a.	Discuss schema refinement with suitable Examples	5(M)	CO4	BL3
b.	Explain Fifth Normal Form with example	5(M)		

10a.	Explain about ACID properties	5(M)	CO5	BL4
b.	Explain about Strict Two-Phase Locking	5(M)		

(OR)

11a.	Explain about File Organizations and Indexing	5(M)	CO5	BL4
b.	Explain operations on B$^+$-Trees	5(M)		

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