Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

0520MCA104072102

Second Semester MCA (2 Year) Degree Examination July 2021

Course Code: 20MCA104

Course Name: ADVANCED COMPUTER NETWORKS

Max. Marks: 60 Duration: 3 Hours

PART A

Answer all questions, each carries3 marks. Marks

1	What is protocol layering? What are the reasons for using Layered Architecture in Computer Networks?	(3)
2	What is the role of SMTP in E-Mail message transfer?	(3)
3	Demonstrate the significance of sequence numbers in stop and wait ARQ.	(3)
4	Explain the TCP segment header format.	(3)
5	Compare datagram network with virtual circuit network.	(3)
6	Explain multicast routing.	(3)
7	Explain how parity is used to achieve error detection in data communication.	(3)
8	Explain the working of CSMA/CD?	(3)
9	Explain Network Address Translation.	(3)
10	What is VPN? List different types of VPN.	(3)

PART B

Answer any one question from each module. Each question carries 6 marks.

Module I

11	Explain the working of File Transfer Protocol (FTP) and its features.	(6)
	OR	
12	Explain the two predominant network architecture used in modern network applications with diagrams.	(6)

Module II

13	Outline in detail the two well-known data transport protocols provided by the Internet transport layer.	(6)
	OR	
14	Explain why TCP congestion control is referred as Additive increase Multiplicative decrease form of congestion control.	(6)

Module III

15 Describe the format of IPv6 datagram with the help of a diagram, highlighting the significance of each field. (6)

OR

16 Explain the significance of routing in networking. Illustrate distant vector routing algorithm used in network routing. (6)

Module IV

17 a) What are channel partitioning protocols? Indicate the difference between each category of channel partitioning protocol. (3) (6)

b) Draw the Ethernet frame structure and mention the purpose of fields in it. (3)

OR

18 What are the different error detection techniques used at the data link layer? (6)

Module V

19 Explain Bluetooth with its architecture and layers. (6)

OR

20 Explain Network management and highlight the role of network administrator. (6)

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