CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
IV–B.TECH–I–Semester End Examinations (Regular) - November- 2023
DISTRIBUTED SYSTEMS
(CSE)

[Time: 3 Hours]   [Max. Marks: 70]

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 20 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   (20 Marks)

1. a) Give an Example of a URL. [2M]
   b) List the characteristics of inter process communications. [2M]
   c) What are the requirements of the distributed systems? [2M]
   d) List out some issues in distributed file system. [2M]
   e) Define Bully algorithm. [2M]
   f) Present a note on external synchronization. [2M]
   g) Define distributed deadlock. [2M]
   h) Write about two phase locking. [2M]
   i) List the advantages and disadvantages of DSM. [2M]
   j) What is distributed shared memory? [2M]

PART-B   (50 Marks)

2a). Explain RPC with a neat example. [5M]

b). Discuss how distributed systems are more scalable than the centralized systems? [5M]

OR

3. Explain Architectural and fundamental models in distributed system. [10M]

4. Why should UFIDs be unique across all possible file system? How is uniqueness for UFIDs ensured? Explain. [10M]

OR

5. What resources are used when thread is created? How do they differ from those used when process Is created? [10M]

6. Explain the differences between IP and overlay routing for peer-to-peer applications. [10M]

OR

7. How to implement mutual exclusion between processes in a distributed system using Ricart and Agrawala's algorithm? Explain. [10M]

8. List the advantages and drawbacks of multi version timestamp ordering in comparison with ordinary timestamp ordering? Explain. [10M]

OR

9. Discuss how a non-recoverable situation cloud arise if write locks are released after the last operation of transaction but before its commitment. [10M]

10. Explain in which respects DSM is suitable or unsuitable for client server system. [10M]

OR

11. Discuss whether message passing or DSM is preferable for fault-tolerant applications. [10M]

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