Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Seventh Semester B.Tech Degree Supplementary Examination June 2022 (2015 Scheme)

Course Code: EC407

Course Name: COMPUTER COMMUNICATION

Max. Marks: 100 Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks. Marks

1 a) Comparison between Circuit switching and Packet switching. (6)

b) Explain the TCP/IP network model with a neat diagram. (9)

2 a) Compare any three physical topologies used in computer networks. (7)

b) How sliding window flow control mechanism is implemented? (8)

3 a) How collision is handled in CSMA/CD? (7)

b) Explain the frame format in HDLC protocol. (8)

PART B

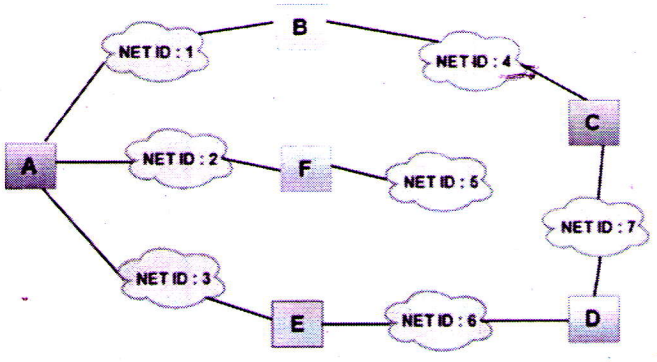
Answer any two full questions, each carries 15 marks.

4 a) Describe the address mapping mechanism using ARP. (5)

b) Explain any two networking devices. (5)

c) Explain IPv4 datagram format. (5)

5 a) In the given diagram, each cloud represents the network and each square represents router. How Distance Vector Routing algorithm is implemented here? (10)



b) Compare adaptive and non-adaptive routing algorithms. (5)

6 a) Find the class, Net id and host id of the following IP addresses (4)

i) 112.23.4.2

ii) 170.6.18.1

iii) 198.67.91.8

iv) 222.11.88.99

b) Describe how a newly arriving host in an organization will be assigned an IP address using DHCP protocol. (4)

c) Explain any one of the routing protocols. (7)

PART C

Answer any two full questions, each carries 20 marks.

7 a) What are the features of UDP? (7)

b) Illustrate the TCP header format. (6)

c) What are the types of characteristics attributed to a flow? (7)

8 a) What is S/MIME? How does it work? (8)

b) Explain 3 common attacks in computer networks? (6)

c) How does IPSec work? (6)

9 a) What is quality of service (QoS) and flow characteristics? Explain different scheduling techniques to improve QoS. (10)

b) Explain any one protocol used for providing security at the transport layer. (5)

c) What are the limitations of firewall? (5)

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