

Register No : _____

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)

B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV /DEC 2024

Fifth Semester

Information Technology

CS3551- Distributed Computing

Regulations – 2021

Duration : 3 Hrs

Maximum: 100 Marks

PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
1.	What is message passing?	RE	1	2
2.	Define transparency and its types.	RE	1	2
3.	Define asynchronous programming.	RE	2	2
4.	What is Chandy-Lamport algorithm?	RE	2	2
5.	Name the two types of messages used in Ricart-Agrawala's algorithm.	RE	3	2
6.	What is deadlock avoidance?	RE	3	2
7.	Compare clock skew and clock drift.	UN	4	2
8.	List drawback of synchronous check pointing.	AN	4	2
9.	Infer the situations where PaaS may not be the best option.	UN	5	2
10.	How virtualization employed in Azure?	UN	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*13 = 65)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a i Differentiate message passing and shared memory system.	AN	1	7
	ii Explain how a parallel system differs from a distributed system.	AN	1	6
Or				
	b i What is global state? Explain global state of distributed systems.	UN	1	7
	ii Explain the applications of distributed computing and challenges.	UN	1	6
12.	a Elucidate on the total and casual order in distributed system with a neat diagram.	AP	2	13
Or				
	b Explain about Chandy-Lamport Snapshot algorithms for FIFO channels.	UN	2	13

13.	a	Explain Agrawala's algorithm and Token-Based algorithm.	UN	3	13
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Or

	b	Name and explain the different types of deadlock models in distributed system with the commonly used strategies to handle deadlocks with a neat diagram.	UN	3	13
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14.	a	i	List agreement statement that should be followed in synchronous system with failure.	UN	4	6
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		ii	Illustrate two kinds of checkpoints for checkpoint algorithm.	UN	4	7
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Or

	b	i	Discuss various issues of failure recovery with an example.	UN	4	6
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		ii	Interpret different types of failure in distributed systems.	UN	4	7
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15.	a	i	Explain Cloud Services.	UN	5	6
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		ii	Distinguish Iaas, Paas, Saas.	AN	5	7
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Or

	b	i	Explain cloud models.	UN	5	7
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		ii	Distinguish cloud computing and virtualization.	AN	5	6
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*PART – C (Marks 1*15 = 15)*

<i>Q.No</i>		<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
16.	a	Analyse Suzuki-Kasami's broadcast algorithm for mutual exclusion in distributed system.	4	3	15
Or					
	b	Compare and contrast cloud services like compute, storage and application services.	4	5	15