Code No: 155AY

R18

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year I Semester Examinations, March - 2021
DISTRIBUTED DATABASES
(Computer Science and Engineering)

Time: 3 Hours
Max. Marks: 75

Answer any five questions
All questions carry equal marks
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1.a) Explain about Horizontal and vertical fragmentation strategies with examples.
 b) What are the features of the reference architecture for distributed databases?   [8+7]

2.a) What is an operator tree of a query? What is the use of operator graph? Discuss.
 b) Explain the procedure for simplifying joins between horizontally fragmented relations.
                                                                                        [7+8]

3. Explain the following with respect to distributed databases
 a) Operations in parametric query
 b) GROUP by operation for evaluating aggregate functions.   [7+8]

4.a) What are the objectives of query processing optimization? Explain.
 b) How an optimization graph can be drawn for a given query? Discuss.   [7+8]

5.a) Explain about semi-join reduction in distributed databases
 b) Discuss the differences between distributed join and non-distributed join.   [8+7]

6.a) Write about the computational structure of distributed transaction.
 b) Distinguish between preemptive and non-preemptive methods for deadlock prevention.
                                                                                        [7+8]

7.a) Explain the optimistic approach to concurrency control in distributed databases.
 b) What are the issues related to query processing and load balancing in parallel database
    systems? Discuss.   [8+7]

8.a) What is object management architecture? Explain.
 b) Explain the architecture of CORBA.   [7+8]

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