



22520

12223

3 Hours / 70 Marks

Seat No.

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- 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) Draw and label sketch of ICMPV4 packet format.
- (b) State the importance of IPV6 over IPV4.
- (c) Distinguish between SMTP and POP3 protocol (Any two points).
- (d) What is UDP ? Which services are provided by UDP (Any two) ?
- (e) State importance of Routing table.
- (f) State the use of Telnet.
- (g) State the concept of fragmentation in IPV4.

2. Attempt any THREE of the following :

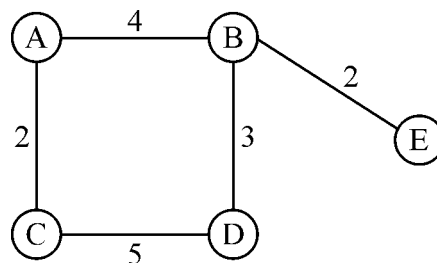
12

- (a) Describe flow control under SCTP.
- (b) What is Mobile IP ? List and explain components of Mobile IP.
- (c) Describe DHCP with its operation and static and dynamic allocation.
- (d) Give use of OSPF with its reason.



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

- (a) State significance of following related to IPV6.
- Auto configuration
 - Renumbering
- (b) Draw and explain TCP segment structure.
- (c) With the help of diagram, explain architecture of WWW.
- (d) Use Bellman-Fort algorithm to find the shortest distance for all nodes in the graph.

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

- (a) Construct a diagram to show the application of Cookies in a scenario in which the server uses Cookies for Advertisement.
- (b) List Intradomain multicast protocol. Explain any one in detail.
- (c) Describe the HTTP Response Message Format.
- (d) List different timers used in TCP.
- (e) Explain the working of SSH.

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

- (a) Describe the BGP3 in detail.
- (b) State the need for
- (1) Sequence Control
 - (2) Error Control
 - (3) Flow Control in networking.
- (c) Explain the process of transition from IPV4 to IPV6 for a network.

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

- (a) With a suitable example, explain Link State Routing algorithm. What are the serious drawbacks of Link State Routing Algorithm ?
 - (b) For the IP addresses given below
 - (1) Identify the classes to which the following IP Address belongs to
 - (2) Identify network address section.
 - (3) Identify Host Address Section.
 - (4) Calculate number of hosts that can be assigned with each network
 - (i) 22.34.45.133
 - (ii) 12.12.12.12
 - (iii) 192.0.233.26
 - (iv) 126.123.16.87
 - (c) Describe e-mail security over non-secure channel.
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