

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VIII EXAMINATION – SUMMER 2016****Subject Code:180701****Date:10/05/2016****Subject Name:Distributed Systems****Time:10:30 AM to 01:00 PM****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) List out the methods of Object Locating Mechanism. Explain any Three object locating mechanism. **07**
- (b) Discuss load estimation policy and Process transfer policy in load balancing algorithms. **07**
- Q.2** (a) What is process addressing? Explain commonly used methods for process addressing. **07**
- (b) Define Global state. Explain Distributed snapshot algorithm. **07**
- OR**
- (b) Enumerate various issues in clock synchronization. Classify the clock synchronization algorithm and explain Berkley algorithm with an example. **07**
- Q.3** (a) Explain RPC Architecture. What is the role of IDL file in RPC? **07**
- (b) Explain the functionality of each layer in OSI layer architecture with various protocols used in each layer. **07**
- OR**
- Q.3** (a) What is the significance of client-server binding? How are various issues handled in changing client-server binding? **07**
- (b) How does VMTP protocol handle lost messages, flow control, group Communication and maintain transparency. **07**
- Q.4** (a) Differentiate monolithic kernel model and micro kernel model. **07**
- (b) Define Thrashing in DSM. Explain methods for solving thrashing in DSM. **07**
- OR**
- Q.4** (a) How the problem is specified using formal model? Specify the problem of mutual exclusion using formal model specification. **07**
- (b) List and explain various consistency models used in DSM. **07**
- Q.5** (a) What are threads? What are the different ways of synchronizing threads? Also explain various thread models. **07**
- (b) Explain features and issues in message passing system. **07**
- OR**
- Q.5** (a) What is process migration? Explain address transport mechanism with freezing techniques. **07**
- (b) What is non-idempotent routine? How such routine creates problem with message passing? Also explain its solution with example. **07**

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