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GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER-IV • EXAMINATION - SUMMER 2017

Subject Code: 640006 Subject Name: Distributed Computing (DC1) Time:10.30 AM TO 01.00 PM Instructions: Date: 08/06 Total Mar			
Q.1	(a)	 i. A basic multicasting mechanism is ii. SETI is an example of computing. iii. Most abstract of the object oriented paradigm is iv. When Communication from one process to single other process, the IPC is said to be a v. CORBA is abbreviated as vi. Justify why security concern is disadvantage of distributed computing. vii. An unthreaded connection-oriented server is said to be 	07
	(b)	Explain Inter-Process Communication. Discuss event synchronization in the following modes of IPC. i. Asynchronous Send and Asynchronous Receive ii. Synchronous Send and Asynchronous Receive	07
Q.2	(a)	Suppose following events takes place in chronological order in a multicast group participated by three processes P1,P2 and P3: P1 multicast m1. P2 responds to m1 by multicasting m2. P3 multicast m3 spontaneously. P1 responds to m3 by multicasting m4. P3 responds to m2 by multicasting m5. P2 multicast m6 spontaneously. List what are the scenario are permitted for multicasting?	07
	(b)	Explain Mobile Agent Paradigm and Client Server Paragdigm OR	07
	(b)	Explain Peer to Peer Paradigm and Message System Paradigm.	07
Q.3	(a)	What is reliable multicasting? Discuss classification of reliable multicast systems.	07
	(b)	What is concurrent Server? Write a Concurrent Daytime Server program using Stream Socket API.	07
Q.3	(a)	OR Explain with complete example program: How to I. Join to a multicast group?	07
	(b)	II. Send and Receive a DatagramPacket to a multicast group? According to three layer software architecture, explain echo client-server using TCP with UML diagram and program flow.	07

Q.4	(a)	Write a program which sends a message and receives a message using connectionless datagram socket.	07
	(b)	I. Explain how hidden form-fields can be used for transferring session state data.	04
		II. Differentiate Stateful Server vs Stateless Server	03
		OR	
Q.4	(a)	With Diagram and code fragment, explain connection oriented stream socket.	07
	(b)	I. Discuss how to transfer session state data using cookie	04
		II. Discuss reasons for popularity of distributed computing	03
Q.5	(a)	Discuss the basic architecture of CORBA, its object interface, object references, server and clients in detail with diagram.	07
	(b)	What is RMI? With suitable example discuss the implementation of Java RMI on server. (With Steps for building an RMI Application).	07
		OR	
Q.5	(a)	Compare SOAP Web Services and RESTful Web Services with Example.	07
	(b)	I. What is RMI? Describe java RMI Architecture. What is the role of rmiregistry?	04
		II. What is WSDL? Explain role of WSDL in SOA.	03
