ECAT Pre General Science Physics Chapter 19 Dawn of Modern Physics Online Test

Sr	Questions	Answers Choice
1	When low energy photon interact with a metal,which of the following effect is likely to be taken place	A. pair production B. photoelectric C. Compton effect D. None of these
2	Compton was awarded Nobel prize in physics in	A. 1921 B. 1923 C. 1925 D. 1927
3	In the compton's effect, it is found that the wavelength of incident x-rays is	A. greater than the wavelength of scattered x-rays B. equal to the wavelength of scattered x-rays C. less than the wavelength of scattered x-rays D. any one of these
4	Albert Einstein got the Nobel prize in physics for his explanation of photoelectric effect in	A. 1916 B. 1919 C. 1921 D. 1923
5	According to the electromagnetic wave theory of light, increasing the intensity of incident light should increase the	A. number of photoelectrons B. size of the photoelectrons C. charge on photoelectrons D. K.E of photoelectrons
6	As the light shines on the metal surface, the electrons are ejected	A. slowly B. instantaneously C. either of these D. none of these
7	The value of threshold frequency for different metals is	A. different B. same C. may be different or may be same D. none of these
8	There is certain frequency below which no electrons are emitted from the metal surface, this frequency is known as	A. maximum frequency B. minimum frequency C. threshold frequency D. all of these
9	The photoelectric effect, the maximum energy of photoelectrons depends on the	A. particular metal surface B. frequency of incident light C. both of them D. none of them
10	When monochromatic light is allowed to fall on cathode, it begins to emit electrons, these electrons are called	A. thermoionic electrons B. free electrons C. photoelectrons D. slow electrons
11	The emission of electrons from a metal surface when exposed to light of suitable frequency is called the	A. pair production B. Compton effect C. photoelectric effect D. relativity
12	Electromagnetic radiation or photons interact with matter in	A. two distinct ways B. three distinct ways C. four distinct ways D. five distinct ways
13	The whole shape of the black body spectrum for all wavelengths was explained by the formula proposed by	A. Max plank B. Newton C. Einstein D. J.J. Thomson
14	The analysis of the distribution of wavelengths of the radiation emitted from a hot body set the foundation of new mechanics, known as	A. classical mechanics B. Newtonian mechanics C. quantum mechanics D. statistical mechanics
		A. 100 ev

15	The energy of a photon in a beam of infrared radiation of wavelength 1240 nm is	B. 10⁶e v C. 10³e v D. 1.0 e v
16	The photon of radio-waves has energy of about	A. 1 Me V B. 1 Ke v C. 10⁻¹⁰e v D. 10¹⁰e v
17	From the theory of relativity, momentum p of the photon is related to energy as	A. p = hfc B. p = hf/c C. p = f(hc,f) D. p = cf/h
18	Max plank received the Nobel Prize in physics for his discovery of energy quanta in	A. 1900 B. 1906 C. 1912 D. 1918
19	In photoelectric effect the energy of ejected electrons depend on	A. The frequency B. The intensity C. Both frequency and intensity D. None of these
20	The value of the plank's constant 'h' is given by	A. 1.6 x 10⁻¹⁹J B. 1.67 x 10⁻²⁷Kg C. 6.63 x 10³⁴Js D. 6.63 x 10⁻³⁴Js
21	A photon is considered to have	A. Momentum B. Energy C. Wavelength D. All of the above
22	S.I. unit of planks constant is	A. J-s⁻¹ B. J.s C. J.s⁻² D. J.s²
23	The energy of photon 'E' is proported to	A. The magnetic field H B. The electric field E C. Both the electric and magnetic field H and E D. Frequency
24	The energy of a photon is represented by	A. h/c² B. h/T C. hc² D. hf/c²
25	According to the Max plank, energy is redialed or absorbed in	A. discrete packets B. continuous waves C. either of them D. none of these
26	Max plank founded a mathematical model resulting in an equation that describes the shape of observed black body radiation curves exactly, in	A. 1890 B. 1895 C. 1900 D. 1905
27	The value of the Stephen's constant for black body radiations is given by	A. 5.6 x 10⁸Wm⁻²K⁻⁴ B. 5.67 x 10⁻⁸Wm⁻²K⁻⁴ C. 2.9 x 10⁻³mK D. 2.9 x 10³mK
28	The Stephen-Boltzmann law for the black body radiation is given by	A. E = T² B. E = -T² C. E = T⁴ D. E = -T⁴
29	The inside cavity of the black body is	A. painted white B. painted silver C. blackened with soot D. painted red
30	A black body is	A. an ideal absorber B. an ideal radiator C. both of them D. none of them