Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Sixth semester B.Tech degree examinations (S), September 2020

Course Code: IT306

Course Name: Distributed Systems

Max. Marks: 100 Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks. Marks

1	a)	What are the advantages of mobile agents in distributed system?	(3)
	b)	Compare synchronousdistributed systems withasynchronousdistributed systems.	(4)
	c)	What are the two key examples of kernel design? Compare them.	(8)
2	a)	Describe any two external data representation methods	(8)
	b)	Explain the working of RPC with neat diagram.	(7)
3	a)	What is the role of proxy and skeleton in RMI.	(4)
	b)	What is an execution environment? Explaintwo independentaspects of creating a new process.	(8)
	c)	What are thevarious threading architectures?	(3)

PART B

Answer any two full questions, each carries 15 marks.

4	a)	Describe about file service architecture with a neat diagram.	(8)
	b)	Explain how Berkeley algorithm helps in internal synchronization.	(7)
5	a)	Compare logical clocks and vector clocks.	(5)
	b)	Define events, process states and clocks.	(3)
	c)	State the responsibilities of DNS name server and DNS queries.	(7)
6	a)	State the importance of safety and liveness in global state predicates.	(4)
	b)	Explain how process states are collected.	(3)
	c)	Explain the industry standard for securing intranet servers against unauthorised access and imposter attack.	(5)
	d)	List file system modules.	(3)

ADR-ADR-ADR

PART C

Answer any two full questions, each carries 20 marks.

7	a)	Explain Maekawa's voting algorithm for mutual exclusion.	(10)
	b)	Differentiate message passing and DSM	(10)
8	a)	Explain problem of consensus.	(10)
	b)	Explain the concept of CORBA RMI.	(10)
9	a)	Summarize how release consistency reduce distributed shared memory overheads.	(10)
	b)	What are the different categories of failure detectors? Compare detection mechanisms.	(10)

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ADR-ADR-ADR