R20 Regulation *Subject code: 3E5GA & 3E5HA*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, April 2026

DISTRIBUTED DATABASES

(Common to CSE(DS) & CSE(AI&ML))

Maximum Marks: 70 Date: 24.04.2026 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

All the following questions carry equal marks (10X2M=20 Marks)		Marks	CO	BTL
1	Define Distributed Database	2M	1	L1
2	Explain correctness rules of fragmentation?	2M	1	L1
3	Explain Query Decomposition?	2M	2	L1
4	Give an example of operation tree?	2M	2	L1
5	Define Transaction?	2M	3	L1
6	Explain workflows in transaction?	2M	3	L1
7	What is meant by network partitioning?	2M	4	L1
8	Explain parallel execution problems?	2M	4	L1
9	What do you mean by horizontal class partitioning?	2M	5	L1
10	What is meant by distributed object storage?	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	Explain basic architectural model and Explain multi database system with diagram	10M	1	L2
	OR			
12	What is fragmentation? Explain clustering algorithm using vertical fragmentation	10M	1	L2
13	Explain each layers of query processing with neat diagram	10M	2	L2
	OR			
14	Explain in detail about INGREES, System R algorithms.	10M	2	L2
15	What are problems in implementing non-monotonic reasoning in problem solving process	10M	3	L2
	OR			
16	a) Explain Dead lock management in distributed database b) Explain serializability theory with an example	5M 5M	3	L2

17	a) Explain failures in distributed system b) Explain briefly about network partitioning	5M 5M	4	L2
	OR			
18	Explain parallel system architecture with neat diagram	10M	4	L2
19	a) Compare OODBMS with RDBMS b) Explain about persistent programming languages.	5M 5M	5	L2
	OR			
20	a) Explain about object storage b) Explain briefly about architectural issues in distributed object DBMS	5M 5M	5	L2