

It'yJ.

0 - 1.0000	3.5000	6.7106
0.1000 - 0.8555	3.6000	7.1187
0.2000 - 0.9024	3.7000	7.4974
0.3000 - 0.5419	3.8000	7.9707
0.4000 - 0.512	3.9000	7.9866
0.5000 - 0.1969	4.0000	8.2568
0.6000 - 0.0146	4.1000	8.5274
0.7000 - 0.1738	4.2000	8.7982
0.8000 - 0.3861	4.3000	9.0692
0.9000 - 0.5679	4.400	9.3402
1.0000 - 0.7929	4.500	9.6112
1.1000 0.9824	4.600	9.6112
1.2000 1.9660	4.700	10.1529
1.3000 1.4150	4.800	10.4234
1.4000 1.6375	4.900	10.6935
1.5000 1.8639	5.000	10.9632
1.6000 2.0935		
1.7000 2.3266		
1.8000 2.5628		
1.9000 2.8021		
2.0000 3.0441		
2.1000 3.2887		
2.2000 3.5358		
2.3000 3.7852		
2.4000 4.0369		
2.5000 4.2903		
2.6000 4.5458		
2.7000 4.8030		
2.8000 5.0619		
2.9000 5.3225		
3.0000 5.511		
3.1000 5.875		



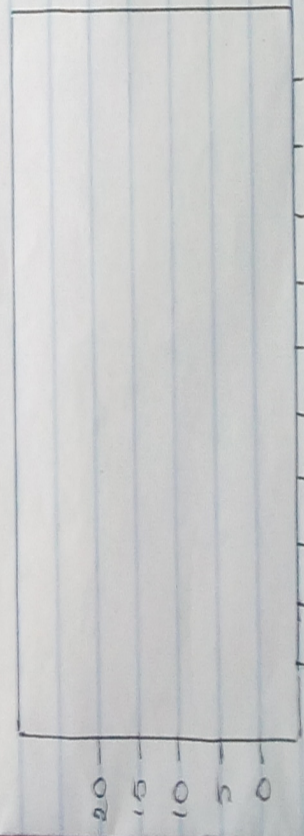
LAWING ASSIGNMENT - II  
 CHEMICAL ENGINEERING  
 18TENG01013  
 ENG MAT ASSIGNMENT - IV

The set of eqn of a system is given in eqn (1) with the aid of MATLAB evaluate the values  $x_i$ 's in the model.

$$\begin{bmatrix} x_1 - 2x_2 - x_3 + x_4 = 10 \\ x_1 + 3x_2 - 11x_3 = 8 \\ x_1 - 4x_2 + 2x_3 = 3 \\ -x_2 + 3x_3 - 1x_4 = -1 \end{bmatrix}$$

$$A = \begin{bmatrix} 1 & -2 & -1 & 1 \\ 1 & 3 & 0 & 0 \\ 1 & -4 & 2 & 0 \\ 0 & -1 & 3 & -1 \end{bmatrix} \quad C = \begin{bmatrix} 10 \\ 8 \\ 3 \\ -1 \end{bmatrix}$$

$$X = \begin{bmatrix} -1.000 & 0.2400 & 0.4733 & 0.6667 \\ -2.0000 & 0.1600 & -0.2201 & -0.3333 \\ 3.0000 & 0.0400 & 0.0261 & 0.3333 \\ 4.0000 & 0.0400 & -0.3061 & -0.3333 \end{bmatrix}$$



The model eqn  $y = \sin(0.25t) + 2 \cos(0.85t)$   
 $2r \approx 0.85t$   
 $0.003 = \frac{10}{10}$

$0 \leq t \leq 10$  hrs  
 $\Delta t = 0.1$  hr  
 $t = 0:0:1:10$

$$y = \sin(0.25t) + 2 \cos(0.85t)$$

plot(t,y)