Reg. No.:

06 A 104 CS8603

9635 – STELLA MARY'S COLLEGE OF ENGINEERING

103-DEPARTMENT OF CIVIL ENGINEERING

INTERNAL EXAM -II (2022 – 2023 EVEN)

III Year / VI Semester

CS8603 – DISTRIBUTED SYSTEMS

Max. : 60 Marks

Date &Time: 17/04/2023 & 9:15 AM to 11:15 AM

Note:

- *Write the examination using blue or black pen*
- *Draw neat sketch with pencil (if necessary)*
- *Use tables or charts (if necessary)*
- *Answer all questions*

Q.No.	Question	Bloom's Taxonomy Level	CO
	Part – A **(Each Question carries 2 Marks)=5*2=10 marks**		
1.	List the four classes of Knapp's classification of distributed deadlock detection algorithms.	Remembering	(CO3)
2.	Define Z-dependency.	Remembering	(CO4)
3.	What are the conditions for byzantine agreement problem.	Remembering	(CO4)
4.	What are the performance features of P2P systems?	Remembering	(CO5)
5.	List out the three requirements of the critical section problem.	Analyzing	(CO5)
	Part – B **(Answer for each question carries 10 Marks)5*10=50 marks**		
Q.No.	**Question**	**Bloom's Taxonomy Level**	**CO**
6.	(a) Explain about the chandy–misra–haas algorithm for the AND model	Creating	CO3
	OR		
	(b) Formulate the mitchell and merritt's algorithm for the single-resource model.	Creating	CO3
7.	(a) Elaborate the pessimistic logging, optimistic logging and casual logging.	Analyzing	CO4
	OR		
	(b) What is rollback? and explain the several types of messages for rollback.	Remembering	CO4

8.	(a) Explain agreement in (message-passing) synchronous systemswith failures	Evaluating	CO4
	OR		
	(b) Demonstrate in detail about the juang–venkatesan algorithm forasynchronous check pointing and recovery.	Understanding	CO5
9.	(a) Summarize in detail how node insertion and node deletion are applied in tapestry	Understanding	CO5
	OR		
	(b) Discuss the CAN maintenance and CAN optimizations	Creating	CO2
10.	(a) Discuss Lamport's bakery algorithm Lamport's WRWR mechanism and fast mutual exclusion.	Creating	CO5
	OR		
	(b) Develop a detailed implementation of causal consistency, andprovide a correctness argument for your implementation	Creating	CO5

12/4/25

Prepared by

SUBITHA.V AP/CSE

12/4/25

Verified by

(Santhiya.G [AP/CSE])

HOD

12/4/25

[Dr.F.R.Shiny Mol M.E.]