

**AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH**

**(AIUB)**

**DATA COMMUNICATION LAB**

Course Instructor : Tanjil Amin

Lab No : 02

Section : L

Date of Performance : 3-02-2020

Date of Submission : 10-02-2020

Group : 01

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**Performance Task for Lab Report:**

(a) Select the value of the amplitudes as follows: let A1 = GD and A2 = AF.

(b) Make a plot of x3 over a range of t that will exhibit approximately 2 cycles. Make sure the plot starts at a negative time so that it will include t = 0, and make sure that you have at least 20 samples per period of the wave.

(c) Plot x3 in frequency domain and calculate its bandwidth.

(d) Quantize x3 in 6 equally distributed levels and provide image for one cycle of the original signal and quantized signal.

(a) a1=18

a2=10

(b) fs=1000

t=0:1/fs:0.05

x1=a1\*cos(2\*pi\*100\*t)

x2=a2\*cos(2\*pi\*200\*t)

x3=x1+x2

plot (t, x3)



Figure : t, x3

(c) bandwidth=obw (x3, fs)

bandwidth = 191.1953