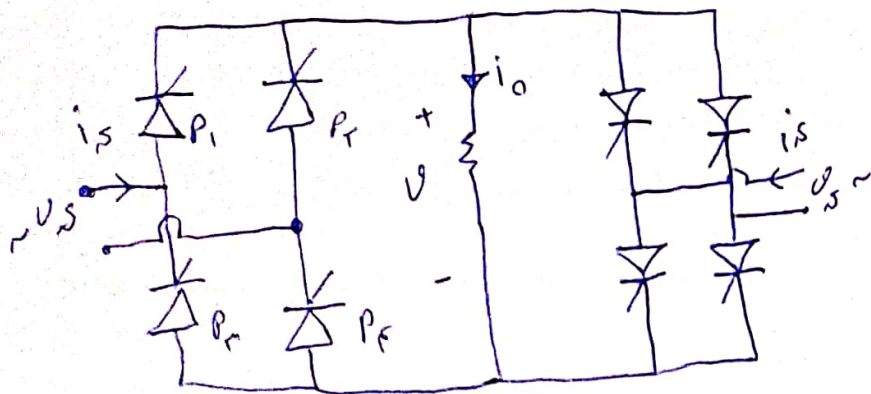


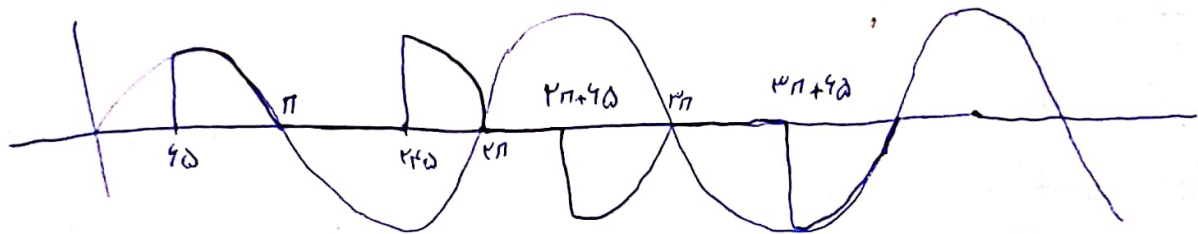
احمد جعفری ۹۷۲۰۵۹۳



$$\alpha = 45^\circ = 1.1071 \text{ rad}$$

$$\frac{\omega \cdot}{\pi} = 25 \rightarrow n = 2$$

الف



$$V_{orms} = 220 \times \sqrt{1 - \frac{1.1071}{\pi} + \frac{\sin(2 \times 1.1071)}{2\pi}} = 192.095$$

$$P = \frac{V_{orms}^2}{R} = \frac{192.095^2}{10} = 3690.141$$

$$P.F = \frac{\frac{V_{orms}^2}{R}}{V_{s rms} \times I_{s rms}} = \frac{V_{orms}}{V_{s rms}} = \frac{192.095}{220} = 0.8731 \rightarrow 87.31\%$$

ب

