R15

Code No: 825AC

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MCA V Semester Examinations, June/July - 2018
DISTRIBUTED DATABASES

Time: 3 Hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A

5 × 5 Marks = 25

1.a) What are the advantages of a distributed database management system over a centralized DBMS? [5]
b) Give the comparison of global queries and fragmented queries. [5]
c) Discuss the ways in which the concurrency control approaches can be classified. [5]
d) Define reliability. What are the types of failures in distributed DBMS? [5]
e) Differentiate between DDBMS and MDBMS. [5]

PART - B

5 × 10 Marks = 50

2. Why is data replication useful in Distributed Database and what typical units of data are replicated? [10]

OR

3. Distributed databases can be fragmented in many ways. Define the term fragmentation and explain using real world examples any three types of fragmentation that can be carried out. [10]

4. What is query optimization? Give the framework for query optimization in distributed environment. [10]

OR

5. List steps of query decomposition and explain any one from that. [10]

6. Consider a failure that occurs during 2PC for a transaction. For each possible failure, explain how 2PC ensures transaction atomicity despite the failure? [10]

OR

7. Explain briefly about timestamp-based concurrency algorithms. [10]

8. Define a catalog. How is it maintained in distributed databases? [10]

OR

9. Describe the role of check points and cold restart mechanisms in dealing with inconsistencies in transactions. [10]

10. Explain briefly about architectural issues in distributed object DBMS. [10]

OR

11. Give objective of query processing in view of distributed database. [10]

---oo0oo---