



R17 Regulation

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

Subject code: 1E7FF

B.Tech IV Year I Semester Regular Examinations, February 2021

DISTRIBUTED DATABASES

(Information Technology)

Maximum Marks: 70

Date: 02.03.2021 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)

- 1 What is the role of integrity in database?
- 2 List the features of distributed database system
- 3 How to handle fragment queries in DDBMS?
- 4 Justify the importance of query optimization in DDBMS
- 5 Write the example for nested transaction
- 6 Examine about concurrency control in distributed databases
- 7 Differentiate error, failure and fault
- 8 Define checkpoint
- 9 Discuss the importance of pointer swizzling in OODBMS
- 10 Why interoperability is important in distributed environment?

Part-B

Answer All the following questions.

(10M X 5=50Marks)

- 11 Compare the advantages and disadvantages of Distributed and Centralized Databases with neat diagram. (10M)
- OR**
- 12 a) Define fragmentation. (5M)
b) Explain horizontal and vertical fragmentation with customer database. (5M)
 - 13 a) Summarize the grouping and aggregate functions used in distributed database. (5M)
b) Construct Equivalence transformation rules for queries in distributed environment. (5M)
- OR**
- 14 a) Discuss about query optimization techniques. (5M)
b) Identify the uniqueness of parametric queries. (5M)
 - 15 a) Write notes on various concurrency control techniques. (5M)
b) Explain Optimistic Concurrency Control Algorithm. (5M)

OR

- 16 a) Discuss about deadlock handling methods in distributed database. (5M)
b) Differentiate two phase and three phase commit protocol used in distributed database system. (5M)

- 17 a) Describe about data maintenance in distributed catalog. (5M)
b) Explain the distributed reliability protocols. (5M)

OR

- 18 a) What are the security issues in distributed database system? (5M)
b) Analyze the ways to ensure security in distributed system. (5M)

- 19 a) Discuss about cache consistency problem. (5M)
b) Demonstrate the working of object query processing architecture. (5M)

OR

- 20 a) How recovery can be done in multi database system? (5M)
b) Justify CORBA is an example of the distributed object paradigm in terms of interoperability. (5M)