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Reg. No.												

Question Paper Code	11790

B.E./B.Tech. - DEGREE EXAMINATIONS, APRIL/MAY 2023

Sixth Semester

Computer Science and Engineering

CS8603 – DISTRIBUTED SYSTEM

(Regulations 2017)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks, K-Level, CO
1.	Define distributed system.	*2,K1, CO1*
2.	State the various models of communication network.	*2,K1, CO1*
3.	Differentiate unicasting and multicasting.	*2,K2, CO2*
4.	State consistent cut.	*2,K1, CO2*
5.	Predict the necessary conditions to satisfy the consistent global state.	*2,K3, CO3*
6.	Identify consistent snapshot.	*2,K3, CO3*
7.	Define rollback recovery.	*2,K1,CO5*
8.	Compare coordinated check pointing versus uncoordinated check pointing.	*2,K2,CO5*
9.	List the P2P overlay and its types.	*2,K1,CO6*
10.	Define content addressable networks (CAN).	*2,K1,CO6*

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11.	a)	Explain the various design issues and challenges in the distributed system.	*13, K2,CO1*
		OR	
	b)	Explain the various primitives of distributed communication.	*13, K2,CO1*
12.	a)	Illustrate the Bagrodia algorithm for binary rendezvous with an example.	*13, K2,CO2*
		OR	
	b)	Discuss in detail about the distributed algorithm to implement total order and causal order of messages.	*13, K2,CO2*

13. a) Illustrate the Chandy-Lamport global state snapshot algorithm with an example. *13,K2,CO3*

OR

b) Describe FIFO, non-FIFO executions and casually ordered executions. *13,K2,CO3*

14. a) Explain in detail about Koo-Toueg Coordinated check pointing algorithm with an example. *13, K2,CO5*

OR

b) Demonstrate Juang–Venkatesan algorithm for asynchronous check pointing and recovery. *13, K2,CO5*

15. a) Discuss the CAN maintenance and CAN optimizations. *13, K2,CO6*

OR

b) Explain the main issues in designing a DSM system and mention its advantages and disadvantages. *13, K2,CO6*

PART - C (1 × 15 = 15 Marks)

16. a) Explain Ricart Agarwala Mutual exclusion algorithm and Suzuki–Kasami's broadcast algorithm. *15, K3,CO4*

OR

b) Illustrate Knapp's classification of distributed deadlock detection algorithms. *15, K3,CO4*