**11-DUAL NATURE OF RADIATION AND MATTER**

**1. Photons and photoelectric effect**

1. Energy of a photon,  2. Number of photons emitted per second  3. Momentum of photon,  4. Equivalent mass of a photon,  5. Work function,  6. Kinetic energy of photoelectrons is given by Einstein’s photoelectron equation, 7. If V0 is the shopping potential, the maximum kinetic energy of the ejected photo electrons,  8. Intensity of radiation =  Incident power = Incident intensity x area

**2. de-Broglie Waves**

1. Kinetic energy,  Momentum,  2. De-Broglie wavelength of an electron beam accelerated through a potential difference of *V* volts is  4. Bragg’s equation for crystal diffraction is, *n* is order of the spectrum.