

**GUJARAT TECHNOLOGICAL UNIVERSITY****M.E Sem-II Examination July 2010****Subject code: 720102****Subject Name: Distributed Computing and Application****Date: 06 /07 /2010****Time: 11.00am – 1.30pm****Instructions:****Total Marks: 60**

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

**Q.1 (a)** Comment on following statements, either in favor or in oppose. Justify your answer with example. **06**

1. Every built-in data is passed as argument in RMI, but not every user defined object.
2. Distributed computing differs from parallel computing in its goal and invocation of processes.
3. Network application and network service are same.

**(b)** What is IPC? What are the basic IPC calls? Explain the role and importance of IPC in distributed computing with appropriate illustrations. **06**

**Q.2 (a)** Why are RPC and RMI known as action oriented rather than data oriented? Give proper example. How does RPC differ from RMI? **06**

**(b)** Explain the following w. r. to RMI. **06**

1. Stub downloading
2. Need of policy file

**OR**

**(b)** Explain the following w. r. to CORBA **06**

1. IDL and its importance
2. Naming system
3. ORB

**Q.3 (a)** Discuss the various types of JDBC drivers with their merits and demerits. **06**

**(b)** What is metadata in JDBC? How can we read the metadata? Explain with proper example. **06**

**OR**

**Q.3 (a)** Discuss the role of Driver and DriverManager class in JDBC with the important methods they provide. **06**

**(b)** Compare the following. **06**

1. Socket and RMI
2. RMI and CORBA

**Q.4 (a)** Describe the following with respect to J2EE. **06**

1. J2EE makes the user free from vendor lock in.
2. What is the benefit of following standard package structure for web application? Give the structure with example.
3. What are the different tiers in J2EE? What are their roles?

**(b)** What is web.xml file in servlet? What is its role? Explain with sample web.xml file. **06**

**OR**

**Q.4 (a)** Answer the following w. r. to servlet. **06**

1. What is importance of encodeURL() method?
2. How does servlet receives the input parameters send by user and the headers set by browser?

**(b)** Write a servlet to produce the first N Fibonacci numbers. N is given by user. Write necessary HTML file also. **06**

**Q.5 (a)** What is DTD? How can you write a DTD file and refer it in XML file? Give a small example. **06**

**(b)** Write short note on Java Messaging Service. **06**

**OR**

**Q.5 (a)** Discuss the features of grid computing and give the different types of grids. **06**

**(b)** Write short note on MPI to develop the parallel applications. **06**

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