Reg No.:_____ Name:_____

0520MCA104072103

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Second Semester MCA (2 Year) Degree Examination June 2022

Course Code: 20MCA104

Course Name: ADVANCED COMPUTER NETWORKS

Max. Marks: 60 Duration: 3 Hours

PART A

Answer all questions, each carries 3 marks. Marks

1	What are the reasons for using layered protocol architecture?	(3)
2	Differentiate HTTP persistent and non-persistent communications.	(3)
3	Demonstrate how Stop-and-Wait protocol is used for reliable data transfer.	(3)
4	Discuss about three-way handshaking in TCP with suitable diagram.	(3)
5	What are Virtual Circuits? Compare with circuit switched and packet switched networks.	(3)
6	Explain the features of RIP.	(3)
7	Draw and explain IEEE 802.3 Ethernet frame format.	(3)
8	What is the difference between a Hub and a Switch?	(3)
9	With a neat diagram explain the architecture of Bluetooth	(3)
10	What is VPN?	(3)

PART B

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

Module I

11	What is the relevance of a network protocol architecture? With neat diagram, brief the responsibilities of network support layers in OSI Reference model?	(6)

OR

12	Discuss with relevant example, the application layer protocol used to retrieve web pages from the Web.	(6)

Module II

13 What is network congestion? Show how the performance of network is affected by congestion? Write about the mechanisms to alleviate congestion after it happens. (6)

OR

14 Demonstrate the working of Go-Back-N and Selective Repeat protocols with suitable diagrams. (6)

Module III

15 Define routing? Explain the process of Link State Routing with OSPF protocol. (6)

OR

16 Write short notes on inter-domain routing protocol BGP. (6)

Module IV

17 Explain the random access protocol used for collision detection in Ethernet. (6)

OR

18 Generate codeword at sender and perform checking of codeword at receiver assuming no error for the dataword 1100 and divisor 1101 using CRC. (6)

Module V

19 With neat diagram explain the architecture of IEEE 802.11 Wireless LAN. (6)

OR

20 Explain SNMP framework for managing devices in the Internet. (6)

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