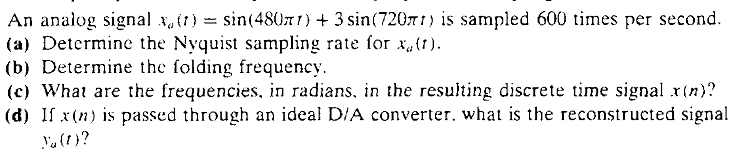
**DSP Assignment 1**

**5Th Semester, Fall 2021 (CLO-1)**

Q.1 Consider the analog signal,

1. Sketch the signal in the interval ms
2. If the signal is sampled with sampling frequency hertz, find the frequency of the resultant discrete time signal , . Is the signal periodic?
3. Sketch the samples of on the diagram with of developed in part(a). What is the period of in number of samples N and time in milli-seconds.

Q.2



Q.3

A discrete-time signal x[n] = 7.5sine(π/5n + π/6) is quantized with a resolution,

(a) Δ=0.10 (b) Δ=0.05 (c) Δ=0.01

What is the number of number of bits ‘b’ required in the A/D conversion in each of these cases?

This assignment is due on Friday 03rd December 2021, and its associated quiz will also be in the class on Friday 03rd December 2021.