Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

Roll No .....

MCTA-205

M.E./M.Tech., II Semester

Examination, December 2016

Distributed System

Time : Three Hours

Maximum Marks : 70

Note : i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Assume a client calls an asynchronous RPC to a server, and subsequently waits until the server returns a result using another asynchronous RPC. Is this approach the same as letting the client execute a normal RPC? What if we replace the asynchronous RPC with asynchronous RPCs? 7

   b) Describe about architectural model for distributed system. 7

2. a) How many lookup calls are needed to resolve a s-port pathname for a file that is stored on an NFS server? What is the reason for performing the translation step-by-step? 7

   b) Describe file service architecture. 7

3. a) Define the interface to the election service in CORBA IDL and Java RMI. 7

   b) Explain what is security policy and what are the corresponding mechanism in the case of a multi-user operating system such as Unix. 7

279

4. a) Which factors identified in the cost of a remote in vocation also feature in message passing. 7

   b) Assuming that strict two-phase locking is in use, describe how the actions of the two phase commit protocol relate to the concurrency control actions of each individual server. How does distributed deadlock detection fit in? 7

5. a) Explain about centralized algorithm. 7

   b) Describe about distributed deadlock and its recovery. 7

6. a) How can we authenticate the contact addresses returned by a lookup service for secure Globe objects? 7

   b) Describe about Nested transactions. 7

7. a) Initial exchanges of public keys are vulnerable to the man-in-the-middle attack. Describe as many defenses against it as you can. 7

   b) Explain how the write ahead log in distributed transactions can be used to recover from failures. 7

8. Write short notes on : 14

   a) Digital signatures

   b) Time stamp ordering

   c) Cryptographic algorithms

   d) Distributed multimedia system

******

280