National University
of computer and emerging sciences

Computer Networks - Fall 2021
Assignment No. 3

Submission Deadline: 30th November, 2021 - 11:59pm (on google classroom)

Submission Guidelines

1. You are only allowed to work on Cisco Packet Tracer **Instructor Version**.
2. Late submissions will be marked zero.
3. Only zipped files are acceptable. Any other format will be marked zero.
4. Submit your zipped file with the naming convention: RollNo_YourName_Section.zip
5. Plagiarism in any of the tasks will lead to zero marks in the whole assignment category.

For Questions 1 and 2, create the topology given to you along with this pdf. Make the exact topology with the same number of devices as in the picture.

Question No. 1:
For this question, you have to implement static routing in order to achieve the goal that all hosts should be able to communicate with each other. For basic configuration of the networks, you are required to use B class IPs. **Do not use A or C class in any case, otherwise you will be awarded a straight zero for this task.**

Question No. 2:
For this question, you have to implement RIP in order to achieve the goal that all hosts should be able to communicate with each other. For basic configuration of the networks, you are required to use subnetting. You are assigned an IP address 162.11.23.211. You have to make 60 subnets with 812 hosts in each subnet.

For Questions 3, 4, and 5, you have to do your work either on a paper (take pictures from cam-scanner or a similar application and make a pdf in sequence) or on any other suitable software. Make sure to put your pages in order otherwise you will lose marks. You can also type the solution instead of writing on the paper.

Question No. 3:
You are assigned an IP address 171.10.33.103. You have to make 54 subnets with 519 hosts in each subnet. You have to answer the following questions:

a. In which subnet does the above IP address lie?
b. What is the network address of the above IP address?
c. What is the broadcast address of the above IP address?
d. Specify the range of each subnet.
e. What is the subnet mask of this subnet?

Question No. 4:
You are assigned an IP address 12.12.12.12. You have to make 3333 subnets with 4011 hosts in each subnet. You have to answer the following questions:

a. In which subnet does the above IP address lie?
b. What is the network address of the above IP address?
c. What is the broadcast address of the above IP address?
d. Specify the range of each subnet.
e. What is the subnet mask of this subnet?

Question No. 5:

You are assigned an IP address 191.255.255.255. You have to make 512 subnets with 511 hosts in each subnet. You have to answer the following questions:

a. In which subnet does the above IP address lie?
b. What is the network address of the above IP address?
c. What is the broadcast address of the above IP address?
d. Specify the range of each subnet.
e. What is the subnet mask of this subnet?