Experiment No: 2 Date:03-02-2021

**GENERATION OF CONTINUOUS TIME SIGNALS**

**AIM:**

To generate different types of continuous time signals using MATLAB program.

**Pre - lab Exercises**

1. Define Unit Impulse signal.

=>It is a signal where it is zero everywhere except at the origin. It’s strength is unity.

1. Define Unit Step Signal.

=>It is a signal where it’s value is zero when t is less than zero and it’s value is one when t is greater than zero

1. Define Unit ramp Signal.

=>It is a signal where it’s value is zero when t is less than zero and it’s value is t when t is greater than or equal to zero

1. Define exponential signals.

=>Exponential signals is of the from where B and a are real parameters.

When a is positive it is called as growing exponential ,when it is negative it is called as decaying exponential

1. Define exponentially damped sinusoidal signal

=>Exponential damped sinusoidal signal is of the form where alpha is greater than zero .

**Lab Exercise:**

Generation of signals in continuous time domain:

1. Generate & plot a unit impulse signal



1. Generate & plot unit step signal



1. Generate and plot a ramp signal.



1. Plot the signal



1. Generate and plot the signal where A=2, = 4rad/s and phi= 1.5rad



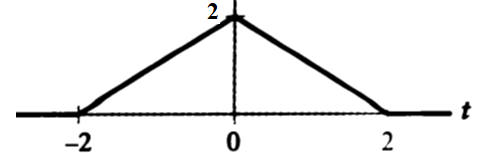
1. Generate and plot the signal for two cases (i) b = 2 (ii) b= -2.



1. Generate an exponentially damped sinusoidal signal of amplitude =10 and frequency = 20rad/sec for (a) decay rate=10 (b) decay rate=5. Plot the two figures on the same figure window.



1. Plot the given signal using MATLAB



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