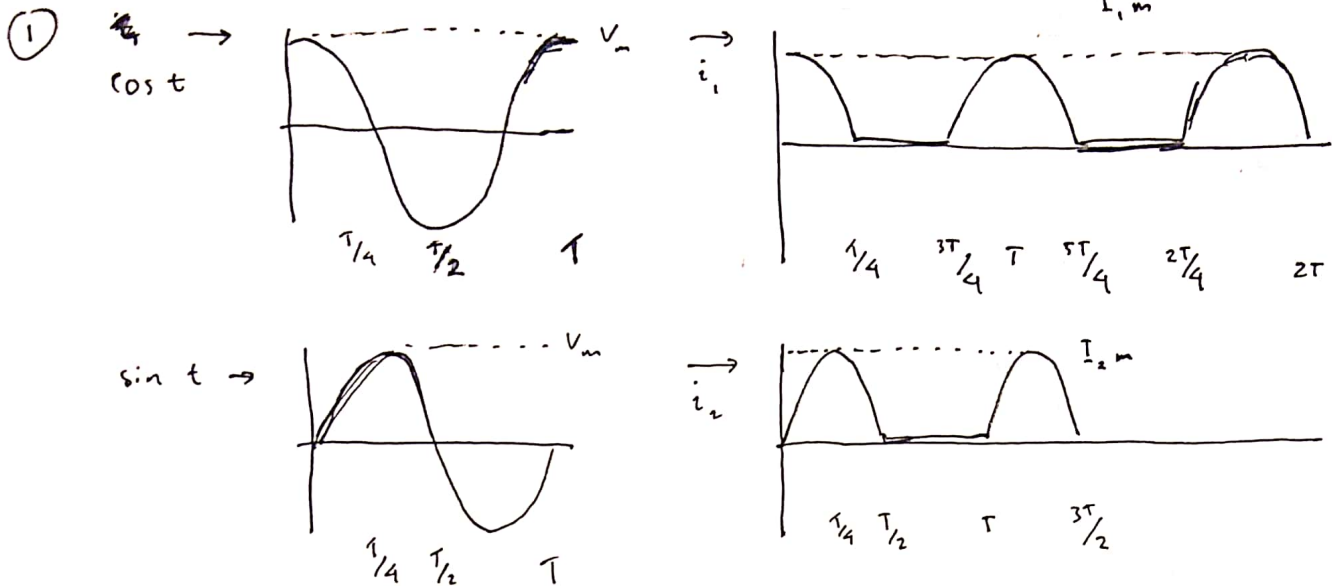


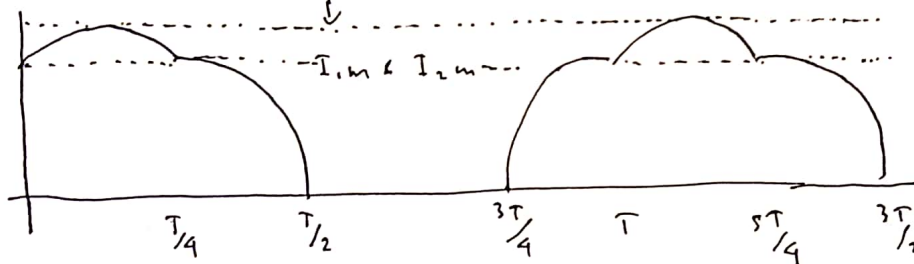
Tugas 1 RE

Ikhwanul Abilgu DH

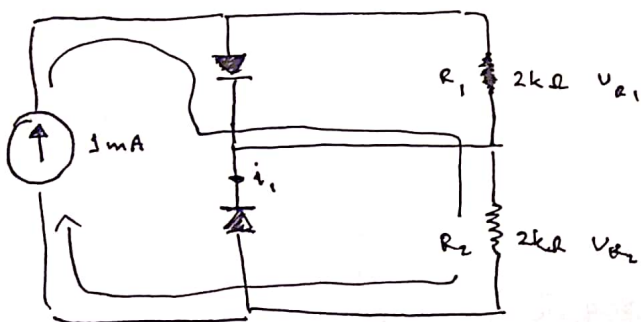
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$$i = i_1 + i_2 \quad \frac{I_{1m}}{\sqrt{2}} + \frac{I_{2m}}{\sqrt{2}} \quad (\text{karena perpotongan di } 45^\circ)$$



