22520

22232

3 Hours / 70 Marks Seat No. | | | | | | | | |

Instructions : (1) All Questions are *compulsory.*

(2) Illustrate your answers with neat sketches wherever necessary.

(3) Figures to the right indicate full marks.

(4) Assume suitable data, if necessary.

Marks

1. Attempt any FIVE of the following : **10**

(a) Draw and label sketch of IPv4 packet format.

(b) List any two extension headers of IPv6 protocol.

(c) Define Inter domain routing.

(d) State the use of six flags in TCP header.

(e) Differentiate between FTP and TFTP (2 points).

(f) List types of ICMPv4 messages.

(g) State the importance of IPv6 over IPv4.

2. Attempt any THREE of the following : **12**

(a) Explain classfull addressing mechanism of IPv4.

(b) Differentiate between TCP and UDP.

(c) Describe HTTP response message format.

(d) Explain Network address translation.

3. Attempt any THREE of the following : **12**

(a) Explain distance vector routing with suitable example.

(b) Describe the working of TELNET.

(c) List UDP services and UDP applications (any 4 each).

(d) Find out the error, if any in the following IPv4 addresses :

a. 111.56.054.78

b. 222.34.7.8.20

c. 75.45.301.14

d. 11100101.23.14.67

4. Attempt any THREE of the following : **12**

(a) Distinguish between SMTP and POP3 protocol.

(b) Draw and explain IPv6 packet format.

(c) Differentiate between RIP and OSPF routing protocol.

(d) Describe the state transition of TCP.

(e) Explain the process of resolving the given host name into IP address using DNS.

5. Attempt any TWO of the following : **12**

(a) Explain the process of transition from IPv4 to IPv6.

(b) Explain TCP with respect to flow control and error control.

(c) Describe the architecture of E-mail system using four scenario.

6. Attempt any TWO of the following : **12**

(a) Explain Bellman Ford algorithm with suitable example.

(b) For the IP address given below, find the range of addresses in the following blocks :

(a) 123.56.77.32/29

(b) 200.17.21.128/27

(c) 17.34.16.0/23

(d) 180.34.64.64/30

(c) Describe the fields of SCTP packet format. Explain SCTP association establishment process.