B. Tech Degree VII Semester Examination, November 2009

IT 704 DISTRIBUTED COMPUTING
(2002 Scheme)

Time : 3 Hours   Maximum Marks : 100

I.   (a)   What do you mean by a distributed system?   What are the challenges associated
                with it?   (10)
        (b)   What are the characteristics of group communication. Give an example of a group
                communication implementation.   (10)
                                                OR
II.   (a)   Describe the elements of a client server communication system.   (10)
        (b)   Describe briefly JAVA RMI.   (10)

III.   (a)   Compare the performance of processes and threads.   (10)
        (b)   Describe the Java Network file system.   (10)
                                                OR
IV.   (a)   Describe the main functions of the Kernel of a distributed OS.   (10)
        (b)   Explain the function of a Domain Name Service.   (10)

V.   (a)   What do you mean by synchronization?   What are the different synchronization
                techniques?   (10)
        (b)   What are the replication strategies used in fault tolerant systems.   (10)
                                                OR
VI.   (a)   What do you mean by distributed deadlocks? What causes it?   (8)
        (b)   Explain any one election algorithm to implement mutual exclusion.   (12)

VII.   (a)   Explain the different transaction between client and server in a distributed
                database system.   (10)
        (b)   Compare the different methods for concurrency control.   (10)
                                                OR
VIII.   Describe the two-phase commit protocol.   (20)

IX.   (a)   What do you mean by fault tolerant services?   Describe the different types of
                fault tolerant services.   (10)
        (b)   What are digital signatures? What are the different types of techniques used?   (10)
                                                OR
X.   Write short notes on :-
                        (i)   Shadow versions
                        (ii)   Logging
                        (iii)   Asymmetric algorithm
                        (iv)   Firewalls   .   (4 x 5 = 20)

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