

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII (Old) EXAMINATION – WINTER 2019****Subject Code: 180701****Date: 25/11/2019****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) What is a distributed system? Enlist and explain design feature of a distributed system. **07**
- (b) Enlist the IPC synchronization technique in distributed systems. Explain any one of them in detail. **07**
- Q.2** (a) Explain any two protocols of distributed systems. **07**
- (b) Explain RPC. **07**
- OR**
- (b) Explain RMI architecture using figure. **07**
- Q.3** (a) Provide Difference between Message Passing and Distributed Shared Memory(DSM). Explain any technique of software implementation of DSM. **07**
- (b) How the process is specified using formal model? Define the process execution and admissibility using formal model. **07**
- OR**
- Q.3** (a) Explain any two methods of common clock implementation using hardware. **07**
- (b) Explain any one method of logical clock implementation using example. **07**
- Q.4** (a) Differentiate between load distribution and balancing. Explain any technique of load distribution or balancing. **07**
- (b) What is write invalidate protocol? Explain how it works using figure. **07**
- OR**
- Q.4** (a) Discuss thread synchronization any two techniques. **07**
- (b) Compare and contrast any 3 consistency models. **07**
- Q.5** (a) Explain what is coherence protocol. Explain any one coherence protocol. **07**
- (b) Compare and contrast the any three ways file naming system in distributed systems. **07**
- OR**
- Q.5** (a) Why mutual exclusion is more complex in distributed systems? **07**
- Compare and contrast mutual exclusion algorithms.
- (b) Explain the design issues of distributed file system. **07**