②



Dioda dianggap ideal = Short
Arus melewati dioda (tidak ada resistansi)

$$i_1 = 0$$

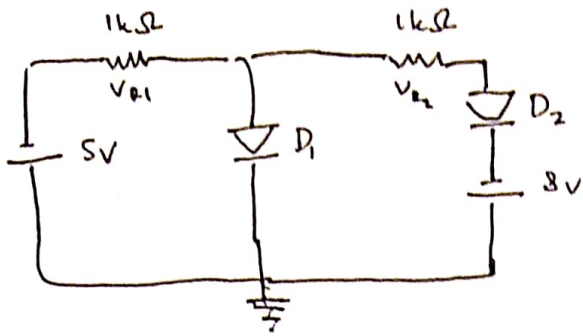
$$V_{R1} = 0$$

$$V_{R2} = I \cdot R_2$$

$$= 1 \text{ mA} \cdot 2 \text{ k}$$

$$\boxed{V_{R2} = 2 \text{ V}}$$

3



$$I_{D1} = 0$$

$$I_{D2} = V/R$$

$$= (5-8)/1k+1k$$

$$= 3/2k$$

$$I_{D2} = 1,5 \text{ mA}$$

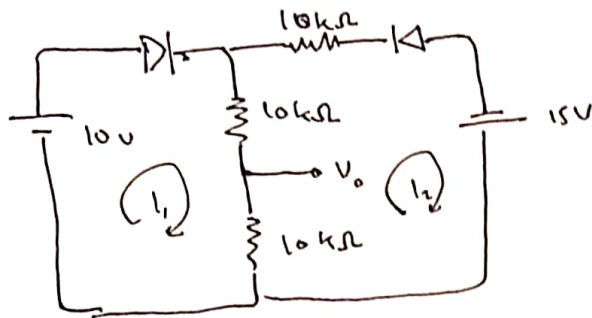
$$V_{R1} = I \cdot R = 1,5 \text{ mA} \cdot 1k\Omega$$

$$V_{R1} = 1,5 \text{ V}$$

$$V_{R2} = I \cdot R = 1,5 \text{ mA} \cdot 1k\Omega$$

$$V_{R2} = 1,5 \text{ V}$$

4



$$I_2 = 0 \text{ (Terblok dioda)}$$

$$I_1 = V/R$$

$$= 10/10k+10k$$

$$= 10/20k\Omega$$

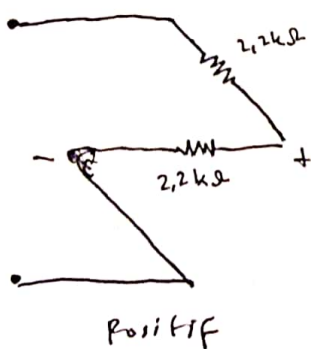
$$I_1 = 0,5 \text{ mA}$$

$$V_0 = V_{R10k} = I \cdot R$$

$$= 0,5 \cdot 10k\Omega$$

$$V_0 = 5 \text{ V}$$

5



$$i = V/R$$

$$= 20/2,2+2,2$$

$$= 20/4,4$$

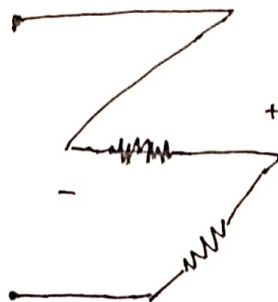
$$= 4,54 \text{ mA}$$

$$V_0 = V_i - IR$$

$$= 20 - 4,54 \cdot 2,2k$$

$$= 20 - 10$$

$$= 10 \text{ V}$$



$$i = V/R$$

$$= 20/2,2+2,2$$

$$= 4,54 \text{ mA}$$

$$V_0 = V_i - IR$$

$$= 20 - 4,54 \cdot 2,2k$$

$$V_0 = 10 \text{ V}$$

