

8.5

National University of Computer and Emerging Sciences, Lahore Campus
Quiz5 [BS(CS): Section D] Fall 2023

Computer Networks (Code: CS3001)

Quiz Date: Novemer 23, 2023

Total Marks: 15

[CLO 3]

Duration: 25 -Minutes

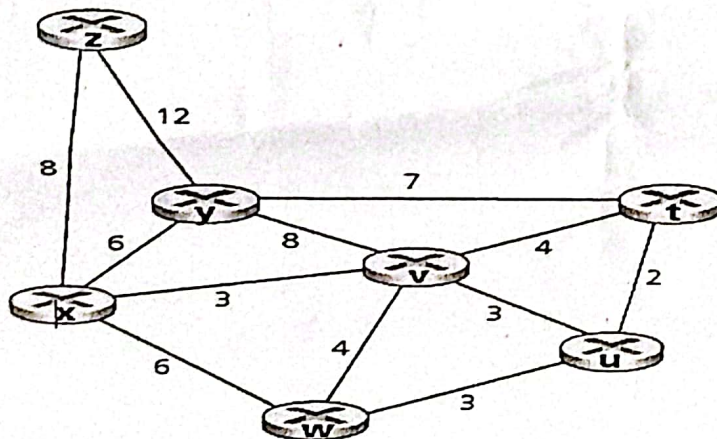
Name ----- Roll # ----- Section -----

Q1: What does BGP stand for? Explain the primary purpose of BGP in networking. [0.5+1.5=2]

Q 2: What is the difference between eBGP and iBGP? [2]

Q3: Consider the following network. With the indicated link costs, use Dijkstra's shortest-path algorithm to compute the shortest path from z to all network nodes. Show the working of the algorithm in the form of a tabular summary for all iterations (i.e., distance and predecessor for all network nodes during each iteration). Moreover, provide the least-cost-path tree from node z and resulting forwarding table in z.

[7+2+2=11]

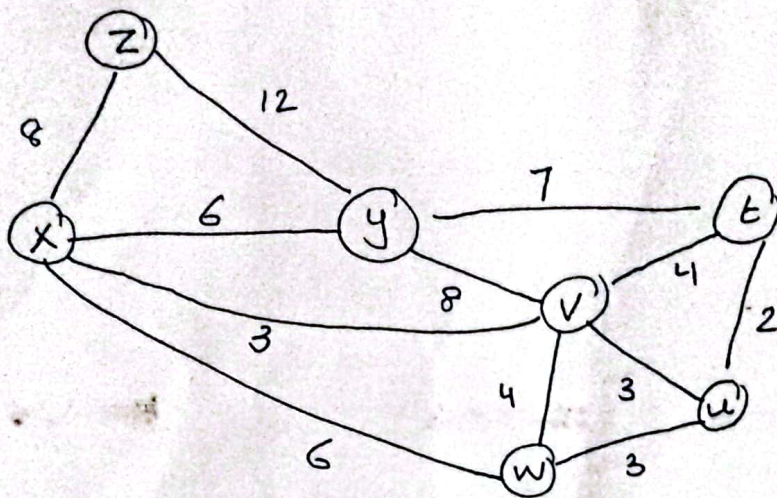


Start writing your answers from here onwards. Yu can use backside of this sheet if needed.

Q. 1 Ans. BGP stands for Border Gateway Protocol. The primary purpose of BGP in networking is to network is that it is inter-domain routing protocol which allows subnets to broadcast itself and to where it can reach to the Internet.

Q. 2 Ans. eBGP is external BGP where the that it receives network reachability from nearby autonomous systems. iBGP is that it broadcasts the reachability data to all autonomous internal routers.

Q.3
Ans.



1

Step	Starting	D_{zx}	D_{zy}	D_{ze}	D_{zv}	D_{zw}	D_{zu}
Step 0	Z	(8, Z)	12, Z	∞	∞	∞	∞
Step 1	ZX	8, Z	12, Z	∞	(11, X)	14, X	∞
Step 2	ZXV	8, Z	(12, Z)	15, V	11, X	14, X	14, V
Step 3	ZXY	8, Z	12, Z	15, V	11, X	14, X	14, V

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