CS G525 Advanced Computer Networks Mid-sem Exam

Sem 2019-20 I

Nov 1, 2022 11:00 – 12:30 PM

Max Marks: 2X16 = 32

Name _____ **Roll No** _____

Write answers in one sentence in the space provided below the question.

1. Why cannot we use MAC addresses to send datagrams from one subnet to another?

2. What will happen if a node sends a frame with the destination MAC address of the node that belongs to another subnet?

3. If a node does not know the MAC address of the destination, which protocol will it use to retrieve the MAC address of the destination?

4. Under which condition will a self-learning switch not learn the MAC addresses of the nodes connected to all of its interfaces?

5. What do I need to do if I want two of my machines to share the same public IP address on the Internet?

6. What state will solution, of question #5, has to maintain?

7. How many unique parallel socket connections can work while sharing a single IP?

8. If one of the two machines wants to use a protocol, where the connection initiation request originates from the Internet, why does my solution fail?

9. When SNR deteriorates (gets poor), how do the modulation techniques able to maintain the reliability of the network connection?

10. Why does CSMA/CD protocol fail in the wireless networks?

11. Give a scenario in which the RTS-CTS protocol keeps failing infinitely often.

12. In the traditional IP network, what will happen when a node keeps the IP address after changing the subnet?

13. What information can be redundant in the Link State routing protocol?

14. How does a node, whose multipoint relay selector set (MS) is empty, deal with the Topology Control (TC) messages?

15. What does “on demand” feature optimizes in the AODV routing protocol?

16. How does AODV compare freshness of routes to a destination?