ECAT Physics Online Test

Sr	Questions	Answers Choice
1	According to Rutherford atomic model, the positive charge in an atom	A. is concentrated at its centre B. is in the form of positive electron at same distance from its centre C. is spread uniformly through its volume D. none of these
2	The chemical behaviour of an atom is determined by	A. binding energy B. atomic number C. mass number D. number of isotopes
3	1 amu is equal to	A. 1.66×10^{-24} kg B. 1.66×10^{-19} kg C. 1.66×10^{-34} kg D. 1.66×10^{-27} kg
4	Mass of proton is	A. 1.67×10^{-27} kg B. 1.67×10^{-31} kg C. 1.66×10^{-34} kg D. 1.67×10^{-17} kg
5	Mass of neutron is	A. 1.67×10^{-31} kg B. 1.67×10^{-27} kg C. 9.1×10^{-31} kg D. $1.67 \times 10^{-}$19kg
6	Nucleus consists of	A. proton and neutron B. protons and electron C. electron and neutron D. protons only
7	A particle having the mass of electron and charge of a proton is called a	A. photon B. position C. antiproton D. antineutrino
8	Charge on neutron is	A. 1.6×10^{-19}C B. zero C. -1.6×10^{-19}C D. 1.2×10^{-19}C
9	In 1932 Chadwick discovered	A. proton B. neutron C. photon D. electron
10	Neutron was discovered by	A. Curie B. Roentgen C. Chadwick D. Rutherford
11	Neutron was discovered in	A. 1915 B. 1920 C. 1925 D. 1932
12	Proton was discovered by Rutherford in	A. 1915 B. 1906 C. 1910 D. 1920
13	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
14	As the light shines on the metal surface, the electrons are ejected	A. slowly B. instantaneously C. either of these D. none of these
15	The value of threshold frequency for different metals is	A. different B. same C. may be different or may be same

16	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
17	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
18	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
19	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
20	Electromagnetic radiation or photons interact with matter in	A. two distinct ways B. three distinct ways C. four distinct ways D. five distinct ways
21	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
22	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
23	The energy of a photon in a beam of infrared radiation of wavelength 1240 nm is	A. 100 ev B. 10^6 e v C. 10^3 e v D. 1.0 e v
24	The photon of radio-waves has energy of about	A. 1 Me V B. 1 Ke v C. 10^{-10} e v D. 10^{10} e v
25	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
26	Max plank received the Nobel Prize in physics for his discovery of energy quanta in	A. 1900 B. 1906 C. 1912 D. 1918
27	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
28	The value of the plank's constant 'h' is given by	A. 1.6×10^{-19} J B. 1.67×10^{-27} Kg C. 6.63×10^{34} Js D. 6.63×10^{-34} Js
29	A photon is considered to have	A. Momentum B. Energy C. Wavelength D. All of the above
30	S.I. unit of planks constant is	A. $J\text{-}s^{-1}$ B. J.s C. $J.s^{-2}$ D. $J.s^2$