7. Sole the following system of equations using Gauss elimination method:

$x-y+z=0$

$-x+y-z=0$

$10y+25z=90$

$20x+10y=80$

Or

8. Find the eigen values and eigen vectors of the matrix

$$\begin{bmatrix} 6 & 2 & -2 \\ 2 & 5 & 0 \\ -2 & 0 & 7 \end{bmatrix}$$

9. Fit a second-degree parabola to the following data .

x	0	1	2	3	4
y	1	1.8	1.3	2.5	6.3

Or

10. Find the correlation coefficient between x and y from the given data

x	2	4	6	8	10
y	5	7	9	8	11