Seat No.:		Enrolment No
GUJARAT TECHNOLOGICAL UNIVERSITY M. E SEMESTER – II • EXAMINATION – SUMMER • 2014		

Date: 18-06-2014

Subject Name: Distributed Computing & Application

Time: 02:30 pm - 05:00 pm	Total Marks: 70

Instructions:

Subject code: 1720102

- 1. Attempt all questions.
- 2. Make suitable assumptions wherever necessary.
- 3. Figures to the right indicate full marks.
- 0.1 (a) List and explain reasons behind popularity of Distributed computing. 07 Is it possible to perform concurrent programming in a single process? Justify your 07 (b) answer with suitable example. What do you mean by Synchronous and Asynchronous operations? Draw and explain 07 0.2 (a) event diagrams for all three scenarios of Synchronous send and Asynchronous receive. List and explain some common mechanisms to handle heterogeneity in data 07 (b) representation. Explain Message System Paradigm for distributed computing. 07 Q.3 Give differences between state full and stateless server implementations? Also discuss (a) 07 advantages and disadvantages of both implementations. **(b)** Explain usage of following interfaces in RMI. **07** 1. Remote 2. Serializable
 - OR
- Explain various reliable multicasting techniques. Q.3(a) 07 Explain the roles of WSDL and UDDI in web service. **(b) 07**
- 0.4 (a) What do you mean by 07
- 1. Well-formed XML document
 - 2. Valid XML document Write a short note on MPI **07**
- (b) OR
- Write a short note on PVM **Q.4** (a) 07
 - (b) Give differences between **07** 1. Grid computing versus Cluster computing
 - 2. DOM versus SAX XML processing techniques
- **Q.5** Attempt any two. 14
 - (a) Write client server program in which client sends one number to server and server replies that number is odd or even. (USE JAVA SOCKET PROGRAMMING API)
 - **(b)** Write RMI program in which client sends one number to server and server replies that number is odd or even. (USE JAVA RMI API)
 - Write a program to create Student class with name, age and city member variables. (c) Also write main program to save and read objects of Student class in file.
