BCACAC 262

**Credit Based Fourth Semester B.C.A. Degree
Examination, September 2022
(Common to all Batches)
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 in Part – **B**.

PART – A

1. a) Name any two organisations related to evolution of open networks. **(10×2=20)**

   b) What is loop back address ?

   c) What is use of ARP ?

   d) Differentiate direct and indirect delivery of datagram.

   e) What is default router ?

   f) What is Border Gateway protocol ?

   g) Compare telnet and rlogin protocols.

   h) What is user datagram protocol ?

   i) What do you mean by passive and active open in TCP ?

   j) Differentiate FTP and TFTP.

   k) What is the purpose of MIME protocol ?

   l) What is the purpose of Post office protocol ?

PART – B

Unit – I

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

   b) Explain TCP/IP 5 layer reference model.

   c) Explain address resolution through dynamic binding. **(5+5+5)**

3. a) Explain application level and network level interconnection schemes.

   b) Explain various classes of IP addressing scheme.

   c) Explain address resolution through direct mapping. **(5+5+5)**

Unit – II

4. a) Write a short note on open shortest path first protocols.

   b) Explain the IP-routing algorithm.

   c) What is subnet addressing ? Explain. **(5+5+5)**

5. a) Give the structure of IP datagram. Explain its fields.

   b) What is next-hop routing ? Explain.

   c) Explain various characteristics of BGP. **(5+5+5)**

Unit – III

6. a) Give the UDP message format and explain various fields.

   b) Explain how TCP establishes connection using 3 way hand shake.

   c) Explain various services offered by telnet protocol. **(5+5+5)**

7. a) Explain sliding window technique with a diagram.

   b) Explain how TCP terminates connection using 3 way hand shake.

   c) Explain how application programs are used to implement telnet client and telnet server with a diagram. **(5+5+5)**

Unit – IV

8. a) Explain FTP process model with diagram.

   b) Explain send-side silly Window Avoidance.

   c) Explain changes introduced in IPV6 compare to IPV4. **(5+5+5)**

9. a) Explain NFS with diagram.

   b) Explain various characteristics of IP multicasting.

   c) Give the format of IPV6 base header and explain its fields. **(5+5+5)**

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