



R20 Regulation

Subject code: 3E5GA

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

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

DISTRIBUTED DATABASES
(CSE(AI & ML))

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

(10 X 2 Marks=20 Marks)

- 1 What are the advantages and disadvantages of distributed DBMS?
- 2 List out the features of DDBMS.
- 3 What are the objectives of Distributed Query Processing?
- 4 Mention the layers of query processing.
- 5 What is transaction and its properties in DBMS?
- 6 How can we prevent deadlock in DBMS?
- 7 Give the reliability techniques in distributed database system.
- 8 What is load balancing in distributed database?
- 9 Define object query processing.
- 10 What are the benefits of using OODBMS over an ORDBMS?

Part-B

Answer All the following questions.

(5 X 10 Marks=50 Marks)

- 11 What is horizontal and vertical fragmentation? What are the types of horizontal fragmentation?
(10 Marks)
OR
- 12 Explain DDMBS Architecture with neat diagram. (10 Marks)
- 13 What are homogenous and heterogeneous database. Give the architecture of heterogeneous database along with some query processing issues. (10 Marks)
OR
- 14 Explain the phases of query processing in distributed database. (10 Marks)
- 15 What are the various concurrency control techniques? Compare Lock based Concurrency Control strategies in detail. (10 Marks)
OR
- 16 Compare Distributed Deadlock prevention to Distributed Deadlock Avoidance. Explain one scheme of Distributed deadlock Detection and Recovery. (10 Marks)
- 17 What problem can occur in a distributed system due to the failure of link and partitioning of the network? What are the ways by which recovery can take place? (10 Marks)

OR

- 18 Explain in detail about Parallel database system architectures. (10 Marks)
- 19 A. Describe briefly architectural issues in object database management system. (5 Marks)
B. Write note on distributed object storage. (5 Marks)
- OR
- 20 A. Briefly explain the role of persistent programming languages in OODBMS. (5 Marks)
B. Write note on OODBMS and ORDBMS. (5 Marks)