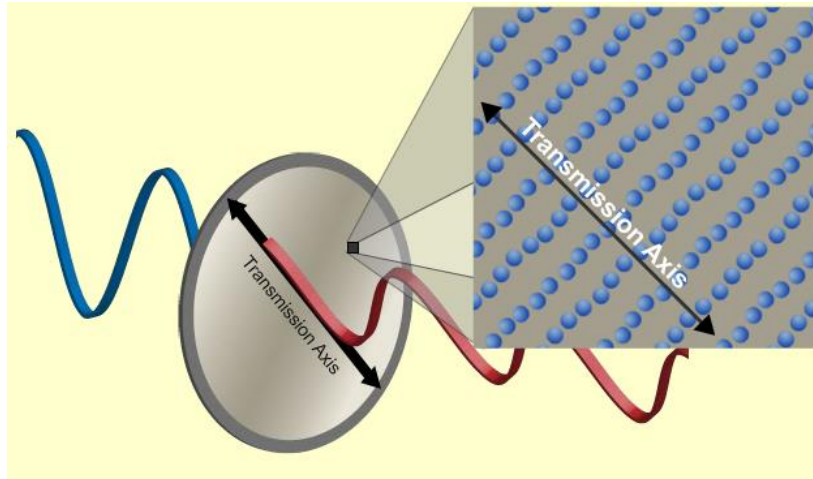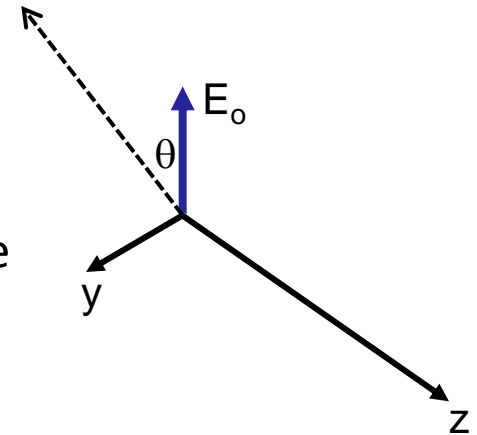The molecular structure of a polarizer causes the component of the E field perpendicular to the Transmission Axis to be absorbed.

Suppose we have a beam traveling in the $+z-$ direction. At $t = 0$ and $z = 0$, the electric field is aligned along the positive $x-$ axis and has a magnitude equal to E_o

What is the component of E_o along a direction in the $x - y$ plane that makes an angle of θ with respect to the $x-$ axis?

A) $E_o \sin\theta$ B) $E_o \cos\theta$ C) 0 D) $E_o/\sin\theta$ E) $E_o/\cos\theta$