

- Note : : 1) All questions are compulsory.
2) Make suitable assumptions wherever necessary and state the assumptions made.
3) Numbers to the right indicate marks.

- Q. 1 Attempt **any two** of the following **10**
a Explain output module of TCP.
b Write a note on timers available in RIP.
c Explain class full addressing.
d Explain IPv6 base header format.
- Q. 2 Attempt **any three** of the following **15**
a Write a note on NAT (network address translation)
b Explain role of presentation layer.
c Explain supernetting with example.
d State and explain reassembly module of IP Package.
e Explain strategies for transmission from IPv4 to IPv6.
f Explain unicast, anycast and multicast address in IPv6.
- Q. 3 Attempt **any three** of the following **15**
a Explain Cache control module of ARP.
b List and Explain Error Reporting messages of ICMP.
c Explain role of foreign agent and home agent in Mobile IP.
d Explain the concept of path vector routing.
e Explain two-node instability in RIP.
f Explain various types of links in OSPF.
- Q. 4 Attempt **any three** of the following **15**
a State and explain features of UDP.
b Write and Explain pseudo code of control-block module and output module of UDP.
c Draw and explain TCP Segment format.
d Draw and explain client state transition diagram of TCP.
e State and explain services of SCTP.
f Explain INIT chunk of SCTP.
- Q. 5 Attempt **any three** of the following **15**
a Draw and explain DHCP packet format.
b Explain Generic, Country and the Inverse Domain.
c Explain the concept of NVT and NVT character set.
d Explain in brief components of SSH.
e Explain in brief communication over control connection & data connection in FTP.
f Explain different messages of TFTP.
- Q. 6 Attempt **any three** of the following **15**
a Explain in detail hypertext and hyper media, web client(browser), webserver, Uniform resource locator.
b Explain persistence and nonpersistent connection of HTTP.
c Write a note on message transfer agent of email system.
d Explain in detail the role of POP3 and IMAP4 in email system.
e Explain various data types and subtypes in MIME.
f Write a note on Audio Compression.

Q. 7 Attempt **any three** of the following

15

- a Explain in detail constructors used to create DatagramSocket.
- b Write TCP socket program that will display whether a number is a prime or not.
- c Explain Socket class with its methods and properties.
- d Explain how UDP socket programming works?
- e Write UDP socket program that will display number of vowels in a string.
- f Write a Client/server application where a client contacts the server to obtain random number. Use Socket and Server Socket.
