

# GUJARAT TECHNOLOGICAL UNIVERSITY

## MCA – SEMESTER IV • EXAMINATION – SUMMER 2016

**Subject Code: 640006**

**Date: 04-06-2016**

**Subject Name: Distributed Computing**

**Time: 10.30a.m. To 01.00p.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) Differentiate between Monolithic Computing, Parallel Computing and Distributed Computing. **07**  
(b) Explain different scenarios related to event synchronization for Synchronous Send and Asynchronous Receive with appropriate diagrams **07**
- Q.2** (a) Write code in Java for implementing a UDP based connectionless echo client server application. **07**  
(b) Write code in Java for implementing a TCP based echo client server application. **07**
- OR
- (b) Write code in Java for implementing a TCP based daytime client server application. **07**
- Q.3** (a) Explain different operations for an archetypal Multi-Cast API. **07**  
(b) Explain: Peer to Peer, Client Server and Mobile Agent IPC Paradigms. **07**
- OR
- Q.3** (a) Explain classification of Multi-casting Mechanisms based on various criteria. **07**  
(b) Briefly Explain the following terms:: i) Iterative Server ii) Concurrent Server iii) Stateful Server iv) Stateless Server v) Multi-Threaded Server vi) Active Open vii) Passive Open **07**
- Q.4** (a) Explain the steps for building an RMI Application. **07**  
(b) Draw and explain basic CORBA architecture **07**
- OR
- Q.4** (a) What is RMI? Draw and explain Java RMI architecture. Show stub-skeleton interactions using interaction diagram. **07**  
**Q.4** (b) Explain how cookies can be used for transferring session state data. Draw appropriate event/interaction diagram. **07**
- Q.5** (a) Write a short note on REST. **07**  
(b) What is WSDL? Explain the role of WSDL in SOA integration with appropriate figure. **07**
- Q.5** (a) Explain SOAP. Compare SOAP webservice and RESTful webservice. **07**  
(b) With diagram explain Web Service infrastructure and stepwise communication. **07**

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