Printed Pages : 1 **Roll No.** | | | | | | | | | | | **CS-211**

M.TECH. (SEM–II)

CARRY OVER EXAMINATION 2016-17

DISTRIBUTED COMPUTING

Time : 3 Hours ***Max. Marks : 100***

Note : *Be precise in your answer. In case of numerical problem assume data wherever not provided.*

1. Attempt any Two parts of the following: 2 × 10 = 20

(a) In what respect are distributed computing systems superior to parallel systems?Exaplain.

(b) Why architectural model is important in the distributed system design? Also discuss the resource sharing and its importance.

(c) Explain JAVA implementation of RMI.

2. Attempt any Two parts of the following: 2 × 10 = 20

(a) Describe the various RPC protocols supporting client server communication.

(b) What is remote method invocation? What are the commonalities and differences between RPC and RMI?

(c) What are the distributed objects and how these are implemented in distributed system?

3. Attempt any Two parts of the following: 2 × 10 = 20

(a) Name the main component of a distributed file system. What might be the reasons for separating the various functions of distributed file system into these components?

(b) What are the requirements for distributed mutual exclusion algorithm?

(c) Discuss various algorithm used for deadlock detection in distributed system.

4. Attempt any Two parts of the following: 2 × 10 = 20

(a) Why election algorithms are normally needed in a distributed system? A LAN based distributed system has broadcast facility. Suggest a simple election algorithm for use in this system.

(b) Explain the major differences between external and internal synchronization of clock in distributed systems.

(c) What is distributed Multimedia? Write the characteristics of multimedia data.

5. Attempt any Two parts of the following: 2 × 10 = 20

(a) What is transaction recovery? Explain how the transaction recovery can be made?

(b) Explain flat and nested transaction with suitable example.

(c) **Write short notes on:**

i) Sun Network file system

ii) Optimistic concurrency control

iii) Digital Signature

iv) Events and Notification