

**24471**

**B. Tech 7th Sem. (IT)  
Examination – May, 2018**

**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: Attempt *five* questions selecting *one* question from each section and question No. 1 is *compulsory*.

1. Write a short note on the following : 20

- (a) What are the advantages of Distributed system over Centralized system ?
- (b) Why replication is required in distributed system ?
- (c) Briefly explain goals of distributed system.
- (d) What is shared memory ?

## SECTION – A

2. (a) Explain Client-Server model in detail. 10
- (b) What is Remote procedure call ? Explain different class of Failure that can occur in RPC system and how to deal it ? 10
3. Define Distributed operating system. What are the advantages and disadvantages of Distributed operating system ? Discuss major design issues of a distributed system. 20

## SECTION – B

- 4.(a) Describe various algorithms for implementation of mutual exclusion in distributed systems. 10
- (b) Discuss the following algorithms : 10
- (i) The Bully algorithm
- (ii) Ring algorithm
5. (a) What are the ACID properties of transaction ? Explain atomic transactions. 10
- (b) What is the need of clock synchronization in distributed systems ? 10

## SECTION – C

6. (a) What are the different design issues for processor allocation algorithms ? 10
- (b) Describe Distributed File System design and implementation issue. 10

7. Explain the following : 20
- (a) Real time distributed systems.
  - (b) Scheduling in distributed systems.

**SECTION - D**

8. (a) Explain various consistency models of distributed shared memory. 10
- (b) What is page based distributed shared memory ? Discuss in detail. 10
9. Write a short note on : 20
- (a) Process management in MACH.
  - (b) UNIX emulation in MACH.
  - (c) Communication in MACH.
-