

Name: \_\_\_\_\_ Roll No: \_\_\_\_\_

# **International Islamic University, Islamabad**

## **Department of Computer Science**

### **Computer Networks**

**Mid Term Exam Spring 2020**

**Monday, 22 June, 2020**

**Total Time: 4.0 Hours, Total Marks: 20**

**Course Instructor: Dr. Qaisar Javaid**

**You are advised to READ these notes:**

- 1. Attempt all the questions by hand on white sheets.**
- 2. Download the file CN-Mid-Answer.docx file (File attached in the Midterm Activity in Google Classroom).**
- 3. Type in your name and registration number on the first page of the word file in the space provided.**
- 4. Take screens shots of the answer sheets.**
- 5. Embed those screenshots in the file CN-Mid-Answer.docx.**
- 6. Save the CN-Mid-Answer.docx as pdf document.**
- 7. Upload the CN-Mid-Answers.pdf file on the link provided in the Google Classroom. on the question paper.**
- 8. Make sure you have 2 pages in question paper.**

**Question No. 1 [6 Marks]**

1. Suppose a computer sends a packet at the network layer to another computer somewhere in the Internet. The logical destination address of the packet is corrupted. What happens to the packet? How can the source computer be informed of the situation?
2. Performance is inversely related to delay. When you use the Internet, which of the following applications are more sensitive to delay?
  - i. Sending an e-mail
  - ii. Copying a file
  - iii. Surfing the Internet

**Question No. 2 [7 Marks]**

1. The data rate of 10Base5 is 10 Mbps. How long does it take to create the smallest frame? Show your calculations.
2. An ISP has block of 1024 addresses. It needs to divide the addresses among 1024 customers. Does it need subnetting? Explain your answer.

**Question No. 3 [7 Marks]**

1. IIUI is granted the block 16.0.0.0/8. The administrator wants to create 500 fixed-length subnets.
  - a. Find the subnet mask.
  - b. Find the number of addresses in each subnet.
  - c. Find the first and last addresses in subnet 1.
  - d. Find the first and last addresses in subnet 500.

**Good Luck**