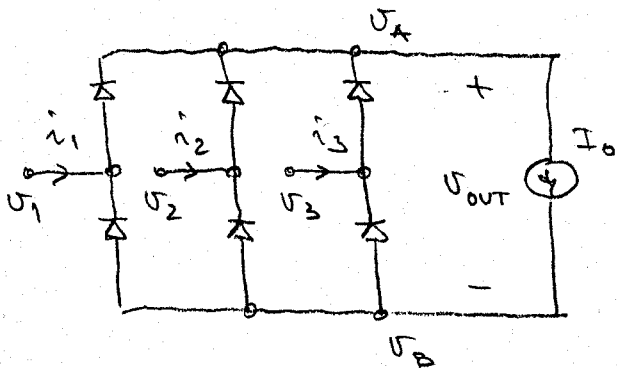


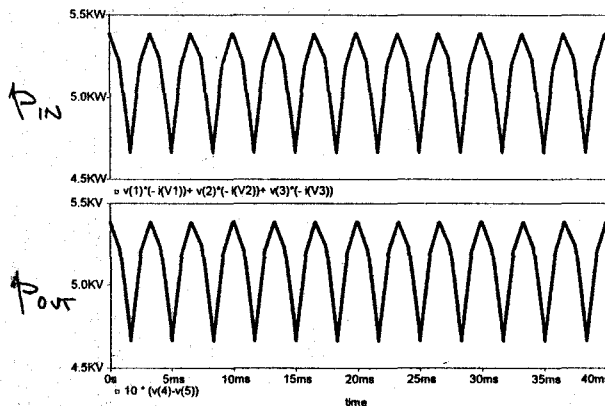
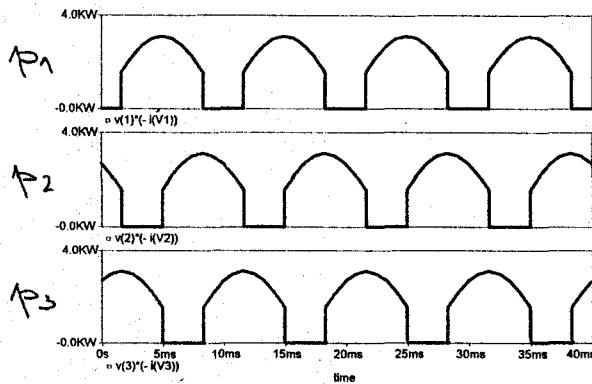
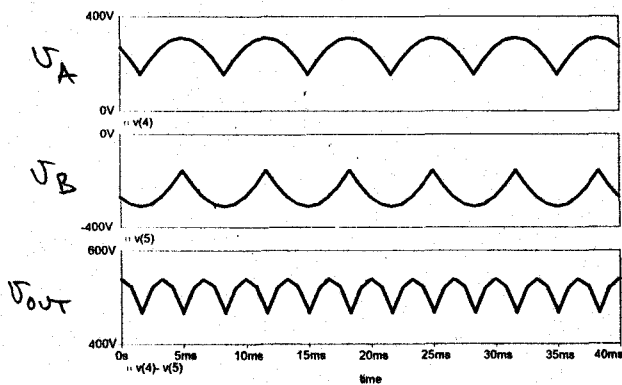
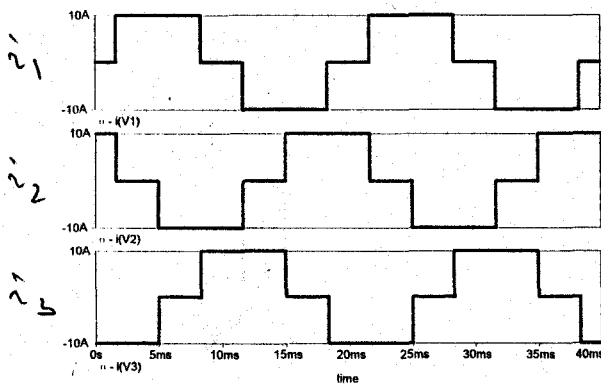
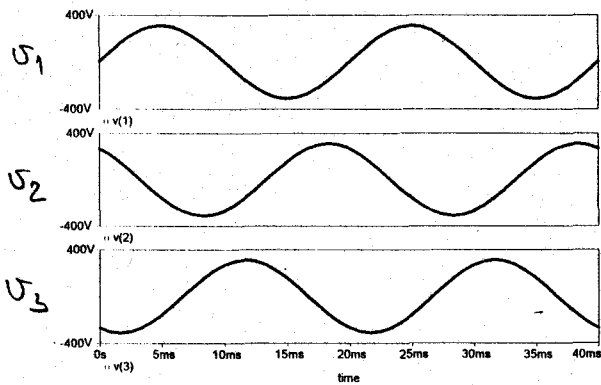
3Φ RECTIFIER, HANDOUT # 1



$$V_m = 220\sqrt{2} \text{ V}$$

$$\omega_0 = 2\pi \cdot 50 \text{ Hz}$$

$$I_0 = 10 \text{ A}$$



$$u_1 = V_m \sin(\omega_0 t)$$

$$u_2 = V_m \sin(\omega_0 t - 120^\circ)$$

$$u_3 = V_m \sin(\omega_0 t - 240^\circ)$$

$$V_{OUT} = \frac{3\sqrt{3}}{\pi} V_m$$

$$P = \frac{3\sqrt{3}}{\pi} V_m I_0$$

$$P_{1/3} = \frac{\sqrt{3}}{\pi} V_m I_0$$

$$I_{PRMS} = \sqrt{\frac{2}{3}} I$$

$$V_{PRMS} = \frac{1}{\sqrt{2}} V_m$$

$$PF = \frac{3}{\pi} = 0.955$$

$$THD(I_p) \approx 31\%$$