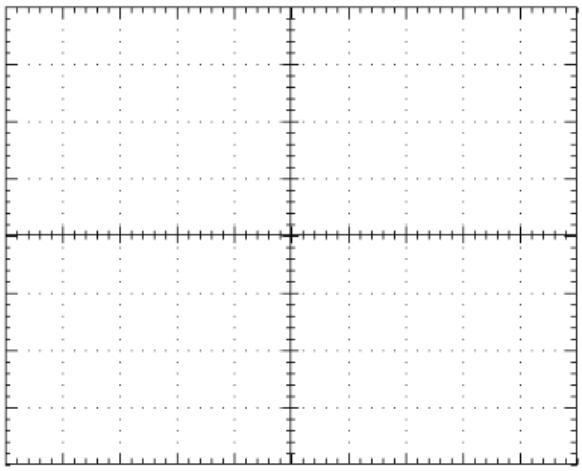
EXPERIMENT RESULTS

1. Single Phase Full-Wave Uncontrolled Rectifier



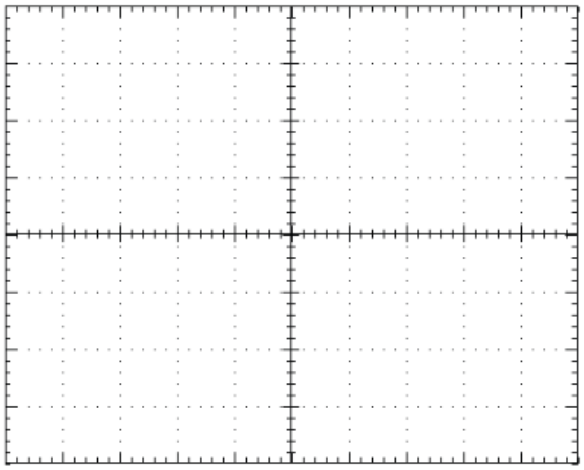
$V_{i(max)}$:

$V_{i(rms)}$:

$V_{o(ort)}$:

$V_{o(rms)}$:

(a) Input and Output Voltage (Ohmic Load)



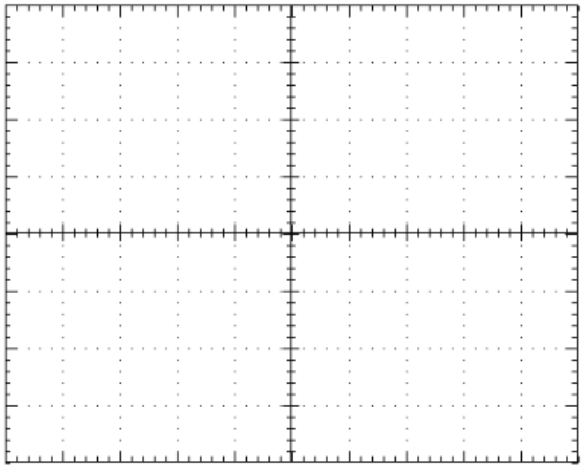
$V_{o(ort)}$:

$V_{o(rms)}$:

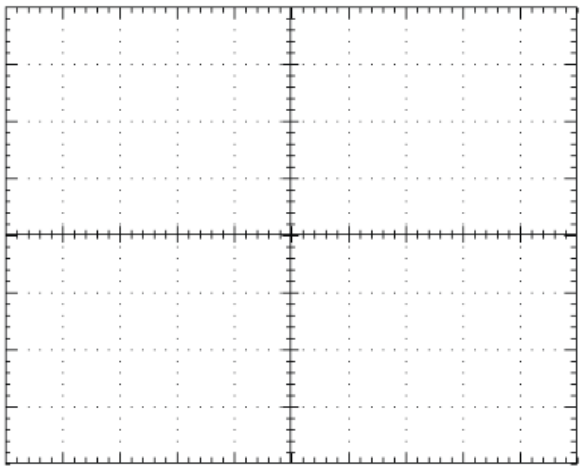
$I_{o(ort)}$:

$I_{o(rms)}$:

(b) Output Voltage and Current (Ohmic Load)



(c) $D1$ and $D2$ Diode Voltages (Ohmic Load)



$V_{o(ort)}$:

$V_{o(rms)}$:

$I_{o(ort)}$:

$I_{o(rms)}$:

(d) Output Voltage and Current (Inductive Load)

