

GUJARAT TECHNOLOGICAL UNIVERSITY**ME – SEMESTER – I (New)– EXAMINATION – WINTER-2019****Subject Code: 3710213****Date: 06-01-2020****Subject Name: Distributed Systems****Time: 02:30 PM TO 05:00 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) Explain all forms of transparency parameter in distributed operating systems. **07**
 (b) Briefly explain the concept of stateful and stateless servers with diagram **07**
- Q.2** (a) Explain IPC Synchronization in detail. **07**
 (b) Explain circuit switching and packet switching. Mention the differences between circuit switching and packet switching. **07**
- OR**
- (b) Differentiate between monolithic kernel and microkernel approaches for designing distributed operating system. **07**
- Q.3** (a) Explain CORBA Architecture in detail. **07**
 (b) Discuss the main features of ATM technology. **07**
- OR**
- Q.3** (a) Which are the different techniques to avoid deadlock in Distributed Operating System? **07**
 (b) What is a RPC? Explain RPC Execution process in detail with diagram. **07**
- Q.4** (a) 1. What are the differences between RMI and RPC? **04**
 2. Explain the significance of wait-for graph with respect to deadlock. **03**
 (b) What is the role of “binding agent” in client server binding? Explain types of binding in detail. **07**
- OR**
- Q.4** (a) What will happen in a bully algorithm for electing a coordinator when two or more process almost simultaneously discover that the coordinator has crashed? Suggest some suitable mechanism. **07**
 (b) Explain name space and name server. **07**
- Q.5** (a) Which are the different types of process scheduling techniques? Explain desirable features for good scheduling algorithm. **07**
 (b) Explain the technique to avoid the faults in distributed systems **07**
- OR**
- Q.5** (a) Explain the causal consistency model for a distributed shared memory system. **07**
 (b) What is thread? Compare user level thread with kernel level thread. **07**
