



R22 Regulation

Subject code:4E4FD

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)



B.Tech IV Semester Supplementary Examinations, December 2025

DATABASE MANAGEMENT SYSTEMS

(IT)

Maximum Marks: 60

Date:20.12.2025

Duration: 3 hours

- Note: 1.This question paper contains two parts A and B.
 2. Part A is compulsory which carries 10 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit.
 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 (10X1M=10 Marks)		Marks	CO	Bloom Tx
1.a)	Define Entity -Relationship Model.	1M	CO1	BL1
b)	Write the importance of super key.	1M	CO1	BL2
c)	Define relational database query.	1M	CO2	BL1
d)	What is the use of integrity constraints?	1M	CO2	BL1
e)	What is meant by functional dependencies?	1M	CO3	BL1
f)	Differentiate between partial and transitive dependency.	1M	CO3	BL2
g)	What are different storage types?	1M	CO4	BL1
h)	What are the different phases (states) of transaction?	1M	CO4	BL2
i)	Present the need for Query Optimization.	1M	CO5	BL2
j)	What is meant by query tuning?	1M	CO5	BL1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	Bloom Tx
2	a) Describe about views of data. b) What are the functions of database administrator?	6M 4M	CO1	BL2
OR				
3	Analyze and Explain an E-R diagram for a Life insurance company with almost all components.	10M	CO1	BL4
4	Explain the Embedded SQL and Dynamic SQL with examples	10M	CO2	BL2
OR				
5	For the following relation R and set of functional dependencies F : R(A,B,C,D,E), F = {AC → E, B → D, E → A }. Show all candidate keys.	10M	CO2	BL3
6	Discuss in detail the different types of Normal Forms with suitable examples.	10M	CO3	BL2
OR				

7	a) Explain decomposition using multivalued dependencies. b) Differentiate between BCNF and 3NF with suitable examples.	5M 5M	CO3	BL3
8	Explain ACID properties and illustrate them through examples.	10M	CO4	BL2
OR				
9	Write a short note on: a) Transaction concept. b) Deadlock.	10M 5M	CO4	BL2
10	Explain the concept of materialized views and their role in query optimization.	10M	CO5	BL3
OR				
11	a) Discuss the basic form of SQL query? b) Give the diagrammatic representation to indicate the basic steps in query processing.	3M 7M	CO5	BL3