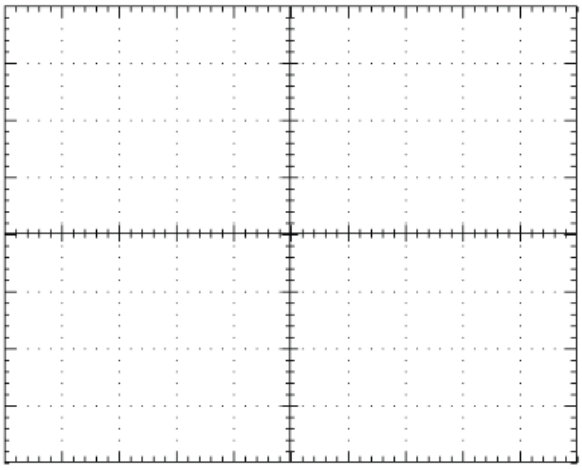
- **Using the measurements taken for the ohmic load, calculate the following rectifier power.**

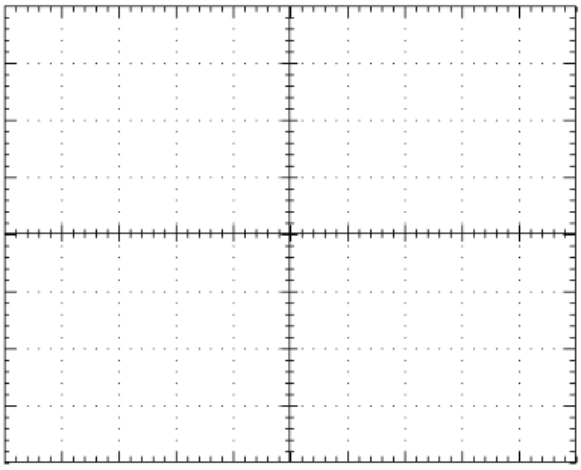
$$P_{o(ort)} = \frac{V_{o(ort)}^2}{R} = V_{o(ort)} I_{o(ort)} \quad :$$

$$P_{o(rms)} = \frac{V_{o(rms)}^2}{R} = V_{o(rms)} I_{o(rms)} \quad :$$

- **Discuss the obtained results.**

2. Single Phase Full Wave Controlled Rectifier





$\alpha = 30^{\circ}$

$V_{o(ort)}$:

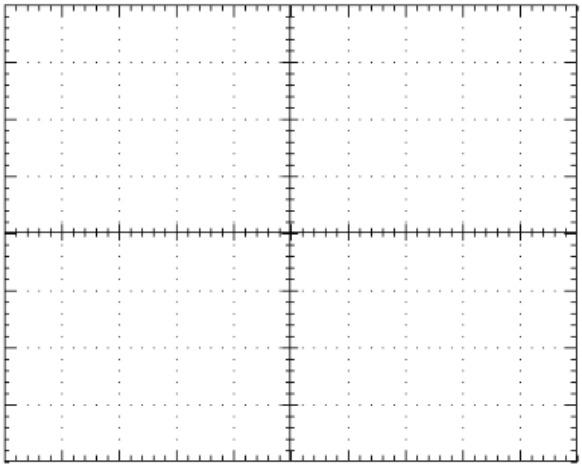
$V_{o(rms)}$:

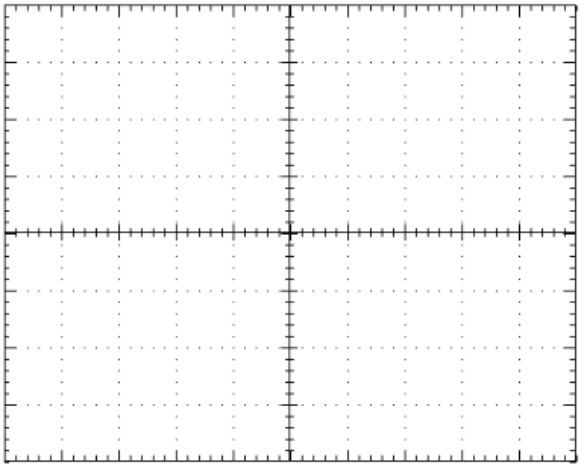
$\alpha = 60^{\circ}$

$V_{o(ort)}$:

$V_{o(rms)}$:

(a) Input and Output Voltage (Ohmic Load)





$\alpha = 30^{\circ}$

$I_{o(ort)}$:

$I_{o(rms)}$:

