CY245AT

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RV COLLEGE OF ENGINEERING®

(An Autonomous Institution Affiliated to VTU)

IV Semester B. E. Examinations Sept/Oct – 2024

Common to CY/CSE/ISE/AIML/CD

COMPUTER NETWORKS

Time: 03 Hours *Maximum Marks: 100*

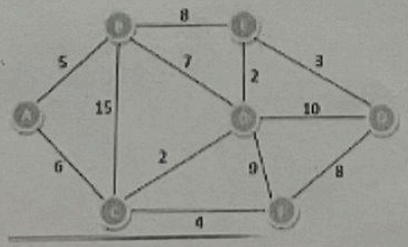
Instructions to candidates:

1. Answer all questions from Part A. Part A questions should be answered in first three pages of the answer book only.
2. Answer FIVE full questions from Part B. In Part B question number 2is compulsory. Answer any one full question from 3 and 4, 5 and 6, 7 and 8, 9 and 10.

PART-A

			M	BT	CO
1	1.1	8/1500 is size of the standard Ethernet Packet	01	1	2
	1.2	What is the use of Choke Packet in routing?	01	2	2
	1.3	Differentiate between Unicasting and Broadcasting.	01	3	2
	1.4	23 is the default port number used by the Telnet.	01	1	2
	1.5	List the parameters used in the Admission Control.	02	1	2
	1.6	Differentiate Routing over Forwarding.	02	3	2
	1.7	List any two QoS requirements of an E-mail application	02	1	2
	1.8	What role does RSVP play in the Integrated Services (IntServ) architecture?	02	1	2
	1.9	Differentiate Point to Point and Multi Point connection.	02	1	2
	1.10	Write any two functionalities of Network layer.	02	2	2
	1.11	List any two advantages of IPv6 over IPv4.	02	2	2
	1.12	Differentiate between CSMA and CSMA/CD.	02	3	2

PART-B

2	a	Write any four salient features of HDLC and PPP protocol.	08	2	2
	b	Draw the TCP/IP protocol suite. Describe the functionality of each layer in detail.	08	2	2
3	a	Differentiate Datagram Subnet and Virtual- Circuit Subnet.	08	2	2
	b	For the following network find the shortest path using Dijkstra algorithm. Consider the node 'A' as the source node and node 'G' as destination.  ABDEG	08	3	1
		OR			
4	a	What is routing Protocol? Discuss the following: (i) Properties of routing protocol. (ii) Classification of routing protocol.	08	2	2
	b	With the help of a neat diagram, illustrate the use of Multicast Routing.	08	3	1

5	a	Discuss packet scheduling algorithms in detail.	08	2	2
	b	Describe the QoS requirements of Telephone and Videoconferencing applications.	08	2	2
		OR			
6	a	Discuss Expedited Forwarding and Assured Forwarding in detail.	08	2	2
	b	Describe Explicit Congestion notification and Hop-by-Hop Backpressure.	08	2	2
7	a	Summarize Address Resolution Protocol in detail.	08	2	2
	b	Discuss the IPv6 header format with a neat diagram.	08	2	2
		OR			
8	a	Identify and discuss the network management protocol used to dynamically assign an IP address to any device on a network allowing it to communicate using IP. (DHCP)	08	2	2
	b	Draw the network model and describe the working of Exterior Gateway Routing Protocol.	08	2	2
9	a	Discuss any six differences between UDP and TCP.	08	2	2
	b	With a neat diagram describe three-way handshake in detail.	08	2	2
		OR			
10	a	Draw the header format of TCP segment header and discuss each field in detail.	08	2	2
	b	Describe the architecture of World Wide Web in detail.	08	2	2