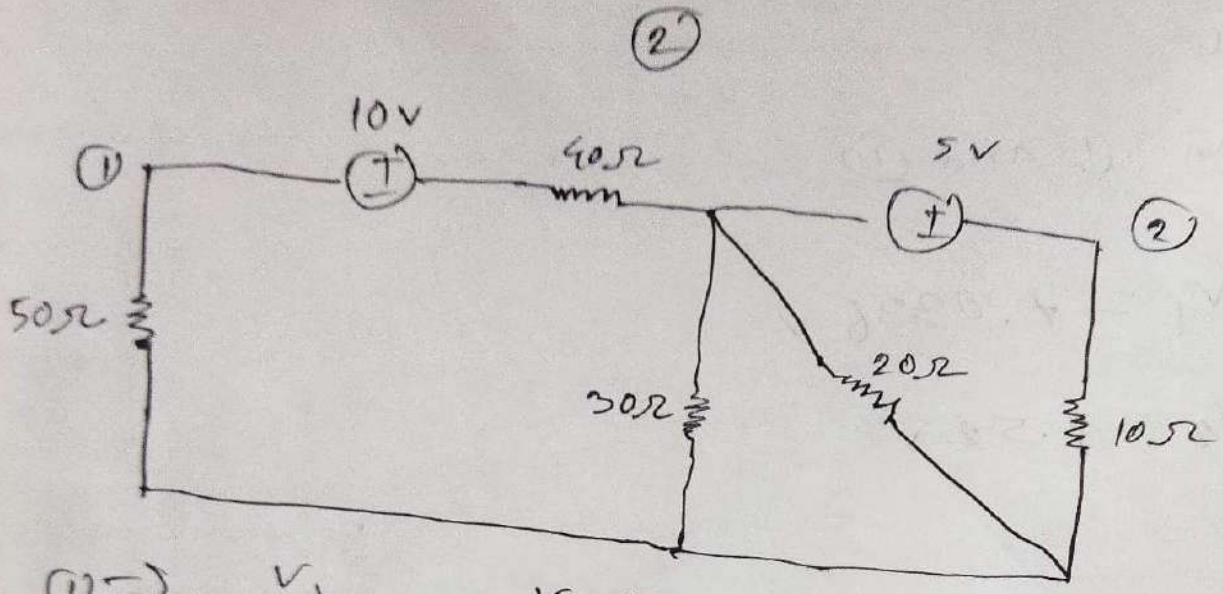
$V_1 = -10V$

$V_2 = -25V$



① $\Rightarrow \frac{V_1}{50} + \frac{V_1 - 20}{40} + \frac{V_1 - V_2}{30} = 0$

$\Rightarrow \frac{12V_1 + 15V_1 - 300 + 20V_1 - 20V_2}{600} = 0$

$\Rightarrow 47V_1 - 20V_2 = 300$ ——— (1)

② $\Rightarrow 20 \| 10$

$= \frac{20 \times 10}{20+10}$

② $\Rightarrow 30 \| 20 \Rightarrow \frac{30 \times 20}{30+20}$

$\Rightarrow 12$

$\therefore \frac{V_2 - V_1}{12} + \frac{V_2}{5} + \frac{V_2}{10} = 0$

$$\Rightarrow \frac{5V_2 - 5V_1 + 12V_2 + 6V_2}{60} = 0$$

$$\Rightarrow 23V_2 - 5V_1 = 0$$

$$\Rightarrow -5V_1 + 23V_2 = 0 \quad \text{(II)}$$

~~Analysis~~

Analysis (I) and (II)

$$V_1 = 7.0336\ V$$

$$V_2 = 1.52\ V$$