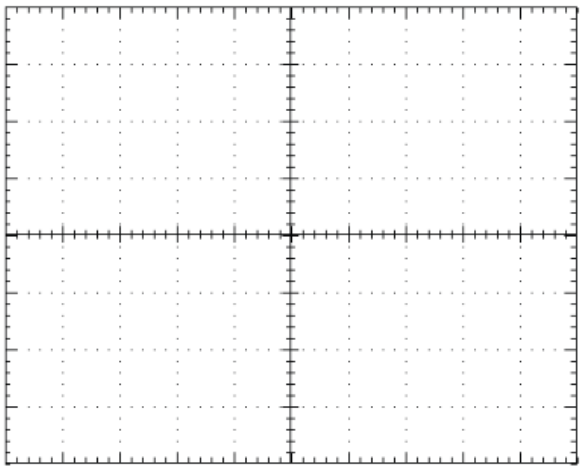
$\alpha = 60^{\circ}$

$I_{o(ort)}$:

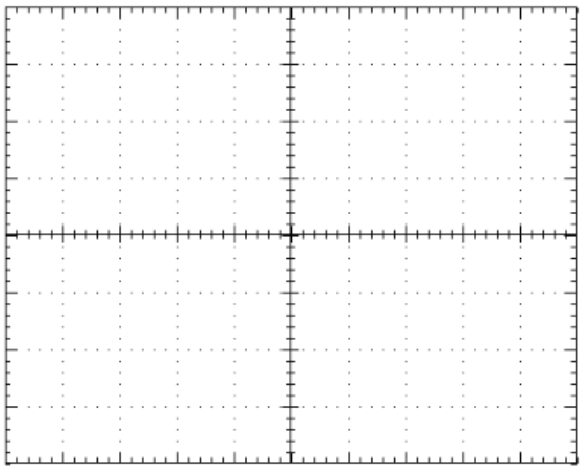
$I_{o(rms)}$:

(b) Output Voltage and Current (Ohmic Load)

Single Phase Full-Wave Uncontrolled and Controlled Rectifier

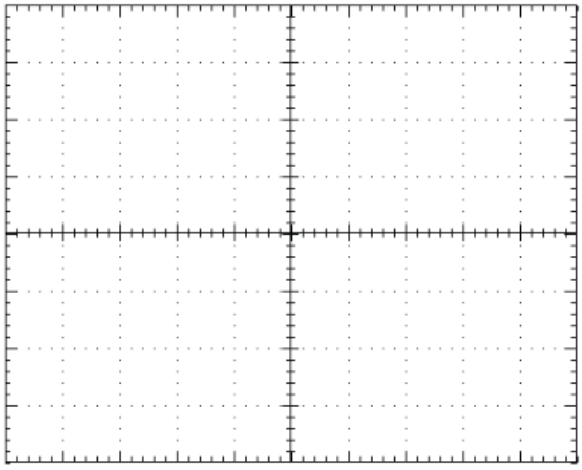


$\alpha = 30^{\circ}$



$\alpha = 60^{\circ}$

(c) T1 and T2 Thyristor Voltage (Ohmic Load)



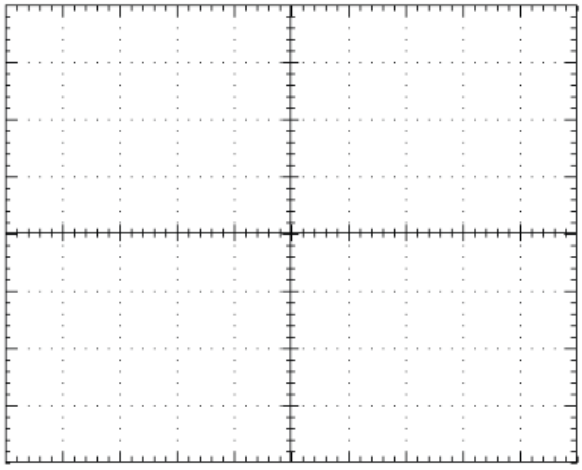
$\alpha = 30^{\circ}$

$V_{o(ort)}$:

$V_{o(rms)}$:

$I_{o(ort)}$:

$I_{o(rms)}$:



$\alpha = 60^{\circ}$

$V_{o(ort)}$:

$V_{o(rms)}$:

$I_{o(ort)}$:

$I_{o(rms)}$:

(d) Output Voltage and Current (Inductive Load)

- **Discuss the obtained results.**