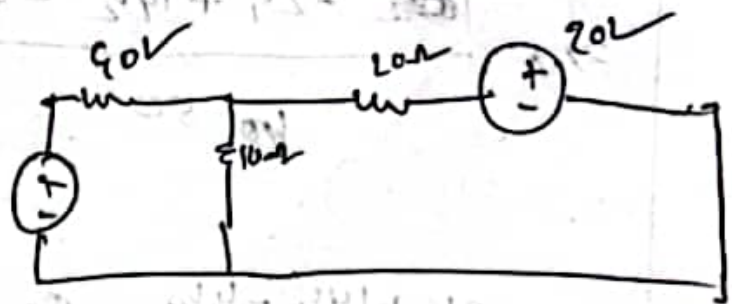


$$\textcircled{1} \frac{V_1 - V_2}{40} - 10 = 0$$

$$\Rightarrow \frac{V_1 - V_2}{40} = 10$$

$$\Rightarrow V_1 - V_2 = 40 \times 10$$

$$= V_1 - V_2 = 400$$



$$\textcircled{2} \frac{V_2 - V_1}{2 \cdot 40} + \frac{V_2 - V_3}{20} + \frac{V_2}{10} = 0$$

$$\Rightarrow \frac{2(V_2 - V_1) + 4(V_2 - V_3) + 8V_2}{80} = 0$$

$$\Rightarrow 2(V_2 - V_1) + 4(V_2 - V_3) + 8V_2 = 80$$

$$\Rightarrow 2V_2 - 2V_1 + 4V_2 - 4V_3 + 8V_2 = 80$$

$$\Rightarrow \cancel{8V_2} - 2V_1 + 14V_2 - 4V_3 = 80$$

$$\Rightarrow -2V_1 + 14V_2 - 4V_3 = 80$$

10

$$\textcircled{i} \quad V_1 = -10 \text{ V} \Rightarrow \textcircled{i}$$

$$\textcircled{ii} \quad \frac{V_1 - 4}{10} + \frac{V_2 - 20}{20} = 0$$

$$\Rightarrow \frac{2V_2 - 2V_1 + V_2 - 20}{20} = 0$$

$$\Rightarrow 3V_2 - 2V_1 = 20 \quad \textcircled{ii}$$

Analises between \textcircled{i} and \textcircled{ii}

$$V_1 = -10 \text{ V}$$

$$V_2 = -2.5 \text{ V}$$

Answer