Roll No ....

IT-601
B.E. VI Semester
Examination, June 2016
Distributed Systems
Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each question are to be attempted at one place.

iii) All questions carry equal marks, out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks, part D (Max. 400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

Unit - I

1. a) What is the meaning of resource sharing?

b) Write architectural models for distributed system.

c) Write the limitation of distributed system.

d) Describe the design requirements for a system to synchronize the clocks in a distributed system.

OR

Explain the Berkeley algorithm of clock synchronization.

Unit - II

2. a) Write communication deadlocks.

b) Explain how centralized deadlock detection done.

c) Write path pushing algorithms.

d) Write the agreement and validity objectives of Byzantine agreement problem.

OR

Write WFG based distributed algorithm for deadlock detection.

Unit - III

3. a) Explain Address space.

b) Explain the features of a distributed file system.

c) Write how sun network file system are managed.

d) Explain the concept of RMI with suitable example.

OR

Write model architecture of distributed file system and its components.

Unit - IV

4. a) What are the fault-tolerant services?

b) Explain how concurrency control is done in distributed transactions.

c) Explain distributed deadlocks.

d) Write how the transactions with replicated data done.

OR

Explain Atomic commit protocols with example.

Unit - V

5. a) Explain the Election Algorithm.

b) Explain Deadlock free packet switching.

c) Write the destination based routing.

d) Explain wave and traversal algorithms.

OR

Write a simple CORBA program that demonstrates the invocation of remote object services. For example when a client sends a message "Hello", the server responds with "Hi Ram".

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