Jayasinghe P. A.
2020 / E / 058

03) a)

b)

Sensor 1	Timer	led 1
led 1		
Sensor 2	Timer	Led 2
led 2		
Sensor 3	Timer	led 3
led 3		
Sensor 4	Timer	led 4
led 4		
Sensor 5	Timer	led 5
led 5		
	Timer T20	
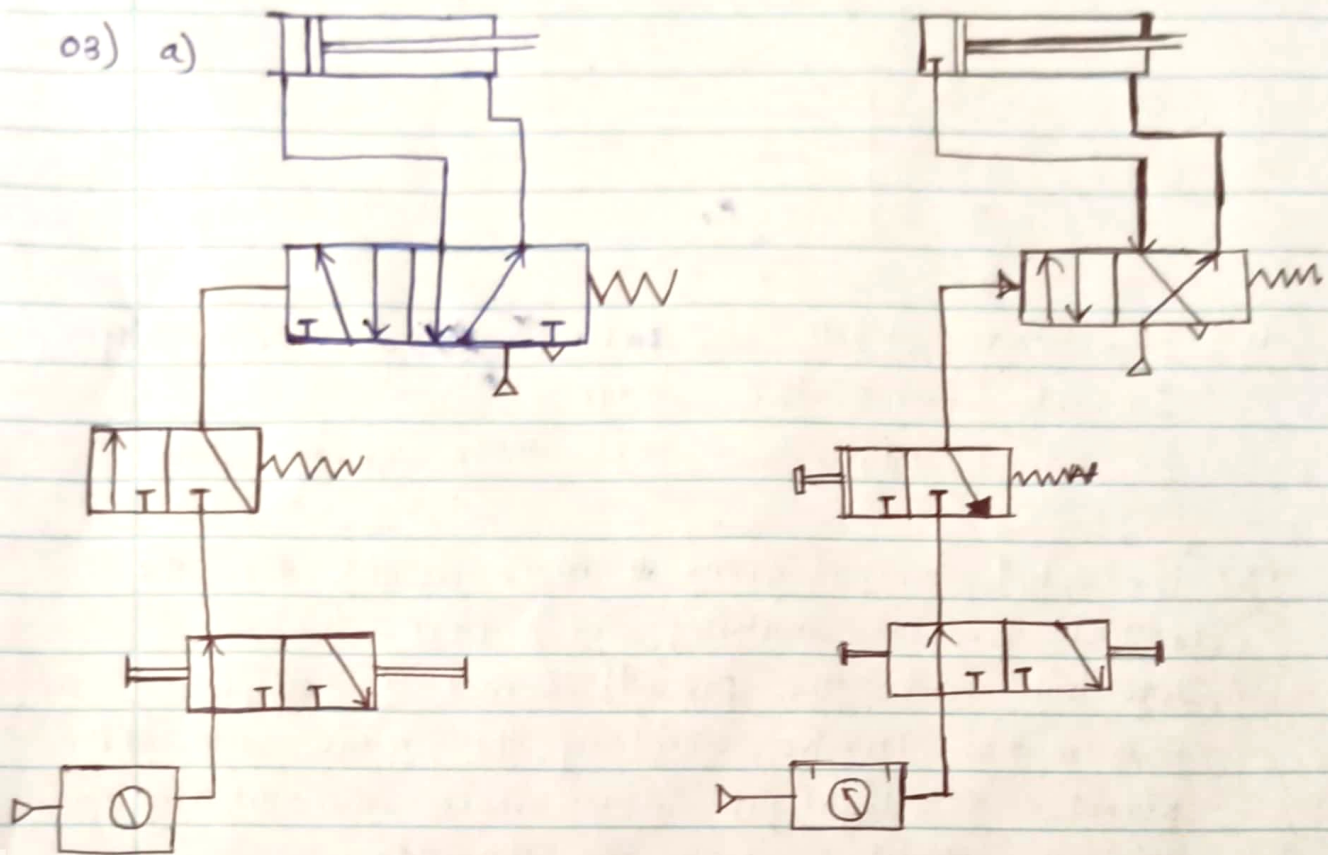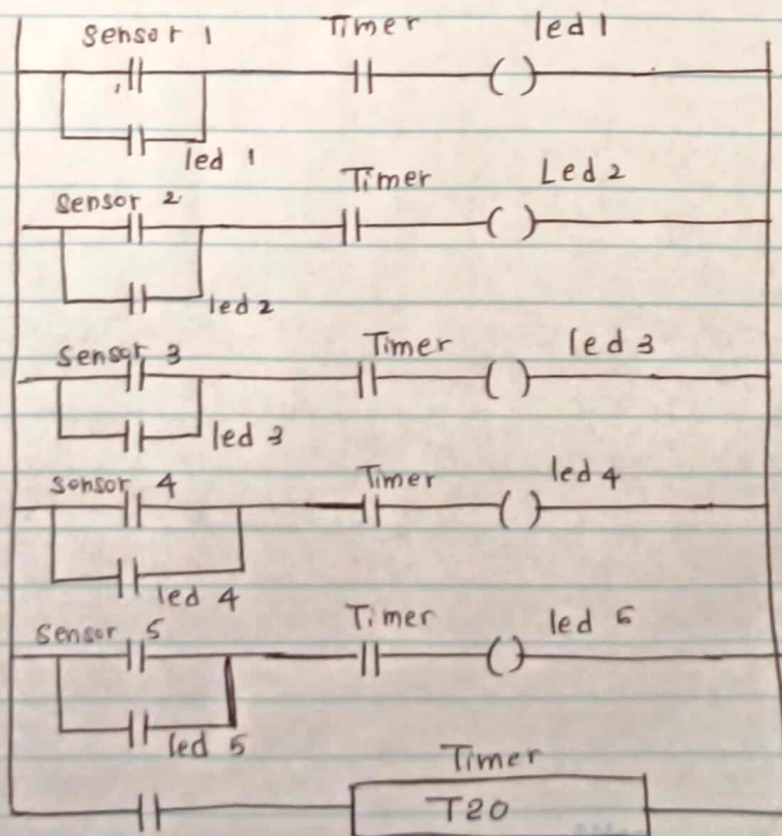
c) i) $\text{Gray} = 0.299 \times R + 0.587G + 0.114 B$

$= 0.299 \times 50 + 0.587 \times 50 + 0.114 \times 50$

$= 50 \quad (\text{Gray scale intensity}).$

ii)
$$\begin{bmatrix} 0 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 0 \end{bmatrix}$$

iii) Translation it self does not create or remove edges. It only moves the image. So no. of edges in the image remains same.

iv) The sobel Kernel gives more weight for the central process making it better for edge detection while the prewitt kernel is simpler. Both method involve convolving the image with the kernals to highlight areas where the intensity changes sharply which are the edges.