

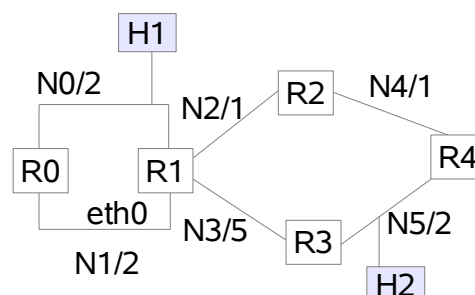
COMPUTER NETWORKS (MCA) – QUIZ 5

- 1.What are interior and exterior gateway protocols?
- 2.Give examples of interior and exterior gateway protocols.
- 3.State the three rules of routing table updation in distance vector algorithm.
- 4.State how the link state algorithm works.
- 5.What is split horizon?
- 6.What is the purpose of using poison reverse?
- 7.Why does the link state protocol use the sequence number?
- 8.Why does a distance vector protocol have slow convergence?
- 9.What is hold-down timeout and how is it useful?
- 10.Give an example topology and explain the count-to-infinity problem.
- 11.State two major differences between RIPv1 and RIPv2.
- 12.What is the difference in the shortest path found by RIP and OSPF protocols?
- 13.What is the purpose of age timer in link state algorithm?
- 14.The age timer is of duration 120s and a HELLO message in the link state algorithm is sent out every 8s. How many messages are discarded by a neighbor if its sequence number is 18?
- 15.Why is RIP not currently used often in networks and is limited to enterprises only?

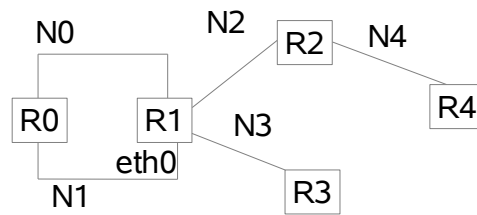
Given that the routing table entries in a router R1 are as follows:

Dest. Network	Gateway	Interface	Hop Cost
N0	Direct	Eth0	1
N1	Direct	Eth1	1

- 16.If router R1 receives an advertisement from a router with ID N1.R2 at time 0 – ((N2, 1), (N3, 2)) in DV algorithm, what is the topology of the network?
- 17.What are the new routing table entries after the above advertisement is received by R1?
- 18.At 20s., R1 receives a new advertisement from N1.R2 with the following: (N2, 16). Which of the optimizations to deal with count-to-infinity problem are definitely enabled based on the two advertisements received?
- 19.R1 receives an advertisement of ((N3, 1), (N2, 2)) from N0.R3 at time 50s after the two above advertisements. If hold-down timeout is enabled in R1, what will be the routing table entries in R1 after receiving this advertisement?
- 20.If triggered updates are enabled in R1, when will the triggered update be sent from R1?
- 21.What is the network topology based on all the advertisements received so far?
- 22.A router Ri has received the following messages in the link-state algorithm: (R1, 1, (R2, R5)), (R2, 10, (R1, R3, R4)), (R3, 5, (R5, R2)), (R4, 2, (R2)), (R5, 1, (R1, R3)). What is the network topology?
- 23.Given the topology below, what is the path for packets destined from host H1 to H2 given that link-state algorithm is used?

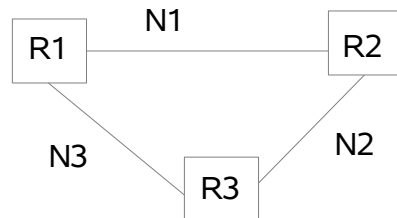


24. In the topology given below, will split-horizon alone be sufficient to prevent count-to-infinity if eth0 interface of R1 goes down?



25. If in the above topology only triggered updates are enabled, what will be the effect of eth0 going down? Will it lead to count-to-infinity problem or not?

26. If in the below topology, R2's advt. reaches R1 first and then R3's advt., which one is used for the routing table entry to N2?



27. What is the problem if the entry is changed when the hop cost is equal to the cost in RT?