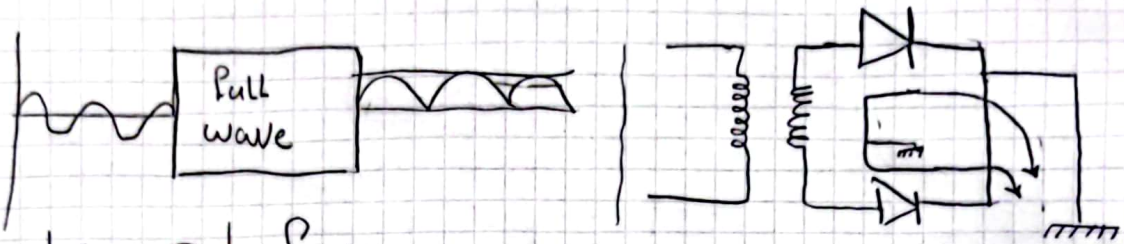


امتحان 2021 - 2022
الالكترونيه

Choose: 1) reverse 2) 0.7V 3) higher 4) equal the source
5) forward 6) 10V 7) natural

c)

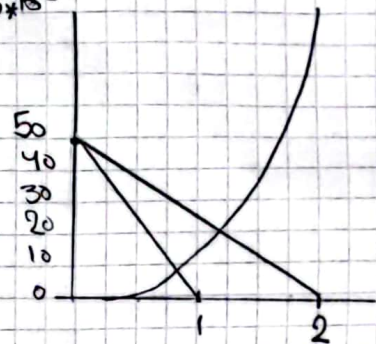


d)

	HWR	FWR
I_{DC}	$\frac{I_m}{\pi}$	$\frac{2I_m}{\pi}$
I_{rms}	$\frac{I_m}{2}$	$\frac{I_m}{\sqrt{2}}$
V_{DC}	$\frac{V_m}{\pi}$	$\frac{2V_m}{\pi}$
η	40.2%	81.2%
γ	1.21	0.48

Ques 2: $I = \frac{V}{R} = \frac{1}{20 \times 10^3} = 50 \text{ mA}$

$$I = \frac{V}{R} = \frac{2}{40 \times 10^3} = 50 \text{ mA}$$



Ques 3:

$I_Z = ?$ $I_L = ?$
 $I_L \rightarrow R_L = 1 \text{ k}\Omega$
 I_Z at full load

$V_{in} = 15V$

$P_Z = 2W$

$P_Z = I_Z V_Z$

$I_Z = \frac{P_Z}{V_Z} = \frac{2}{5} = 0.4 \text{ A}$

$P_S = \frac{V_S - V_Z}{I} = \frac{15 - 5}{0.4} = 25 \text{ W}$

$I_L = \frac{V_Z}{R_L} = \frac{5}{1} = 5 \text{ mA}$

$I_Z = I_S - I_L = 0.4 - 5 \times 10^{-3} = 0.395 \text{ A}$

LED diode

Photo Diode

Function

convert electro light energy

convert light energy to elec

Symbol



Biase

Forward

Reverse

Application

- traffic signals
- T.V
- balard display

- medical devises
- Solar cell
- remote control
- Smoked detector