

22520

24225

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.

Marks

1. Attempt any FIVE of the following :

10

- (a) Write IPv6 abbreviation with suitable example.
- (b) Define address space. Give address space for IPv6.
- (c) List any two application layer protocols.
- (d) List the names of two timers associated with TCP.
- (e) Draw UDP header format.
- (f) State URL with one example.
- (g) List debugging tools used in ICMP.

2. Attempt any THREE of the following :

12

- (a) Compare TCP with UDP (Any four points).
- (b) Draw and explain IPv4 Datagram format.
- (c) Explain working of WWW.



- (d) If an address in block is given in CIDR classless notation as 128·64·32·16/27 then find the following :
- (i) No. of addresses in given block (N)
 - (ii) The first address
 - (iii) The last address
 - (iv) Find prefix bit (n)

3. Attempt any THREE of the following :

12

- (a) Describe distance vector routing technique with suitable diagram.
- (b) Explain any two of the following transition method from IPv4 to IPv6 :
 - (i) Dual Stack
 - (ii) Tunneling
 - (iii) Header translation
- (c) Distinguish between SMTP and POP3.
- (d) Describe the State Transition of TCP with suitable diagram.

4. Attempt any THREE of the following :

12

- (a) Explain working principle of TELNET.
- (b) Describe border gateway protocol with suitable diagram.
- (c) Describe HTTP response-message format.
- (d) Describe packet format of SCTP with neat sketch.
- (e) Construct a diagram to show the application of cookies in scenario in which the server uses cookies for advertisement.

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

- (a) Differentiate between TCP, UDP and SCTP on the basis of reliability, connection management, transmission of message, flow control, security & data delivery.
- (b) Illustrate the importance of :
 - Sequence control
 - Flow control
 - Error control in TCP under transport layer.
- (c) Describe the following IPv6 addressing method :
 - (i) Unicast address
 - (ii) Multicast address
 - (iii) Anycast address

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

- (a) Explain any three intra-domain routing protocols.
 - (b) For the IP address given below :
 - (i) Identify the classes to which the following IP Addresses belongs to
 - (ii) Identify network address section
 - (iii) Calculate number of hosts that can be assigned with each network :
 - (1) 12·12·12·12
 - (2) 192·10·233·26
 - (c) Describe E-mail security over Non-secure channel.
-

