R20 Regulation *Subject code: 3E5EA*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech V Semester Supplementary Examinations, June/July 2023

DISTRIBUTED DATABASES

(Computer Science & Engineering)

Maximum Marks: 70 Date:04.07.2023 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)

1 Why distributed databases are essential?
2 What are the distribution design issues? Explain with examples.
3 Write short notes on layers of query processing.
4 How query optimization is useful in distributed databases?
5 List the properties of transaction.
6 Define False Deadlock. How are false dead locks detected by the dead lock detection systems?
7 How is fault tolerance achieved in distributed database?
8 Where is parallel database used?. What is parallel database?
9 What do you mean by distributed objects?. Define DODBMS.
10 List the drawbacks of Persistent Programming Languages.

Part-B

Answer All the following questions. (10MX 5=50Marks)

11 A. Why we need to have distributed databases? (3)
B. Distinguish the features of distributed databases with centralized databases. (7)

OR

12 Discuss in detail on Distributed Database Architecture with neat diagram. (10)

13 Discuss the following:
A. Fragmentation transparency (5)
B. Control of redundancy (5)

OR

14 Discuss the following:
A. Referential integrity with example (5)
B. Semi-join with an example (5)

15 List and explain anomalies of concurrency control in distributed systems. (10)

OR

16 Explain wait die and wound wait method with help of an example. (10)

17 A. Categorize the types of failures in failures in Distributed DBMS. How do distributed systems handle failures? (5)
B. Brief on Distributed reliability protocols. (5)

OR

18 Explain the following:

A. Load Balancing Approach in Distributed System. (4)

B. Parallel query processing. (6)

19 Explain briefly about the following:

A. Distributed garbage collection. (5)

B. Transaction management in object DBMS. (5)

OR

20 A. Compare between OODBMS and ORDBMS. (6)

B. Describe Object Management Architecture. (4)