ECAT Physics Online Test

Sr	Questions	Answers Choice
1	Compton derived an expression to find compton shift by applying to the process, the law of conservation of:	A. Energy only B. Momentum only C. Mass only D. Charge only E. Both (A) and (B)
2	Compton studied the scattering of x-rays by loosely bound electrons from:	A. NaCl crystal B. Graphite crystal C. Zirconia D. Copper crystal E. None of these
3	The threshold frequency of sodium is 6×10^6 MHz. The cut-off wavelength for this metal will be	A. 500 m B. 500 nm C. 500 km D. 500 cm E. None of these
4	The unit of work function is:	A. Joule B. Electron volt C. That of threshold frequency D. Both (A) and (B) E. None of these
5	Photoelectrons are emitted when ultraviolet light falls on:	A. Casium B. Silver C. Potassium D. Any of these E. None of these
6	The Nobel Prize on the explanation of photoelectric effect was awarded to:	A. Max. Planck B. Maxwell C. Bohr D. Rutherford E. None of these
7	The idea of quantization of energy was proposed by:	A. Einstein B. Max.Planck C. Maxwell D. Bohr E. Rutherford
8	Intensity of light determines the:	A. Energy of each photon B. Number of photons C. Speed of photons D. Size of photons E. None of these
9	Electromagnetic -radiation means:	A. Photons B. protons C. Electrons D. Mesons E. None of these
10	The way through which electromagnetic radiations or photons interact with matter depends upon their:	A. Wavelength B. Frequency C. Energy D. Temperature E. All of these
11	If A represents linear momentum and c, the velocity of light, then unit of pc in international system of units is:	A. Newton B. Joule C. Joule-Sec D. Joule-s⁻¹ E. Watt
12	Max Planck received the Nobel Prize for his discovery of energy quants in:	A. 1718 AD B. 1918 AH C. 1818 AD D. 1918 AD E. None of these
13	The ratio of energy E to the corresponding frequency (f) of the radiation (emitted or absorbed) is called:	A. Wien's constant B. Stefen's constnat C. Planck's constant

14	Wien's constant is measured in:	A. Metre per kelviin B. Metre kelvin C. Kelvin per meter D. Joules E. Dynes
15	The intensity of emitted energy (with wavelength) radiated from a black body at different temperatures was initially measured by:	A. Lummer B. Planck C. Pringsheim D. Both (A) and (B) E. Both (A) and (C)
16	When platinum wire is heated, then at the temperature of 500 $^\circ$C, it becomes:	A. Yellow B. Orange red C. Dull red D. White E. Cherry red
17	The nature of radiations emitted by a hot body depends upon its:	A. Metarial B. Temperature C. colour D. Volume E. Length
18	When the atomic particle are moving with velocities approaching that of light:	A. Newton's laws become valid B. Relativistic effects become prominent C. Botha(A) and (B) are valid D. Neither (A)nor (B) E. There mass becomes zero.
19	As compared to the distance measured by an observer on Earth, the distance from Earth to a star measured by an observer in a moving spaceship would seem:	A. Smaller B. Lerger C. Same D. Much larger E. None of these
20	the dilation of time applies to the timing processes which are:	A. Physical B. Chemical C. Biological D. All of these E. None of these
21	Due to relative motion of observer and the frame of reference of events, time always:	A. Dilates itself B. Contracts itself C. Stretches itself D. Both (A) and (C) E. None of these
22	Practically the quantity v/c is always:	A. less than one B. Equal to one C. Greater then one D. all of these E. None of these
23	the symbol to be used in relativity problems denotes:	A. Dilated time B. Proper time C. Life time D. Half time E. None of these
24	There is no way to detect:	A. Absolute uniform motion B. Accelerated motion C. State rest D. State of motion E. None of these
25	The special theory of relativity is based on:	A. Four postulates B. Three postulates C. Two postulates D. One postulate E. None of these
26	The special theory of relatively treats the problems involving:	A. Inertial frames of reference B. Non-inertial frames C. Non-accelerated frame D. Botha (A) and (C) E. Both (B) and (C)
27	Strictly speaking, the earth is:	A. An accelerated frame of reference B. A non-inertial frame of reference C. An inertial frame of reference D. A non-accelerated frame of reference E. Both (A) and (B)

28	The concept of direction is purely:	A. Absolute B. Relative C. Relative to stars always D. Relative to the sun always E. None of these
29	Conversion of A.C. into D.C. is called:	A. Reftification B. Amplification C. Electric induction D. Magnetic induction E. None of these
30	If both the inputs given to a gate ae 1 such that the output is 0, then it is:	A. AND gate B. NOR gate C. OR gate D. NOT gate E. Both (A) and (C)