



*R20 Regulation* *Subject code: 307AA*  
**TKR COLLEGE OF ENGINEERING AND TECHNOLOGY**  
 (Autonomous, Accredited by NAAC with 'A+' Grade)

**B.Tech VII Semester Regular/Supplementary Examinations, December 2024**

**DATABASE MANAGEMENT SYSTEMS**  
 (CE)

**Maximum Marks: 70**

Date:04.01.2025

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	Blooms Tx
1	What is a data model? List the types of data model used		1	L1
2	What does the cardinality ratio specify?		1	L1
3	When can we use group by clause, explain		2	L1
4	Define-relational algebra.		2	L1
5	What is meant by triggers?		3	L1
6	What is meant by computing the closure of a set of functional dependency?		3	L1
7	Define transaction management.		4	L1
8	List and define ACID properties		4	L1
9	Give one example for hash based indexing.		5	L1
10	Visualize the structure of B+ tree?		5	L1

**Part-B**

Answer All the following questions.		(5X10M=50Marks)	CO	Bloom Tx
11	Explain in detail about Database Management System advantages over file management system. [10M]		1	L2
OR				
12	Describe the characteristics of a database system [10M]		1	L3
13	What is a join operator? Explain about conditional join and natural join with syntax and an example. [10M]		2	L1
OR				
14	Explain about entities, attributes and its relation with entity sets. Sketch an ER model for library management system. [10M]		2	L2
15	Define normalization. List and Explain different normal forms with examples. [10M]		3	L1
OR				

16	Explain about schema refinement in database design.	[10M]	3	L2
17	Explain transaction states with examples?	[10M]	4	L2
OR				
18	Explain concurrency control with lock based protocols	[10M]	4	L2
19	Discuss about file organizations and indexing?	[10M]	5	L2
OR				
20	Explain about Search and Insert in Tree Structured Indexing?	[10M]	5	L2