

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

Sr	Questions	Answers Choice
1	The positron was discovered by:	A. In cosmic radiation B. In 1932 C. By Carl Anderson D. All above E. By direc
2	A particle having mass and charge equal to that of an electron is called:	A. Proton B. Positron C. Pion D. Pi-meson E. Both (C) and (D)
3	Photoelectric effect takes place with a photon of:	A. Very high energy B. Very low energy C. Low energy D. High energy E. None of these
4	Compton shift refers to:	A. Photon B. Meson C. Proton D. Positron E. Both (B) and (D)
5	The year when A.H. Compton was awarded Nobel Prize is:	A. 1923 B. 1927 C. 1931 D. 1935 E. None of these
6	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)
7	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
8	The threshold frequency of sodium is $6 \times 10^6$ 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
9	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
10	Photoelectrons are emitted when ultraviolet light falls on:	A. Cesium B. Silver C. Potassium D. Any of these E. None of these
11	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
12	The idea of quantization of energy was proposed by:	A. Einstein B. Max. Planck C. Maxwell D. Bohr E. Rutherford
13	Intensity of light determines the:	A. Energy of each photon B. Number of photons C. Speed of photons D. None of these

		D. Size of photons E. None of these
14	Electromagnetic -radiation means:	A. Photons B. protons C. Electrons D. Mesons E. None of these
15	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
16	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 <sup>-1</sup> E. Watt
17	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
18	The ratio of energy E to the corresponding frequency (f) of the radiation (emitted or absorbed) is called:	A. Wien's constant B. Stefan's constant C. Planck's constant D. Boltzmann's constant E. None of these
19	Wien's constant is measured in:	A. Metre per kelvin B. Metre kelvin C. Kelvin per meter D. Joules E. Dynes
20	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)
21	When platinum wire is heated, then at the temperature of 500 °C, it becomes:	A. Yellow B. Orange red C. Dull red D. White E. Cherry red
22	The nature of radiations emitted by a hot body depends upon its:	A. Material B. Temperature C. colour D. Volume E. Length
23	When the atomic particle are moving with velocities approaching that of light:	A. Newton's laws become valid B. Relativistic effects become prominent C. Both(A) and (B) are valid D. Neither (A)nor (B) E. Their mass becomes zero.
24	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. Larger C. Same D. Much larger E. None of these
25	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
26	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
27	Practically the quantity v/c is always:	A. less than one B. Equal to one C. Greater than one D. all of these E. None of these

A Dilated time

28 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

29 There is no way to detect:

- A. Absolute uniform motion
- B. Accelerated motion
- C. State rest
- D. State of motion
- E. None of these

30 The special theory of relativity is based on:

- A. Four postulates
- B. Three postulates
- C. Two postulates
- D. One postulate
- E. None of these