

Roll No.

24471

**B. Tech. 7th Semester (CSE)
Examination – December, 2014**

DISTRIBUTED OPERATING SYSTEM

Paper : CSE-423-F

Time : Three Hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Question No. 1 is *compulsory*. Attempt any *one* question from each Section. All questions carry equal marks.

1. Write short notes on : 4 × 5 = 20
- (a) Remote Procedure Call
 - (b) Atomic Transactions
 - (c) Real Time Distributed System
 - (d) Process Management in MACH

SECTION – A

2. Define Distributed Operating System and its goals. Explain how it is different from a Network Operating System in Detail. 20
3. (a) What are the common issues with which the designer of Heterogeneous Distributed System must deal ? 5
- (b) Explain the advantages of a distributed system over centralized system. 5
- (c) How Communication in Distributed system is handled ? Explain. 10

SECTION – B

4. What is the need of Clock Synchronization in distributed System ? Discuss various Clock Synchronization Algorithms. 20
5. What is a Deadlock ? Explain how the Deadlock handling in a Distributed System Environment is different from that in a Conventional Environment. 20

SECTION – C

6. (a) Describe in brief the various Inter-process Communication and Co-ordination mechanism. 10
- (b) Discuss the Hierarchical, Heuristic and Bidding algorithms for Processor Allocation ? 10
7. (a) How Distributed File System is Implement ? Explain. 5
- (b) What are the characteristics of the Distributed File Systems ? How is concurrency control achieved in DFS ? 15

SECTION – D

8. Give an introduction to MACH. Explain the use of following in Mach Process. 20
- (i) Process port
- (ii) Boot strap port
- (iii) Exception port
- (iv) Registered port

9. What is Shared Memory ? Explain Consistency models
in detail.

20