CS G525 Advanced Computer Networks Comprehensive Exam Sem I 2022-2023 Dec 22, 2022 02:00 – 04:00 PM Max Marks: 36

Instruction

• Write answers *briefly* in the space provided below the question

Roll No

1. Why can we not use IP addresses to filter traffic related to a particular domain name? (3 marks)

2. How does ROUTSCOUT detect delays in packet traffic? (3 marks)

3. Why is RDMA faster in moving data? (3 marks)

4. How does AccelUPF split the PFCP processing into 2 parts? (3 marks)

5. Under which condition is the IP layer an overhead in a data-center? If I want to do routing but do not want the overhead of the IP layer, how will I do the routing? (3 + 3 marks)

6. Why is the transmission of data with higher datarate using a single carrier frequency difficult to recover? What is a more robust way to transmit it? (3 + 3 marks)

7. If we eliminate sequence numbers in AODV, there is a possibility of a loop in the network. Give a scenario of the formation of a loop. How does the use of sequence numbers eliminate the formation of a loop? (3 + 3 marks)

8. The NAT protocol fails when a node initiates a network connection from the WAN. What are two possible solutions to this problem? (3 + 3 marks)