Roll No. ☐☐☐☐☐☐☐☐☐☐

B.E / B.TECH (FULLTIME) DEGREE ARREAR EXAMINATIONS, APRIL / MAY 2014

INFORMATION TECHNOLOGY

Semester V

IT 9304- DISTRIBUTED SYSTEMS

(Regulation ..2008..)

Time: 3 Hours   Answer ALL Questions   Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. What is Remote Object Invocation ?

2. Differentiate Unicasting , Multicasting and Broadcasting.

3. Write down the issues of Distributed operating systems.

4. What is Data Centric Consistency Model and Client Centric Consistency Model ?

5. How Distributed Scheduling works ?

6. Define Clock Synchronization.

7. What are the requirements for Consensus Protocol ?

8. What is Distributed Fault Tolerance ?

9. How JINI service is more convenient than Java RMI ?

10. Where COM+ services are applied ?

Part – B (5 x 16 = 80 marks)

11.   Explain in detail about Remote Procedure Call design issues and implementation. (16)

12.   a). i. What is a need for global state ? Explain with an example.   (8)
           ii. Discuss in detail about Chandy-Lamport's Global State recording algorithm.   (8)

(OR)

       b)   Explain in detail about Deadlock Detection algorithms.   (16)

13.   a)   i. What are the algorithms for implementing Distributed Shared Memory ?.   (8)
             Explain.
             ii. The Sun Network File System-Explain.   (8)

(OR)

       b)   Compare and Contrast the following Load Distributing Algorithms ,   (16)
            i. Sender Initiated Algorithms;
            ii. Receiver Initiated Algorithms; and
            iii. Symmetrically Initiated Algorithms

14.   a)   Explain in detail about Distributed Commit Protocols.   (16)

(OR)

b) i. What are the Impossibilities in Fault Tolerance? Explain. (8)

ii. What is Byzantine Fault Tolerance ? Discuss. (8)

15. a) i. Explain in detail about CORBA RMI . (8)
ii. Draw the architecture of CORBA and explain the components. (8)

(OR)

b) Write short notes on .

i. Distributed Object Middleware (4)
ii. Component Based Middleware (4)
iii. Distributed Objects (4)
iv. CORBA Services (4)