R20 Regulation *Subject code:* **3E5EA**

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Regular/Supplementary Examinations, February 2024

DISTRIBUTED DATABASES

(CSE)

Maximum Marks: 70 Date: 24.02.2024 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.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

	Part-A	CO	Bloom Tx
All the following questions carry equal marks (10x2M=20 Marks)			
1	Why distributed databases are essential?	CO1	L2
2	List the components of DDBMS.	CO1	L2
3	What is meant by query optimization?	CO2	L1
4	What are the layers of query processing?	CO2	L2
5	Give the properties of transaction.	CO3	L1
6	Define deadlock.	CO3	L1
7	What is meant by network partitioning?	CO4	L1
8	Mention the importance of reliability concept.	CO4	L2
9	Define persistent programming.	CO5	L1
10	Write the importance of object identity in an Object-Oriented Data Model.	CO5	L2
	Part-B		
Answer All the following questions. (5X10M=50Marks)			
11	Explain with diagram, the reference architecture of a DDBMS. (10M)	CO1	L2
	OR		
12	What are the distribution design issues? Explain with examples. (10M)	CO1	L3
13	a) Explain the problems in query language. (5M) b) Write the objectives in query processing optimization. (5M)	CO2	L2
	OR		
14	a) What are the steps in query optimization? (5M) b) Explain query decomposition. (5M)	CO2	L2
15	a) Discuss concurrency control distributed transactions. (5M) b) What are the advantages of concurrency control in distributed transactions? (5M)	CO3	L2
	OR		
16	What is Transaction? Explain the properties of Transactions with example. (10M)	CO3	L3
17	Discuss the failures in Distributed DBMS. (10M)	CO4	L2
	OR		
18	Explain the general architecture of a parallel database system & shared	CO4	L3

	memory architecture. (10M)		
19	Discuss the fundamental object concepts and models in Distributed Object Database Management Systems with an illustration. (10M)	CO5	L4
	OR		
20	a) Discuss the role of persistent programming in distributed object databases. (5) b) Differentiate between Object-Oriented Database Management Systems (OODBMS) and Object-Relational Database Management Systems (ORDBMS). (5)	CO5	L3