Question 5) A metal plate of area 1 x 10^{-4} m^2 is illuminated by a radiation of intensity 16mW/m^2. The word function of the metal is 5 eV. The energy of the incident photon is 10eV and only 10% of it produces photoelectrons. The number of emitted photoelectrons per second and their maximum energy, respectively will be [1 eV = 1.6 x 10^{-19} J]

(A) 10^{14} and 10 eV

(B) 10^{12} and 5 eV

(C) 10^{11} and 5 eV

(D) 10^{10} and 5 eV

Answer: (C) 10^{11} and 5 eV