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Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Seventh Semester B.Tech Degree Supplementary Examination August 2021

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) State the difference between OSI and TCP/IP models. (8)

b) Explain the HDLC protocol frame format in detail. (7)

2 a) Explain the serial transmission and parallel transmission with a neat sketch. (7)

b) Explain how collision is handled in CSMA/CD with necessary diagram. (8)

3 a) State the advantages and disadvantages of any three physical topologies. (7)

b) Explain the different framing methods. Compare bit stuffing from byte stuffing with frame structures. (8)

PART B

Answer any two full questions, each carries 15 marks.

4 a) Explain Virtual LAN with its configurations. (7)

b) Discuss IPv4 packet format with a neat sketch. (8)

5 a) Explain the forwarding techniques of a packet in network layer. (5)

b) Explain Dijkstra's algorithm to find the shortest path with an example. (10)

6 a) Explain classful and classless addressing. (5)

b) Explain the Routing Information Protocol with an example. (7)

c) Compare IPv4 header format from IPv6 header format. (3)

PART C

Answer any two full questions, each carries 20 marks.

7 a) Explain the TCP segment header format with a neat sketch and explain its various fields. (8)

b) Explain the Open loop and Closed loop congestion control mechanisms in detail. (8)

c) Explain POP3 with necessary diagram. (4)

8 a) Explain about IPsec and its modes. (6)

b) Describe the four SSL protocols in detail. (8)

c) Discuss the various attacks in data network. (6)

9 a) Discuss in detail why TCP is called as connection oriented transport layer protocol. (5)

b) Explain SSL and TLS in detail. (5)

c) Give an idea about Intrusion Detection System (IDS). Explain the different types of IDS in detail. (10)

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