B.E. / COMP / Sem-VIII / CBCGC / R-19 / 'C' Scheme / Subi-DC / Date :-02/12/2024

QP. Code :-10064784

(Time: 3 Hours)   Total Marks: 80

N.B: 1) Question **number 1** is compulsory.
      2) Attempt **any THREE** out of the remaining.
      3) Assume suitable data if **necessary** and justify the assumptions.
      4) Figures to the **right** indicate full marks.

Q 1

  A Explain key Features of Global Scheduling algorithm.   **[05]**

  B What are the services offered by middleware?   **[05]**

  C Differentiate between RMI and RPC.   **[05]**

  D Explain synchronization in DFS with its challenges.   **[05]**

Q 2

  A Justify how load balancing is useful in distributed system.   **[10]**

  B What is fault tolerance? Explain failure models.   **[10]**

Q 3

  A Explain group communication.   **[10]**

  B Explain Raymond's tree based algorithm for mutual exclusion.   **[10]**

Q 4

  A Explain Ricart-Agrawala's algorithm and how it optimizes the message   **[10]**
      overhead in achieving mutual exclusion.

  B Discuss Google file system (GFS) as a scalable distributed file system.   **[10]**

Q 5

  A Explain bully election algorithm.   **[10]**

  B Discuss code migration in distributed system.   **[10]**

Q 6

  A Explain any five data centric consistency models.   **[10]**

  B Discuss design issues in distributed systems.   **[10]**

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