22520

23242

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

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

(2) Answer each next main Question on a new page.

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

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) Use of Non-programmable Electronic Pocket Calculator is permissible.

(7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

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

(a) State the difference between IPv 4 and IPv 6 (any **TWO**).

(b) Draw IPv 6 packet format.

(c) State the need of domain name system.

(d) Enlist applications of UDP (any **TWO**).

(e) State the transmission modes of FTP.

(f) Define virtual private network.

(g) Define Inter-domain and Intra-domain routing.

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

(a) Differentiate between TCP and UDP.

(b) Explain ICMP protocol with its header format.

(c) Describe SMTP with suitable diagram.

(d) Explain IPv 4 addressing format with its classes.

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

(a) Compare between link state routing and distance vector routing.

(b) Explain addressing scheme of IPv 6.

(c) Explain the working of TELNET.

(d) Describe the packet format of SCTP.

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

(a) Explain architecture of E-mail system.

(b) Compare dynamic routing and static routing.

(c) Describe HTTP response message format.

(d) Explain TCP connection establishment using three way handshake mechanism.

(e) Distinguish between SMTP and POP 3 protocol.

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

(a) Explain association establishment process in SCTP.

(b) State the need of

(i) Sequence control

(ii) Error control

(iii) Flow control

under transport layer.

(c) Explain different transition methods of IPv 4 to IPv 6.

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

(a) Explain any 3 Intra domain routing protocols.

(b) For the given IP address below,

(i) Identify the class to which the IP address belong

(ii) Identify host address

(iii) Identify network address

(iv) Calculate the number of host that can be assigned with each network.

IP addresses are :

(1) 121 · 33 · 43 · 13 1

(2) 15 · 15 · 15 · 15

(3) 198 · 22 · 5 · 36

(4) 126 · 120 · 10 · 80

(c) (i) Explain remote login protocol – SSH. **(3)**

(ii) Describe the DHCP operation. **(3)**
