

GUJARAT TECHNOLOGICAL UNIVERSITY
BE -SEMESTER- VIII OLD • EXAMINATION – SUMMER 2020

Subject Code: 180701**Date: 26.10.2020****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) Discuss the design issues of distributed system. **07**
(b) Explain VMTP protocol. **07**
- Q.2** (a) Compare and contrast the IPC synchronization techniques in distributed systems. **07**
(b) Explain how RPC works using a program of calling `int add(int no1, int no2)` method. **07**
- OR**
- (b) Explain RMI architecture and a sample program to call `int add(int no1, int no2)` method. **07**
- Q.3** (a) Explain construction a DFS spanning tree for a specified root. **07**
(b) Which is the best election algorithm, in distributed systems? Explain how. **07**
- OR**
- Q.3** (a) Explain Lamport's logical clock using example. **07**
(b) Explain with example the significance of exactly-once semantics to handle duplicate request messages. **07**
- Q.4** (a) Explain distributed algorithm for mutual exclusion using diagram(s). **07**
(b) Compare and contrast process migration techniques. **07**
- OR**
- Q.4** (a) Explain MRMW protocol. **07**
(b) What is consistency? Discuss the various consistency models used in DSM system. **07**
- Q.5** (a) What are the differences between sender-initiated and receiver-initiated load sharing algorithms? **07**
(b) Write the advantages of distributed shared memory. Define HDSM and explain Ring based multi processor. **07**
- OR**
- Q.5** (a) Explain object naming algorithms in distributed systems. **07**
(b) What is Thrashing? Explain all algorithms use for data location and DSM consistency management. **07**
