Code No: **R42051**

R10

Set No. 1

IV B.Tech II Semester Regular Examinations, April/May - 2014
DISTRIBUTED SYSTEMS
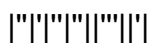**(Common to Computer Science & Engineering and Information Technology)**

Time : 3 hours   **Max. Marks: 75**
Answer any Five Questions
All Questions carry equal marks
*****

1 a)   What is distributed systems? Explain its features along with its motivation for   [8]
         constructing.
   b)   Analyze different challenges of distributed system   [7]

2   What are different system model of distributed system   [15]

3 a)   What are characteristics of the TCP stream communication   [7]
   b)   What is meant by group communication? Explain different types of groups?   [8]

4   What is meant by object model? Describe how distributed object are related to   [15]
         distributed system?

5 a)   Difference between middleware and operating system support?   [8]
   b)   What is meant by thread? Differentiate between process and threads?   [7]

6 a)   What are the main characteristics of peer to peer systems?   [10]
   b)   Write about overlay routing.   [5]

7 a)   Differentiate between client server algorithm & ring based algorithm   [10]
   b)   Write about multicast synchronization?   [5]

8   What is meant by concurrency control? How it is important in distributed   [15]
         systems

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Set No. 2

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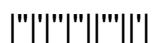
Time : 3 hours   **Max. Marks: 75**

Answer any Five Questions
All Questions carry equal marks
*****

1	a)	What is meant by obiquitous computing? Explain	[8]
	b)	Summarize the example of distributed systems	[7]
2	a)	What are the difficulties and threats of distributed system	[8]
	b)	Describe the main architectural model of distributed system	[7]
3		What is meant by interprocess communication? How inter process communication is used in distributed systems	[15]
4		What are design issues for remote method invocation?	[15]
5	a)	What is meant by shared memory multiprocessor? Explain.	[8]
	b)	Explain how operating system layer support common middle ware.	[7]
6	a)	Distinguish between IP and overlay routing for peer to peer applications.	[8]
	b)	What are the non functional requirements of peer to peer middleware?	[7]
7	a)	Write about fault tolerance.	[7]
	b)	What are the features required for election algorithms.	[8]
8	a)	Write rules for connecting of nested transaction.	[8]
	b)	Write about locking in distributed systems.	[7]

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1 a) What are different trends in distributed systems? [8]
  b) Describe about distributed multimedia systems. [7]

2 a) Distinguish between two-tier and three-tier architectures. [8]
  b) What are thin clients? Explain any two applications of thin clients. [7]

3   What meant by marshalling? Differentiate between TCP stream communication and Client Server Communication. [15]

4 a) Differentiate between RMI and Remote procedure call. [8]
  b) Summarize about implementation of RMI. [7]

5 a) Explain architecture of server threads. Give its applications. [8]
  b) Write about invocation and address space. [7]

6 a) Explain and summarize Napster and its legacy with respect to distributed file system. [8]
  b) Explain sun network file system. [7]

7   Write about bully algorithm and summarize how it is different from other election algorithms. [15]

8 a) Explain about locking in strict two phase locking. [8]
  b) Write about distributed deadlocks. How to prevent deadlocks in distributed systems [7]

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1	a)	Describe the distributed computing as utility.	[8]
	b)	What are different benefits of resource sharing. Explain about its significance	[7]
2		What is meant by event ordering. Explain real time ordering of events.	[15]
3	a)	What are the characteristics of inter process communication.	[10]
	b)	What is meant by external data representation	[5]
4		Write short note on	[15]
		i) java RMI ii) Events and Notifications	
5	a)	What is meant by light weight remote procedure call?	[5]
	b)	how could an interrupt be communicated to a user level server	[5]
	c)	Difference between object and distributed object.	[5]
6	a)	What is meant by failure assumption and failure detectors?	[8]
	b)	Write the algorithm of mutual exclusion.	[7]
7	a)	Explain about coordination and agreement in group communication	[8]
	b)	What meant by total ordering and where it is used.	[7]
8	a)	Write is meant by timestamp ordering and how it is different from optimistic currency control.	[8]
	b)	Write about active and passive replications	[7]

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