Reg. No. | | | | | | | | | |

BCACAC 315

Credit Based V Semester B.C.A. Degree Examination, Oct./Nov. 2016
(New Syllabus) (2014-2015 Batch Onwards)
DISTRIBUTED COMPUTING

Time : 3 Hours

Max. Marks : 100

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

PART – A

1. a) What do you mean by network service and network applications in distributed computing ?

(10×2=20)

b) Write any four top level domain names.

c) What is the difference between program and process ?

d) Write the diagram of architecture of distributed applications.

e) What do you mean by Object Request Broker ? Explain.

f) Explain secure socket API.

g) What are iterative and concurrent servers ?

h) Write the toolkits of Distributed Object System.

i) Write the different types of reliable multicasting systems.

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

k) What do you mean by polling and call back ?

l) Why RMI security manager is used ?

PART – B

Unit – I

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

b) Explain how can we achieve concurrent programming in a process ? Explain its two types.

c) Explain synchronous send and synchronous receive operation for event synchronization.

(7+7+6)

P.T.O.

3. a) With an example explain Event Diagram and Sequence Diagram.
   b) Explain the four operations of an Archetypal IPC Program Interface.
   c) What are the strengths and weakness of distributed computing ? Explain. (7+6+7)

Unit – II

4. a) What is message system paradigm ? Explain its two types.
   b) With a neat diagram explain connectionless datagram socket API.
   c) What do you mean by distributed object paradigms ? Explain RMI and ORB. (7+6+7)

5. a) Explain different trade-offs of Distributed Computing paradigm.
   b) What do you mean by stream-mode socket API ? Explain with a neat diagram.
   c) Explain the network service paradigm and mobile agent paradigm with neat diagrams. (6+6+8)

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) Explain the following :
      i) FIFO Multicasting
      ii) Casual-Ordering Multicasting
      iii) Atomic Order Multicasting
   b) Briefly explain any three client-server paradigm issues.
   c) Write a note on connection oriented Echo client-server. (6+9+5)

Unit – IV

8. a) Explain the steps for building an RMI application.
   b) Explain an Archetypal Distributed Object Architecture.
   c) What are the steps involved in testing and debugging of RMI application ? (8+6+6)

9. a) Explain the steps for building an RMI application with client callback.