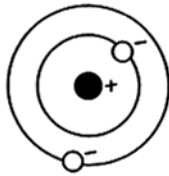


A photon of wavelength less than that of α

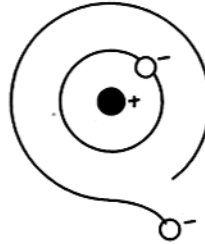
x-rays 

interacting with an atom

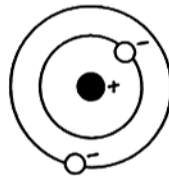


can cause

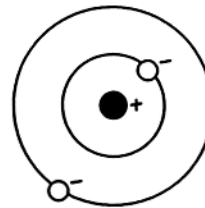
photo-ionization



ultra-violet rays 



excitation of outer electrons



or with a molecule

visible light 

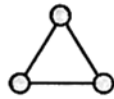
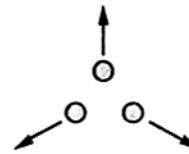
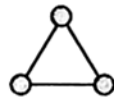


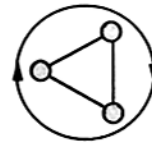
photo-dissociation



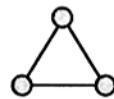
infrared rays 



rotation



microwaves 



vibration

