AMERICAN INTERNATIONAL UNIVERSITY – BANGLADESH (AIUB)
Faculty of Engineering

Course Name: Data Communication **Section**: D **Term**: Final
Quiz: 06 **Total Marks**: 10 Marks **Time**: 30 Minutes

Write your Name, ID, and answers inside the boxes. This question paper has two (2) pages.

Name	Nafinur Leo
ID	20-42195-1

Instructions:

- This paper must be submitted online as a **PDF** file on **VUES** under the component named '**QUIZ 6 SUBMISSION**'.
- The file name must be '**Quiz 6 D ID.pdf**', where **ID** is your ID. For example, the file name can be **Quiz 6 D 19-34567-2.pdf**.
- **Deadline: 08/12/2021 (Wednesday) 2:40 PM.**

1. Assume your ID is AB-CDEFG-H. '**(E+F+5)**' digital channels are trying to send digital data across a communication link simultaneously with a data rate of '**(D+G+10)*100**' bps, where an interleaved unit is a character. Answer the following questions. **Each answer with correct unit will result into one mark.**

a) What is the value of frame rate?

212.58 Fps

b) How long it takes to transmit 16 bits for one of the input channels before multiplexing?

9.508*10^-3 s

c) What is the value of link rate?

25500 bps

d) What is the size of an output unit?

8 bits

e) What is required time to transmit a bit after multiplexing?

3.136*10^-4 s

2. Assume your ID is AB-CDEFG-H. '**(F+G+2)**' digital channels are trying to send digital data across a communication link simultaneously with a data rate of '**(D+E+20)*100**' bps, where size of a unit is **ten** (**10**) bits. **Two** (**2**) synchronizing bits are added to each frame. Answer the following questions. **Each answer with correct unit will result into one mark.**

a) What is the frame duration?

172 bits

b) What is the value of efficiency?

98.837%

c) What is the output unit duration?

2.55*10^-4 s

d) What is the input bit duration?

4.35*10^-5 s

e) What is the data rate?

3970.79 bps

END