

Code No.: CS741PE

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CMR ENGINEERING COLLEGE: HYDERABAD
UGC AUTONOMOUS

IV-B.TECH-I-Semester End Examinations (Supply) - April- 2024
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) Compare centralized and distributed system. [2M]
- b) Distinguish between buffering and caching. [2M]
- c) Define Context switch. [2M]
- d) List the characteristics of file system. [2M]
- e) Differentiate unicast and multicast communication. [2M]
- f) Write a short note on elections. [2M]
- g) Define distributed deadlock? [2M]
- h) Explain recovery of nested transactions. [2M]
- i) Discuss about distributed shared memory. [2M]
- j) Write about sequential consistency. [2M]

PART-B

(50 Marks)

- 2.a) Describe the distributed computing as utility [5M]
 - b) What are the benefits of resource sharing? Explain about its significance? [5 M]
- OR**
3. What are the characteristics of inter process communication? [10M]
 4. Explain file service architecture with a neat diagram. [10M]
- OR**
5. Enumerate the differences between thread and a process. Explain the thread scheduling. [10M]
 - 6.a) Write a short note on clocks, events and process states. [5M]
 - b) Give an example of ring based algorithm to show that processes are not necessarily granted entry to the critical section in happened before order. [5M]
- OR**
7. Suggest how to adapt the casually ordered multicast protocol to handle overlapping groups. [10M]
 8. What is Concurrency control? how it is important in distributed systems. [10M]
- OR**
9. Explain with an example how two transactions are interleaved which are serially equivalent at each server but it is not serially equivalent globally. [10M]
 10. Explain how primary-backup model of replication is fault tolerant. [10M]
- OR**
11. Discuss whether message passing or DSM is preferable for fault-tolerant applications. [10M]
