

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
ME – SEMESTER II (NEW) – • EXAMINATION – SUMMER 2016

Subject Code: 2725605

Date: 27/05/2016

Subject Name: Distributed Computing

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) What is Distributed System? Explain different design issues related to Distributed System. **07**
(b) Classify clock synchronization algorithms and explain any two in brief. **07**
- Q.2** (a) Define data marshaling. Explain different data encoding schemes. **07**
(b) Explain address space transport mechanisms. **07**
- OR**
- (b) Explain key distribution methods used in symmetric and asymmetric systems? List their advantages and disadvantages. **07**
- Q.3** (a) Explain client – server and peer to peer paradigms and compare both of them. **07**
(b) Discuss the issues in designing load-balancing algorithms. **07**
- OR**
- Q.3** (a) Explain distributed objects paradigms for distributed applications. **07**
(b) Discuss the task assignment approach. What are its basic objectives? **07**
- Q.4** (a) Explain bully election algorithm in detail and compare it with ring algorithm. **07**
(b) Explain different types of Computing models. Compare monolithic and micro kernel approach. **07**
- OR**
- Q.4** (a) Discuss Lamport's Timestamps and Vector Timestamps with the help of example. **07**
(b) Explain different possible combination of primitive operations with the help of event diagram. **07**
- Q.5** (a) Explain potential threats and attacks involved in message communication. **07**
(b) Explain different types of name and the ways of naming objects. **07**
- OR**
- Q.5** (a) Explain basic cryptographic system and how symmetric and asymmetric cryptosystems works. **07**
(b) List types of system- oriented names. Explain various approaches to generate system-oriented names. **07**
