K. J. Somaiya Institute of Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

Nov – Dec 2023
(B. Tech) Program: AIDS Scheme II
Examination: TY Semester: V
Course Code: AIDLC5051 and Course Name: Computer Network

Date of Exam: 7/12/2023 **Duration: 2.5 Hours** **Max. Marks: 60**

Instructions:
(1)All questions are compulsory.
(2)Draw neat diagrams wherever applicable.
(3)Assume suitable data, if necessary.

		Max. Marks	CO	BT level
Q 1	**Solve any six questions out of eight.**	12		
i)	Which layers of the TCP/IP protocol suite are involved in a link layer switch?.	2	CO1	Un
ii)	What is the difference between switch and repeater?.	2	CO2	R
iii)	Differentiate between stop and wait and sliding window protocol.	2	CO3	Un
iv)	Differentiate between IPV4 and IPV6.	2	CO4	Un
v)	In the TCP segment, what does an acknowledgement number identify?	2	CO5	R
vi)	Why is Software -Defined Networking important?	2	CO6	Un
vii)	Determine the need of a MAC sub layer.	2	CO3	Un
viii)	Discuss the IPV4 classful addressing scheme with the range of addresses in each class.	2	CO4	Un
Q.2	**Solve any four questions out of six.**	16		
i)	What are the types of addresses used in each of the following layers? a. Application Layer b. Network layer c. Data Link Layer	4	CO1	Un
ii)	List the categories of UTP cables. How noise interference is minimized in twisted pair cables.	4	CO2	Un
iii)	Illustrate stop & wait and Go back N protocols with example.	4	CO5	Ap
iv)	Explain the header format of UDP.	4	CO5	Un

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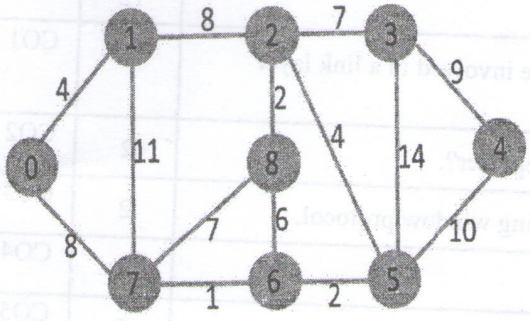
v)	A router receives a packet with the destination address 201.24.67.32. Show how the router finds the network address of the packet?	4	CO4	Ap
vi)	Write short note on : DNS	4	CO6	Un
Q.3	**Solve any two questions out of three.**	16		
i)	Describe the TCP/IP Reference model in detail..	8	CO1	Un
ii)	 Using Dijkstra's shortest path algorithm, find the shortest path from node 0 to all other nodes.	8	CO4	Ap
iii)	Explain how slotted ALOHA solves the problem of Channel allocation.	8	CO5	Un
Q.4	**Solve any two questions out of three.**	16		
i)	Explain various guided and unguided transmission media in computer networks.	8	CO2	Un
ii)	With a diagram, Explain the frame format of Ethernet.	8	CO3	Un
iii)	Write short note on: DHCP and HTTP	8	CO6	Un

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