



**B.Tech III Semester Supplementary Examinations, July 2024**

**DATABASE MANAGEMENT SYSTEMS**  
 (Common to CSE, CSE(AI&ML) & CSE(DS))

**Maximum Marks: 70**

Date:25.07.2024 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)	CO	Bloom Tx
1	Write the types of languages a database system provides?		1	L1
2	Define the terms Entity set, Relationship set?		1	L1
3	List four significant differences between file processing system and DBMS?		2	L1
4	What is functional dependency?		2	L2
5	What are the parts of basic SQL query?		3	L2
6	What is foreign key?		3	L2
7	Define a Transaction? List the properties of transaction.		4	L1
8	Define Two Phase Commit protocol?		4	L1
9	What is linear hashing?		5	L4
10	Explain static hashing?		5	L1

**Part-B**

Answer All the following questions.		(5X10M=50Marks)		
11	Give an overview of database Architecture. [10M]		1	L1
OR				
12	a) Draw an Entity Relationship (ER) for railway reservation system. [5M] b) what is class hierarchy? How is it represented in ER diagram? [5M]		1	L1
13	a) With suitable example explain about rational algebra. [5M] b) Differentiate between delete drop and truncate command? Give examples for each of them? [5M]		2	L2
OR				
14	a) Explain triggers and active databases in detail. [5M] b) Explain various DML statements in SQL with example. [5M]		2	L2
15	Consider the relation R={A, B,C,D,E,F} and FDs and FD's A →BC,F →A,C→A, into R1(A,C,D) R2(B,C,D) and R3(E,F,D) lossless? Explain the requirement of lossless decomposition? [10M]		3	L2

	OR		
16	Explain functional dependency and multivalued dependency with examples? [10M]	3	L3
17	a) Explain transaction states and desirable properties. [5M] b) Define dead lock and explain the two ways to prevent dead lock. [5M]	4	L3
	OR		
18	Write in detail about Remote Backup systems? [10M]	4	L2
19	Explain ACID property with suitable example. [10M]	5	L4
	OR		
20	Write main differences between ISAM and B+ tree indexes? [10M]	5	L4