1T01876 - T.E. Computer Science and Engineering (Artificial Intelligence and Machine Learning) (Choice Based) (R-19-20 ' C' Scheme)SEMESTER - VI / 37476 - Distributed Computing
QP CODE : 10028956 DATE: 18/05/2023

Time: 3 hours **Max. Marks: 80**

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Instructions:

1) Only **Four question** need to be solved.
2) All question carries equal marks.
3) Illustrate your answers with neat sketches wherever necessary.
4) Figures to the right indicate full marks.
5) Assume suitable additional data, if necessary and clearly state it.
6) All sub-questions of the same question should be grouped together.

Q.1	**(a)**	What are various issues in distributed system? Explain minimum 5 issues. Each issue carries 1 mark	**05**
	(b)	Justify how Ricart-Agrawala's algorithm optimized the Message overhead in achieving mutual exclusion	**05**
	(c)	What are desirable features of global scheduling algorithm.	**05**
	(d)	Compare process and thread.	**05**
Q.2	**(a)**	Explain the message communication model transient synchronous, transient asynchronous, persistent synchronous and persistent asynchronous in detail.	**10**
	(b)	What is RPC? Explain the working of RPC in detail with the help of diagram.	**10**
Q.3	**(a)**	Explain Suzuki-Kasami Broadcast Algorithm of mutual exclusion.	**10**
	(b)	Explain the process of synchronization w.r.t. physical and logical clocks.	**10**
Q.4	**(a)**	Compare Load sharing to Task Assignment and Load balancing strategies for scheduling processes in a distributed system.	**10**
	(b)	Explain Bully Election algorithm with the help of an example.	**10**
Q.5	**(a)**	Explain in detail different Data centric consistency models.	**10**
	(b)	Explain Maekawa's algorithm in detail and also specify properties of Quorum Set.	**10**
Q.6	**(a)**	Write a note on code migration.	**10**
	(b)	What are the features of DFS and explain and draw and explain Model file service architecture.	**10**
