BCACAC 315

Credit Based Fifth Semester B.C.A. Degree Examination, Nov./Dec. 2018
(Common to All Batches)
DISTRIBUTED COMPUTING

Time : 3 Hours

Total Marks : 100

Note : Answer **any ten** questions from Part – **A** and **any one full** question from **each** Unit in Part – **B**.

PART – A

(10×2=20)

1. a) What is Distributed Computing ?

   b) What are the four primitive operations of IPC ?

   c) Write the diagram of architecture of distributed applications.

   d) What do you mean by peer to peer paradigm ?

   e) Differentiate UDP and TCP.

   f) Which are the two types of sockets in stream mode socket API ?

   g) Define echo protocol.

   h) What are the classifications of reliable multicast system ?

   i) What do you mean by daytime service ?

   j) List the four well known toolkits for distributed object systems.

   k) What do you mean by stub and skeleton generation ?

   l) What are the layers used in client side architecture of java RMI ?

PART – B

Unit – I

2. a) What are the different forms of computing ? Explain any three.

   b) Explain with diagram IPV4 address scheme.

   c) Explain synchronous send and asynchronous receive scenarios with diagram.

(7+5+8)

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BCACAC 315

3. a) Write the architecture of distributed applications and explain briefly.

   b) What do you mean by concurrent programming ? Explain its types.

   c) With an example, explain Event diagram and Sequence diagram.   (5+8+7)

Unit – II

4. a) What do you mean by distributed object paradigms ? Explain the RMI Paradigm and ORB Paradigm.

   b) What are connectionless and connection oriented datagram sockets ? Explain with diagrams.

   c) Write a note on secure socket API.   (8+7+5)

5. a) Explain different trade-offs of distributed computing paradigm.

   b) Explain the network service paradigm and mobile agent paradigm with neat diagrams.

   c) Write a note on collaborative application (Groupware) paradigm.   (7+8+5)

Unit – III

6. a) Explain client-server distributed computing paradigm with a neat diagram.

   b) With a neat diagram explain the software architecture for a client server application.

   c) Explain the different operations involved in an archetypal multicast API.   (7+7+6)

7. a) What are stateful servers ? Briefly explain the two sates of information.

   b) Explain the mechanism of testing a network service.

   c) Write a note on atomic order reliable multicasting.   (7+7+6)

Unit – IV

8. a) With a neat diagram explain the Java RMI architecture.

   b) What do you mean by Remote Procedure Call ? Differentiate it by a local procedural call with diagram and explain it.

   c) Write the difference between RMI and socket API.   (8+6+6)

9. a) With an example explain a sample RMI application in Java.

   b) With a neat diagram explain stub downloading.

   c) Write a note on RMI security manager.   (10+5+5)