

Lib.

BE (EATC) Sem VIII (R)
Internet Comm. Engg

29/05/09
11-2

May 09 HP 74
Con. 3163-09.

VR-4293

(REVISED COURSE)

(3 Hours)

[Total Marks 100

N.B. : (1) Question No. 1 is **compulsory**.

(2) Attempt any **four** questions from the remaining.

(3) Assumptions made must be **clearly** stated.

1. (a) A host in an organization has an IP address 150.32.64.34 and a subnet mask 255.255.240.0. What is the address of this subnet ? What is the range of IP addresses that a host can have on this subnet ? 5
- (b) Compare the merits of operating routing protocols RIP, OSPF and BGP over UDP, IP and TCP respectively. 5
- (c) Explain TCP/IP network architecture. 10
2. (a) Suppose a router receives an IP packet containing 600 data bytes and has to forward the packet to a network with maximum transmission unit of 200 bytes. Assume that the IP header is 20 bytes long. Show the fragments that the router creates and specify the relevant values in each fragment header (i.e., total length, fragment offset and more bit). 10
- (b) Show the format of User datagram format and explain checksum calculation at sender and receiver with the help of suitable example. 10
3. (a) Explain Internet Group Management Protocol. What is Mbone ? 10
- (b) Explain error control and congestion control mechanism in TCP. 10
4. (a) Compare IP v6 and IP v4. 10
- (b) Explain Dynamic Host configuration protocol. 10
5. (a) Explain sockets and ports. 10
- (b) How does TCP provide a reliable delivery service to applications ? How does it apply flow control over a connection ? Explain other functions covered in the options field of TCP header. 10
6. (a) Explain a static routing Algorithm with the help of suitable example. 10
- (b) What is Firewall ? Explain Packet-filter Firewall and Proxy Firewall. 10
7. Write short notes on (any **two**) :- 20
 - (a) H.323 protocol stack
 - (b) NAT
 - (c) IP utilities available to help in finding out about IP hosts and domains.