

16/4/22

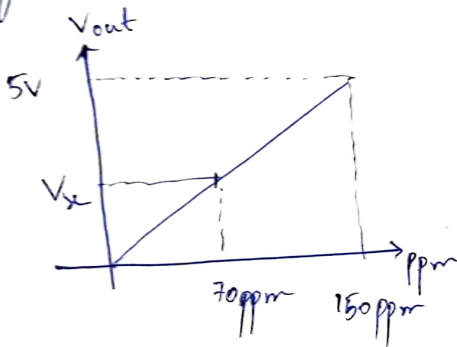
P. Aditya  
211021002

② Detecting 'Co' in Analog way :-

\* Co is detected using MQ-7 gas sensor.

\* It is found that  $V_{out}$  Vs ppm is linear scale from 0 to 150ppm and flattens out after 150ppm.

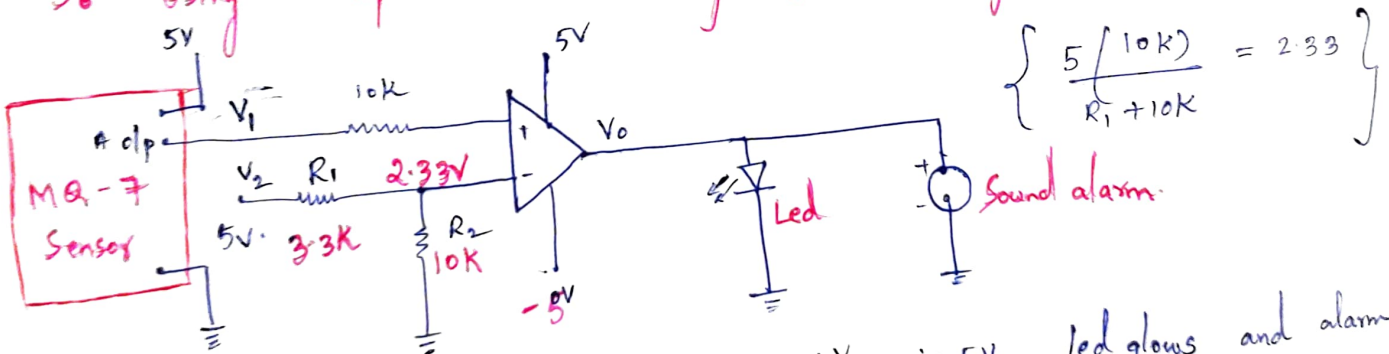
\* Taking upto linear Range i.e. upto 150ppm, designing a Analog circuit



$$V_{out} = \left(\frac{1}{30}\right) \text{PPM}$$

So for 70ppm ;  $V_{out} = \frac{70}{30} = 2.33V$

So using a Comparator and making Reference Voltage of 2.33V.



⇒ if ppm > 70 ;  $V_1 > V_2$ ,  $V_o = +V_{sat}$  i.e. 5V, led glows and alarm sounds.

\* Taking Same Power Supply '5V' for both Sensor and op Amp;  
will cancel any disturbance in power supply as here OP-Amp is used.