



R20 Regulation

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

Subject code: 3E5HA

B.Tech V Semester Regular Examinations, January 2023

DISTRIBUTED DATABASES

(Professional Elective)

(CSE (DS))

Maximum Marks: 70

Date: 20.01.2023 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 What is heterogeneous database?
- 2 Define allocation problem.
- 3 Write about query optimization process.
- 4 Define hybrid fragmentation.
- 5 What are types of workflows?
- 6 Define complete schedule and give an example.
- 7 What is fault tolerance approach?
- 8 Write about distributed database servers.
- 9 Define abstract data type.
- 10 What is persistence of objects?

Part-B

Answer All the following questions.

(10MX 5=50Marks)

- 11 A. Define distributed database system and explain how it is different from other systems. (5M)
B. Discuss on problem areas in distributed DBMSs. (5M)
OR
- 12 A. Explain architectural alternatives in DDBMS. (5M)
B. Discuss on requirements of vertical fragmentation. (5M)
- 13 A. Explain layers of query processing. (5M)
B. Discuss on steps in query decomposition. (5M)
OR
- 14 A. Explain localization of distributed data. (5M)
B. Discuss on INGRES algorithm. (5M)
- 15 A. Explain situations that can occur with improper isolation in transactions. (5M)
B. Discuss on flat and nested transactions. (5M)
OR
- 16 A. Explain basic time stamp ordering algorithm. (5M)
B. Discuss on rules to avoid deadlocks. (5M)

- 17 Explain Two-phase commit protocol with actions flowchart. (10M)
OR
- 18 A. Sketch and explain architecture of parallel database system. (5M)
B. Explain parallel query processing. (5M)
- 19 A. Discuss on horizontal class partitioning. (5M)
B. Explain object server and page server architectures. (5M)
OR
- 20 A. Discuss on inheritance in OODBMS. (5M)
B. Compare OODBMS and ORDBMS. (5M)