



R20 Regulation *Subject code: 3E5EA*
TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous, Accredited by NAAC with 'A' Grade)

B.Tech V Semester Regular Examinations, January 2023

DISTRIBUTED DATABASES
(Professional Elective)
(Computer Science & Engineering)

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 Sketch the DDBS environment.
- 2 What is allocation problem?
- 3 Define query processing problem.
- 4 What is localization of distributed data?
- 5 What is phantom condition?
- 6 Explain wait for graph is used in deadlocks.
- 7 Discuss on sources of system failure.
- 8 Explain distributed database servers.
- 9 Define collection.
- 10 Explain inheritance.

Part-B

Answer All the following questions.

(10MX 5=50Marks)

- 11 A. Explain layers of transparency. (5M)
B. Explain architectural models for distributed DBMSs. (5M)
OR
- 12 Explain horizontal fragmentation with suitable examples. (10M)
- 13 A. Sketch and explain generic layering scheme for distributed query processing. (5M)
B. Explain reduction for horizontal and vertical fragmentation. (5M)
OR
- 14 Define query optimization and explain INGRES algorithm with an example. (10M)
- 15 A. Explain termination conditions of transactions. (5M)
B. Explain properties of transaction. (5M)
OR
- 16 A. Explain Serializability theory with examples. (5M)
B. Discuss on methods to detect distributed deadlocks. (5M)
- 17 Explain Two-Phase commit protocol and sketch its flowchart. (10M)

OR

- 18 A. Explain different partitioning schemes. (5M)
B. Explain intra-operator and inter-operator load balancing. (5M)
 - 19 A. Explain the horizontal and vertical class partitioning. (5M)
B. Discuss on alternative client/server architectures. (5M)
- OR
- 20 A. Discuss on persistent programming languages. (5M)
B. Write the differences between OODBMS and ORDBMS. (5M)