R15

Code No: 824AF

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MCA IV Semester Examinations, April/May - 2019
DISTRIBUTED SYSTEMS

Time: 3hrs **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 design requirements for distributed architectures? [5]
b) What is the need for thread synchronization? Discuss briefly. [5]
c) Explain briefly about Routing overlays. [5]
d) What are the advantages and drawbacks of multi version timestamp ordering in comparison with ordinary timestamp ordering? [5]
e) Give a brief note on the features and advantages of Kerberos. [5]

PART - B

5 × 10 Marks = 50

2. Discuss about system models for distributed systems. [10]

OR

3. Explain how communication between distributed objects is achieved by means of RMI? [10]

4. Discuss about architecture and principals of monolithic Kernel and micro Kernel architectures. [10]

OR

5. Discuss about X.500 Directory Service. [10]

6. Explain Cristian's algorithm and Berkeley algorithm for synchronizing clocks. [10]

OR

7. Explain the algorithm for mutual exclusion in a distributed system. [10]

8. Explain any one optimistic concurrency control algorithm with relevant example. [10]

OR

9. Explain about Atomic commit protocols. [10]

10. Explain in detail about public – key cryptographic algorithms. [10]

OR

11. Discuss about design and implementation issues in DSM. [10]

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