**Assignment 3**

1. plot the functions y=4√(6x+1) and z=5e0.3x – 2x over the interval 0<x<1.5
2. Plot three functions 2 cos(x),cos(x) and .5\*cos(x) in the interval 0 ≤ x ≤ 2Πin three different colors. Find the intersecting points of the three plots within the interval.
3. Plot the three above functions in three different subfigure windows of a same figure window. (use “subplot” function). Repeat the same to generate three different figure window. (use “figure” command)
4. Plot two linear equations 2x+3y=7 and 5x+2y=1 in different colors in the interval -5 to +5. Show grid with a spacing of .5. Find the co-ordinate of the intersection point. (use “grid on”command)
5. Solve the following set of linear equations by creating 3D plot from -5 to +5 in x direction, -3 to +4 in y direction and -5 to +6 in z direction. (may use “solve” function, or apply matrix method)

3x +2y +z = 10

x + y −2z = -3

2x + y -z = 1

1. Write a Matlab code to plot the equation y = 3x + 5. Vary x in the range [1, 10]. Set the two axes maximum limit to [1 – 10] and [1 – 40] for x and y axis respectively. Label the two axes with names. (use function “xlim”, “ylim”)
2. Write a program to generate a discrete time unit sample sequence (take time index value 0 to 20 ). Modify this program to generate the delayed sequence (let delay = 10 unit on time axis). (use function “ones”, “zeros” to generate unit impulse, “stem” for plotting the sequence)
3. Write a program to generate a discrete time unit step sequence.(take time index value 0 to 20 ). Modify this program for the delayed sequence (let delay =10 unit on time axis). Again modify it for amplitude of 2 unit.
4. Write two separate programs to generate the discrete time real exponential sequence, whose envelop will be of the following two patterns. Take time index value 0 to 35 for both the cases.
5. Write a program to generate a discrete-time sequence, having expression S = 2\*m(0.9^m), Where m is the time index value. Add noise (random sequence) with it. Plot the uncorrupted signal, noise signal, and noisy sequence separately. Take time index value 0 to 50.