**Assignment 6**

**(Graphics)**

1. Plot the curve given by equation a=10 e-t as t varies from 0 to 5. Also label the x and y axis, provide a suitable title for the plot, show the grid lines and axes box and enter a text on the plot.
2. Following table gives the values of induced voltage E for different filed current.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| If | 0 | 0.4 | 1.0 | 1.45 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 |
| E1 | 5 | 30 | 70 | 110 | 150 | 215 | 240 | 250 | 260 |

If for a DC generator operating at N = 1500 RPM, plot the open circuit characteristics

(If Vs E) for this generator at 1500 RPM, 1200 RPM & 1000 RPM on the same sheet. Use the proper ‘hold’ and ‘legend’ commands. (Note E α N)

1. Divide the figure window into four sub-windows and plot the following functions
   1. Plot v v/s I, where v=4\*I & I =1, 2, 3, 4 on the upper left sub window.
   2. Plot y v/s x, where y=x2 & x= 1,2,3,4 on the upper right sub-window.
   3. For t=0:2\*pi in step t=pi/60, plot sin(t) v/s t on the lower left sub-window .
   4. For t=0:pi/30:2\*pi, plot cost(t) v/s t on the lower right sub-window.
2. Plot function x=e-a, y=a2 where 0<=a<=10 using semilogx function.
3. Plot the following function f(θ)=sin (θ) for - π/2 ≤ θ≤π/2 using polar and area plot.
4. Plot a bar graph to show the comparison of average temp in city A, B & C for the months from September to February. The data is given as

|  |  |  |  |
| --- | --- | --- | --- |
| Months | City A | City B | City C |
| September | 31 | 28 | 24 |
| October | 29 | 26 | 22 |
| November | 28 | 25 | 20 |
| December | 27 | 24 | 16 |
| January | 26 | 22 | 17 |
| February | 29 | 25 | 20 |

1. Draw the stem plot to show the function y = x.\*x, where -2≤x≤2
2. Given is x=t2 & y = 4t for -4≤t≤4. Obtain a 3-D plot showing the matrix in (x, y) space as a factors of time.