

Physics ECAT Pre Engineering Chapter 19 Dawn of Modern Physics

Sr	Questions	Answers Choice
1	de-Broglies hypthesis was experimentally verified by	A. Maxwell B. Compton C. Einstein D. Davison and Germer
2	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)
3	The general theory of relativity treats problems involving	A. inertial frame of references B. accelerating frame of references C. both of these D. none of these
4	A black body is	A. an ideal absorber B. an ideal radiator C. both of them D. none of them
5	In process of annihilation of matter, the two photons produced move in opposite direction to converse	A. momentum B. charge C. energy D. mass
6	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
7	If the radius of first orbit of hydrogen atom is 0.53 \AA the radius of second orbit will be	A. 2.120 \AA B. 0.212 \AA C. 21.2 \AA D. 0.14 \AA
8	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
9	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
10	When a positron comes close to an electron they annihilate into photons such that	A. each photon has energy 0.51 Me v B. each photon has energy 1.02 Me v C. each photon has energy 0.25 Me v D. none of these
11	When monochromatic light is allowed to fall on cathode, it begins to emit electrons, these electrons are called	A. thermoionic electrons B. free electrons C. photoelectrons D. slow electrons
12	The idea of quantization of energy was proposed by:	A. Einstein B. Max. Planck C. Maxwell D. Bohr E. Rutherford
		A. $a \text{ \AA}$

13	An inertial frame is that frame in which	B. $a=0$ C. $a \neq 0$ D. none of these
14	There is no way to detect:	A. Absolute uniform motion B. Accelerated motion C. State rest D. State of motion E. None of these
15	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
16	Photoelectrons are emitted when ultraviolet light falls on:	A. Casium B. Silver C. Potassium D. Any of these E. None of these
17	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
18	The special theory of relativity is based on:	A. Four postulates B. Three postulates C. Two postulates D. One postulate E. None of these
19	As the light shines on the metal surface, the electrons are ejected	A. slowly B. instantaneously C. either of these D. none of these
20	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. $2.6 \times 10^9 \text{ ms}^{-1}$