- The DIAC conducts when $V_c = 40V$.

$$40 = 335.92 \sin(\omega t - 8.4 + \theta)$$

$$\sin(\omega t - 8.4 + \theta) = \frac{40}{335.92}$$

$$\sin(\omega t - 8.4 + \theta) = 0.1191$$

$$-8.4 + \theta = \sin^{-1}(0.1191)$$

$$= 6.84^\circ$$

$$\theta = 8.4 + 6.84$$

$$= 15.24$$

= minimum Delay firing angle.