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

BCACAC 315

Credit Based Fifth Semester B.C.A. Degree Examination, November/December 2015 (New Syllabus) (2014-15 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 of Part – **B**.*

PART – A

1. a) What is distributed computing ? **(10×2=20)**

   b) Write the general format of URL.

   c) What are request-response protocols ?

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

   e) What are UDP and TCP ? Why they are used ?

   f) Expand : RMI, RPC, SSL, JSSE.

   g) What do you mean by daytime service ?

   h) What do you mean by stateless and stateful protocols ?

   i) What are the classification of reliable multicast system ?

   j) Write any two trade-offs between the RMI API and socket API.

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

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

P.T.O.

PART – B

UNIT – 1

2. a) What are the different forms of computing ? Explain.
   b) Explain with diagram IPV4 address scheme.
   c) Explain synchronous send and synchronous receive and asynchronous send and synchronous receive. **(7+5+8)**

3. a) Explain strength and weaknesses of distributed computing.
   b) Differentiate event diagram and sequence diagram.
   c) Write a note on archetypal IPC program interface. Explain with diagram how basic http works.
   d) Write a note on timeouts and threading. **(6+5+5+4)**

UNIT – 2

4. a) What is message system paradigm ? Explain its two types.
   b) With a neat diagram explain Remote Procedure Call.
   c) What do you mean by stream-mode socket API ? Explain with diagram. **(8+7+5)**

5. a) What is Client-server paradigm ? Explain with diagram.
   b) Explain mobile agent paradigm.
   c) What are connectionless and connection oriented datagram sockets ? Explain with diagram.
   d) Write a note on secure socket API. **(5+4+7+4)**

UNIT – 3

6. a) Explain client-server paradigm issues.
   b) Differentiate stateful and stateless servers.
   c) Write a note on unicast and multicast. **(7+8+5)**

7. a) With a neat diagram explain client-server distributed computing paradigm.
   b) Explain the development process for a network service using Daytime protocol.
   c) Write and explain the classification of reliable multicast system. **(6+6+8)**

UNIT – 4

8. a) What do you mean by Remote Procedure Call ? Differentiate it by a local procedural call with diagram and explain it.
   b) With diagrams explain Polling and Callbacks in RMI.
   c) Write an algorithm for developing the server side and client side software when building an RMI application with client callback. **(7+5+8)**

9. a) Write server side and client side implementation in Java RMI.
   b) With a neat diagram explain stub downloading.
   c) Write a note on RMI security manager. **(10+5+5)**
