GANPAT UNIVERSITY

B. TECH SEMESTER-VI CE/IT EXAMINATION
MAY-JUNE – 2012
CE-605/IT-605: DISTRIBUTED SYSTEMS

Time: 3 Hours]   [Total Marks: 70

Instructions:

1. Figures to the right indicate full marks
2. Each section should be written in a separate answer book
3. Be precise and to the point in your answer

SECTION-I

Q.1   **Answer the following**

(a)   (i) Compare and Contrast Distributed Systems with Computer networks.   06
        (ii) Define the Reasons and Examples of Distributed Systems.

(b)   Describe the Multiprocessors and Multicomputer systems for Distributed   06
        systems.

OR

Q.1   **Answer the following**

(a)   Define the following terms: 06
        (i) Transparency
        (ii) Scalability
        (iii) Middleware

(b)   Discuss the Client-Server Model and Peer-to- Peer model in distributed   06
        systems.

Q.2   **Answer the following**

(a)   Explain the steps of RPC implementation in detail.   06
(b)   Define RPC. Write short note on DCE RPC.   05

OR

Q.2   **Answer the following**

(a)   Write a program to implement Echo service using Java RMI.   06
(b)   Define Distributed Objects. Describe Java RMI in detail.   05

Q.3   **Answer the following**

(a)   Compare Threads with Processes. Describe the ways to create a Thread   06
        using Java with programs.
(b)   Why a Multithreaded server is better than a Single-threaded server and   06
        a FSM server? Explain with example

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SECTION-II

Q.4 **Answer the following**
(a) Explain the Remote-access and Upload-download model of NFS.   06
(b) Define Software Agent. Describe Mobile Agent Infrastructure   06

OR

Q.4 **Answer the following**
(a) Explain CODA client architecture. Define various states of Venus.   06
(b) Define NFS. Explain the basic NFS architecture fir UNIX system.   06

Q.5 **Answer the following**
(a) Explain the Google Cluster organization.   06
(b) Define DFS. Describe working Principle of CODA file system with example.   05

OR

Q.5 **Answer the following**
(a) Write short note on HADOOP.   06
(b) Discuss the Web services architecture.   05

Q.6 **Answer the following**
(a) Describe Centralized, Distributed and Token ring algorithm for Mutual exclusion in brief   06
(b) Explain Lamport's logical clock algorithm.   06