

ECAT Physics Chapter 19 Dawn of Modern Physics

Sr	Questions	Answers Choice
1	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)
2	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
3	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
4	Which of the following phenomenon proves the particle nature of light	A. interference B. diffraction C. photoelectric effect D. none of these
5	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
6	The mass 'm' of a body moving at 0.8 c (whose rest mass is m_0) becomes	A. $2 m_0$ B. $1.67 m_0$ C. $0.67 m_0$ D. $2.67 m_0$
7	Converse of pair production is known as	A. Compton effect B. annihilation of matter C. photoelectric effect D. none of these
8	S.I. unit of planks constant is	A. $J \cdot s^{-1}$ B. $J \cdot s$ C. $J \cdot s^{-2}$ D. $J \cdot s^2$
9	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
10	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
11	A particle of mass 5.0 mg moves with a speed of 8.0 m/s. Its de-Broglie wavelength is	A. 1.66 m B. 1.66×10^{-10} m C. 1.66×10^{-29} cm D. 1.66×10^{-29} m
12	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
13	Victor de-Broglie received the Nobel prize in physics in	A. 1925 B. 1929 C. 1932 D. 1935
		A. Proton

14	A particle having mass and charge equal to that of an electron is called:	B. Positron C. Pion D. Pi-meson E. Both (C) and (D)
15	Albert Einstein got the Nobel prize in physics for his explanation of photoelectric effect in	A. 1916 B. 1919 C. 1921 D. 1923
16	Compton was awarded Nobel prize in physics in	A. 1921 B. 1923 C. 1925 D. 1927
17	The concept of direction and position are purely	A. absolute B. relative C. absolute or relative D. none of these
18	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
19	In order to produce pair production, a photon must have a energy	A. 0.511 Me v B. 0.256 Me v C. 1.02 Me v D. 0.956 Me v
20	A black body is	A. an ideal absorber B. an ideal radiator C. both of them D. none of them