GUJARAT TECHNOLOGICAL UNIVERSITY
M.E Sem-II Remedial Examination December 2010

Subject code: 720102
Subject Name: Distributed Computing & Application
Date: 20 /12 /2010   Time: 02.30 pm – 05.00 pm

Total Marks: 60

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

Q.1 **(a)** Answer following questions in brief.   **06**
1. What is IPC? Give its role in distributed computing.
2. What is synchronization? Why is it needed in distributed computing? Give an example.
3. How does peer-to-peer model differs from client-server model?

(b) Which of the model is data oriented rather than action oriented? What are its   **06** limitations in developing applications? Illustrate with proper example

Q.2 **(a)** What is call backing in RMI? When do you need it? Is client object allowing   **06** call back, really remote object?

(b) Explain the following w. r. to CORBA.   **06**
1. CORBA Architecture
2. Naming system

OR

(b) What role of driver in JDBC? List the various types of drivers and explain them.   **06**

Q.3 **(a)** What is use of PreparedStatement in JDBC? How does it differ from Statement   **06** object? Show its use with example.

(b) Explain the following w. r. to RMI   **06**
1. RMI Security Manager
2. RMI registry

OR

Q.3 **(a)** What is metadata? Discuss the classes related to obtain metadata in JDBC.   **06**
(b) Compare the following.   **06**
1. Message passing Vs. Message oriented
2. Network services Vs. Network applications

Q.4 **(a)** Explain following with respect to J2EE.   **06**
1. What is role of container? How user defined component does gets the characteristics and services from container?
2. What are the components for presentation tier? How do they differ? When should you use which?

(b) Give and discuss the life cycle of servlet. What happens if request comes while   **06** initialization?

OR

Q.4 **(a)** Write a servlet with necessary HTML and other files to count number of   **06** characters in your name.

(b) What is session handling? What is its need? Explain it with example.   **06**

Q.5 **(a)** What is cluster computing? Give its features, services and applications. **06**

(b) What is web service? What are the different components of web services? **06**

OR

Q.5 **(a)** How does parallel computing differs from distributed computing? How does **06** MPI support parallel computing?

(b) How can you use Java Messaging Service to develop the publish-subscribe **06** model?

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