

**R18**

Code No: 155AY

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year I Semester Examinations, July/August - 2023

**DISTRIBUTED DATABASES**

(Common to CSE, CSE(N))

Time: 3 Hours

Max. Marks: 75

- Note:** i) Question paper consists of Part A, Part B.  
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.  
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

**PART – A**

**(25 Marks)**

- 1.a) What are the distribution design issues? [2]
- b) What are the information requirements during allocation? [3]
- c) What are the layers of query processing? [2]
- d) What is query optimization? [3]
- e) What are the types of Transaction? [2]
- f) What is meant by deadlock? List out the conditions for deadlock? [3]
- g) What is meant by network partitioning? [2]
- h) What are the reliability protocols in distributed systems? [3]
- i) What are the applications of object identification? [2]
- j) What is meant by distributed object storage? [3]

**PART – B**

**(50 Marks)**

- 2.a) Explain the principles of distributed databases.
  - b) Explain about Architectural Models for DDBMS. [5+5]
- OR**
- 3.a) Explain Briefly about DDBMS Architecture.
  - b) Briefly explain distributed data processing. [5+5]
- 4.a) Explain about query processing problems.
  - b) Explain briefly about query decomposition and data localization. [5+5]
- OR**
- 5.a) Briefly describe the characterization of query processors.
  - b) Explain any one distributed query optimization algorithm. [5+5]
- 6.a) Briefly explain transaction management.
  - b) Explain deadlock management. [5+5]
- OR**
- 7.a) Explain different optimistic methods for distributed concurrency control.
  - b) Explain the distributed deadlock detection. [5+5]

- 8.a) Explain the failures in DDBMS.  
b) What are different types of Parallel databases architecture? [5+5]

**OR**

- 9.a) Briefly explain fault-tolerance in distributed systems.  
b) What is parallel data placement? Explain with an example? [5+5]

- 10.a) Explain Fundamental object concepts with an example.  
b) Briefly explain persistence of objects. [5+5]

**OR**

- 11.a) Comparison between OODBMS and ORDBMS.  
b) Explain object query processing with example. [5+5]

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