

GUJARAT TECHNOLOGICAL UNIVERSITYMCA Sem-4th Regular Examination May 2011**Subject code: 640006****Subject Name: Distributed Computing****Date:26/052011****Time : 02.30 p.m. – 05.00 p.m.****Total Marks: 70****Instructions:**

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

- Q.1** (a) 1. Discuss strengths and weaknesses of Distributed Computing. **04**
2. Compare connection-oriented and connectionless IPC. **03**
- (b) Explain indefinite blocking. Discuss the event synchronization in the following modes of IPC. **07**
1. Synchronous Send and Synchronous Receive
 2. Synchronous Send and Asynchronous Receive
- Q.2** (a) Discuss the DatagramSocket and DatagramPacket classes available in Java API. **07**
- (b) Explain the Message Passing paradigm & Client-Server paradigm with suitable figures. **07**
- OR**
- (b) Explain the Mobile Agent paradigm & Message System paradigm with suitable figures. **07**
- Q.3** (a) Explain reliable multicasting. Discuss any 3 classifications of reliable multicast systems. **07**
- (b) Write and explain a simple DayTime server program using Stream socket API. **07**
- OR**
- Q.3** (a) Explain with complete example program: How to **07**
1. join to a multicast group?
 2. send a DatagramPacket to a multicast group?
 3. receive a DatagramPacket from a multicast group?
- (b) 1. Explain importance of Time-to-Live in the multicasting API context? **04**
How to set it?
2. Write a short note on Secure Socket API. **03**
- Q.4** (a) What is RMI? Draw and explain Java RMI architecture. Show stub-skeleton interactions using interaction diagram. **07**
- (b) Explain how cookies can be used for transferring session state data. Draw appropriate event/interaction diagram. **07**
- OR**
- Q.4** (a) What is rmiregistry? Explain how to use it on server-side and client-side. **07**
- (b) Explain how hidden form-fields can be used for transferring session state data. Draw appropriate event/interaction diagram. **07**
- Q.5** (a) Draw and explain basic CORBA architecture. **07**

- (b) What is REST? What is the use of REST? Explain any 3 basic principals possessed by RESTful service. **07**

OR

- Q.5** (a) List and explain various CORBA object services. **07**
(b) 1. What is WSDL? explain the role of WSDL in SOA integration with appropriate figure. **04**
2. Explain: RESTful Web Services vs. SOAP Web Services **03**
