Code No: **R42051** **R10** **Set No. 1**

IV B.Tech II Semester Supplementary Examinations, April - 2018

DISTRIBUTED SYSTEMS

(Computer Science and Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks
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1	a)	Differentiate the functionalities of intranet and internet.	[8]
	b)	Explain the security, scalability and concurrency design issues of distributed systems.	[7]
2	a)	How reliable one-to-one communication is implemented in distributed systems? Explain the role of failure model in it.	[8]
	b)	Write a short note on quality of service and use of caching design requirements of distributed architectures.	[7]
3	a)	Describe inter process communication. And also write java APIs for send and receive primitives.	[8]
	b)	Write the implementation of multicast peers operations in group communication.	[7]
4	a)	In detail write about various RMI invocation semantics? How to implement transparency in it?	[8]
	b)	Create distributed objects for client and server. And explain the establishment of communication between them using JAVA	[7]
5	a)	Discuss the tasks of encapsulation, concurrent processing, protection and scheduling with respect to distributed systems.	[8]
	b)	In detail explain the worker -pool multithreading and thread- per- request architectures.	[7]
6	a)	What are the services provided by flat file system? With neat sketch explain its functional components.	[8]
	b)	Explain the characteristics of peer-to peer systems. And also describe IP and overlay routing for peer-to peer applications.	[7]
7	a)	How to implement multicast synchronization? Write an algorithm using logical clocks and explain.	[8]
	b)	What is total ordering? Explain its implementation using a sequencer.	[7]
8	a)	Illustrate simple synchronization and concurrency of transactions and its properties.	[8]
	b)	What is nested transaction? Describe the rules for committing nested transactions and two-phase commit protocol for it.	[7]