Code No: C6202

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.Tech I - Semester Examinations, March/April 2011
DISTRIBUTED SYSTEMS
(WEB TECHNOLOGIES)

Time: 3hours   Max. Marks: 60

Answer any five questions
All questions carry equal marks
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1. a) What is the importance of Client- Server communication in Distributed systems. What are the main operations of the request- reply protocol?
   b) In Remote Procedure Calls, what are the roles of the Client and Server Stub Procedures?
                                                                                          [8+4]

2. a) Compare between the microkernel based operating System and the monolithic operating system design.
   b) What are the various requirements of Distributed File Systems?   [6+6]

3. a)What are the criteria for evaluating the performance of mutual exclusion algorithms? Explain.

   the main advantages of Nested Transactions?   [6+6]

   Optimistic Concurrency Control Algorithms.
   b) Explain the Edge- chasing distributed Deadlock Detection Algorithm.   [6+6]

5. a) Bring out the importance of Digital Signatures in ensuring Security in Distributed Systems.
   b) For the various distributed shared memory consistency models, in what ways can updates be propagated?   [6+6]

6 a) With suitable diagram, explain the architecture of SUN Network File System.
   b) What are the motivations for Replication in distributed Systems?   [6+6]

7. a) Give a comparison of different methods for concurrency control.
   b) Explain the Memory Management mechanism in MACH operating system.   [6+6]

8. Write short notes on
   a) IPC in UNIX.
   b) Logical clocks.
   c) Fault Tolerance in Distributed Systems.   [6+6]

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