Code No: 825AC

R15

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MCA V Semester Examinations, January - 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 is replication transparency? What is its significance? [5]
   b) Demonstrate the use of parametric queries. [5]
   c) What is a nested transaction? Quote examples. [5]
   d) Define reliability. How to measure reliability of a system? [5]
   e) Give object query processor architectures. [5]

PART - B

5×10 **Marks = 50**

2. With necessary reference structure explain various levels of distribution transparency. Quote an example application. [10]

OR

3. What is an integrity constraint? What is its importance in distributed databases? Explain with suitable examples. [10]

4. How can qualified relations optimize query processing in distributed databases? Give illustrative examples. [10]

OR

5. Describe a frame work for query optimization and explain general queries optimization. [10]

6.a) Explain the architectural aspects of distributed transactions.
   b) Give any one protocol for optimistic methods for concurrency control. [5+5]

OR

7. What is a deadlock in distributed databases? Suggest various ways of handling them with illustrations. [10]

8. Explain two-phase commit protocol and compare it with three-phase commit protocols.[10]

OR

9. What are the various approaches to detect inconsistencies in distributed databases data? Explain any one resolution method. [10]

10. Does common object request broker architecture provide interoperability? Justify your answer with necessary discussions. [10]

OR

11. Explain transaction management in multi database system. Discuss challenges faced here compared to centralized database. [10]