

ECAT Pre General Science Physics Chapter 19 Dawn of Modern Physics

Sr	Questions	Answers Choice
1	Max plank received the Nobel Prize in physics for his discovery of energy quanta in	A. 1900 B. 1906 C. 1912 D. 1918
2	The nature of radiations emitted by a hot body depends upon its:	A. Metarial B. Temperature C. colour D. Volume E. Length
3	The special theory of relativity is based on the	A. one postulate B. two postulates C. three postulates D. four postulates
4	According to the special theory of relativity	A. mass and energy are same entities B. mass and energy are same entities but interconvertible C. mass and energy are different entities but interconvertible D. mass and energy are different entities but non-interconvertible
5	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
6	Davision and Germer performed experiment to verify	A. de-Brogile hypothesis B. theory of relativity C. Newton's law of gravitation D. Mass-energy relation
7	Electromagnetic radiation or photons interact with matter in	A. two distinct ways B. three distinct ways C. four distinct ways D. five distinct ways
8	When a high energy photon interact with a metal, which of the following effect is most likely to be taken place	A. pair production B. photoelectric effect C. Compton effect D. None of these
9	Momentum is a parameter associated with	A. wave motion B. particle motion C. neither wave nor particle motion D. none of these
10	The mass of an object will be doubled at speed	A. $1.6 \times 10^8 \text{ ms}^{-1}$ B. $2.6 \times 10^8 \text{ ms}^{-1}$ C. $2.6 \times 10^7 \text{ ms}^{-1}$ D. $2.6 \times 10^9 \text{ ms}^{-1}$
11	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
12	According to the special theory of relativity, a moving clock	A. runs faster B. runs slower C. neither runs faster nor slower D. all of these
13	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
		A. Inertial frames of reference

14	The special theory of relatively treats the problems involving:	B. Non-inertial frames C. Non-accelerated frame D. Both (A) and (C) E. Both (B) and (C)
15	Converse of pair production is known as	A. Compton effect B. annihilation of matter C. photoelectric effect D. none of these
16	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
17	When a positron comes close to an electron they annihilate into	A. one photon B. two photons which travel in the same direction C. two photons which travels in the opposite direction D. two photons which travel in any direction
18	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
19	Compton was awarded Nobel prize in physics in	A. 1921 B. 1923 C. 1925 D. 1927
20	Absolute motion cannot be detected	A. in its own frame of references B. in a different frame of references C. both in its frame and different frame of references D. none of these