

ECAT Physics Chapter 19 Dawn of Modern Physics

Sr	Questions	Answers Choice
1	Momentum is a parameter associated with	A. wave motion B. particle motion C. neither wave nor particle motion D. none of these
2	With the help of 50 K v electron microscope, a resolution of	A. 0.5 to 1 m to possible B. 1 m to 10 m is possible C. 0.5 to 1 nm is possible D. 1 to 10 nm is possible
3	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
4	Which of the following phenomenon proves the particle nature of light	A. interference B. diffraction C. photoelectric effect D. none of these
5	A high temperature, the proportion of shorter wavelengths radiation, emitted by the body	A. decreases B. first increases then decreases C. increases D. any one of them
6	The special theory of relativity treats problems involving	A. inertial frame of references B. accelerating frame of references C. both of these D. none of these
7	If you are moving at relativistic speed between two points that are a fixed distance apart, then the distance between the two points appears	A. larger B. shorter C. equal D. none of these
8	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
9	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
10	The positron was discovered by:	A. In cosmic radiation B. In 1932 C. By Carl Anderson D. All above E. By direc
11	A black body is	A. an ideal absorber B. an ideal radiator C. both of them D. none of them
12	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
13	The existence of positron was predicted by Dirac in	A. 1920 B. 1925 C. 1930 D. 1928
14	The idea of quantization of energy was proposed by:	A. Einstein B. Max. Planck C. Maxwell D. Bohr E. Rutherford

15	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)
16	According to the de-Broglie relation, an object of large mass and ordinary speed has	A. very small wavelength B. very large wavelength C. very small frequency D. all of these
17	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
18	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
19	A non-inertial frame of reference is one, in which	A. law of inertial is valid B. all laws of physics are the same in all frames C. $a > 0$ or $a < 0$ D. $a = 0$
20	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