

22520

21222

3 Hours / 70 Marks

Seat No.

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15 minutes extra for each hour

- 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.
 - (5) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (6) 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) Define Home Agent and foreign agent with respect to Mobile IP.
- (b) State the need of IPv6.
- (c) Distinguish between FTP and TFTP protocols.
- (d) State any four features of TCP.
- (e) Define inter-domain routing protocol. List them.
- (f) State different applications of UDP.
- (g) List two protocols of each for Connection-oriented service and Connection-less service.

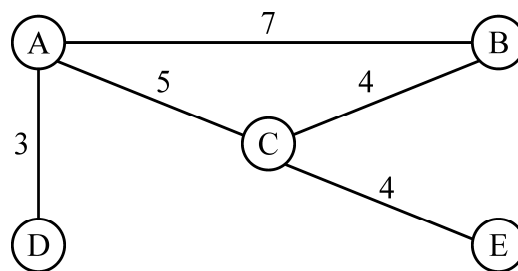
2. Attempt any THREE of the following :

12

- (a) Describe SMTP with suitable diagram.
- (b) Write stepwise procedure to configure IP routing with RIP.
- (c) Draw and explain IPv6 protocol format.
- (d) List and explain, services provided by TCP (Transmission Control Protocol).

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

- (a) Distinguish between dynamic routing and static routing on the basis of configuration, security, routing protocols and cost.
- (b) For the IPV4 addresses given below, calculate subnet mask, broadcast address and number of hosts possible.
 - (i) 10.0.199.237/22
 - (ii) 192.168.14.87/26
- (c) Differentiate between IPv4 and IPv6 (any 4 points).
- (d) Use Bellman – Fort algorithm to find the shortest distance for all nodes in the graph. (Refer fig. no. 01)

**(Fig. No.-1)****4. Attempt any THREE of the following :****12**

- (a) Define WWW. Explain static and dynamic web documents in details.
- (b) Describe the frame format of SSH.
- (c) Draw state transition diagram of TCP.
- (d) Explain functioning of Multicast link. State routing protocol.
- (e) Construct a diagram to show the application of cookies in a 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 and data delivery.
- (b) Describe DHCP with its operation & static and dynamic allocation.
- (c) Describe Email security over non-secure channel.

6. Attempt any TWO of the following : 12

- (a) Explain the process of transition from IPv₄ to IPv₆ for a network.
 - (b) Draw and explain TCP. State transition diagram.
 - (c) For the IP address given below :
 - (i) 132.34.45.133
 - (ii) 14.142.20.20
 - (iii) 191.0.200.45
 - (iv) 129.16.123.85
 - (A) Identify the classes to which the following IP numbers belong to ?
 - (B) Identify network address section.
 - (C) Identify host address section.
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