BCACAC 262

Credit Based IV Semester B.C.A. Degree Examination, November/December 2015
(New Syllabus) (2013-14 Batch Onwards)
PRINCIPLES OF TCP/IP

Time : 3 Hours

Max. Marks : 80

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

PART – A

(10×2=20)

1. a) Expand MILNET and NSFNET.

   b) List various layers of TCP/IP reference model.

   c) What do you mean by loop back address ?

   d) What are the two types of physical address ?

   e) List any four characteristics of BGP.

   f) What do you mean by host specific routing ?

   g) What is subnet addressing ?

   h) Define TCP.

   i) Give UDP message format.

   j) What is the use of telnet protocol ?

   k) What is the general form of an IPv6 datagram with multiple headers ?

   l) Differentiate FTP and TFTP.

PART – B
Unit – I

2. a) Write a note on evolution of networks.

   b) Explain address resolution through direct mapping.

   c) How does a RARP work ? Explain. (5+6+4)

3. a) Explain ISO 7-layer reference model.

   b) Explain Class A, Class B IP addresses.

   c) Write a note on cache and ARP timeouts.   **(7+4+4)**

Unit – II

4. a) Write the IP datagram format and explain the fields VERS, HLEN, TOTAL LENGTH of datagram.

   b) How the datagram can be forwarded using direct delivery ? Explain.

   c) Explain table driven routing.   **(5+5+5)**

5. a) Write IP forwarding algorithm.

   b) Explain subnet addressing concept with an example.

   c) Explain RIP operation.   **(5+5+5)**

Unit – III

6. a) Write UDP multiplexing and demultiplexing using ports.

   b) Explain how reliability is provided in packet delivery using positive acknowledgment with retransmission technique.

   c) Explain send side silly window avoidance.   **(4+6+5)**

7. a) Write UDP message format and explain various fields.

   b) Explain how TCP establishes connection using 3 way handshakes.

   c) What are the advantage and disadvantages of delayed acknowledgment scheme ?   **(5+5+5)**

Unit – IV

8. a) What is FTP ? Explain various features of FTP.

   b) Explain, how email messages are transferred using POP.

   c) Write a note on MIME protocol.   **(5+5+5)**

9. a) How does NFS works ? Explain.

   b) Explain unspecified and loopback addresses used in IPv6.

   c) Write a note on SMTP.   **(5+4+6)**