ECAT Physics Chapter 19 Dawn of Modern Physics

Sr	Questions	Answers Choice
1	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
2	The special theory of relativity treats problems invoving	A. inertial frame of references B. accelerating frame of references C. both of these D. none of these
3	The stopping voltage for a certain metal is 100 volts, then the work function for the cathode plate is	A. 100 J B. 1.6 x 10⁻¹⁷J C. 100 eV D. 1.6 x 10⁻¹⁷eV
4	Momentum is a parameter associated with	A. wave motion B. particle motion C. neither wave nor particle motion D. none of these
5	Pair production is the phenomenon in which	A. matter is converted into energy B. energy is converted into matter C. light is converted into electrical energy D. electrical energy is converted into light
6	According to the special theory of relativity, time is	A. absolute quantity B. not absolute quantity C. constant quantity D. none of these
7	The idea of quantization of energy was proposed by:	A. Einstein B. Max.Planck C. Maxwell D. Bohr E. Rutherford
8	Wien's constant is measured in:	A. Metre per kelviin B. Metre kelvin C. Kelvin per meter D. Joules E. Dynes
9	As the light shines on the metal surface, the electrons are ejected	A. slowly B. instantaneously C. either of these D. none of these
10	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. Lerger C. Same D. Much larger E. None of these
11	Newton's law of motion do not hold in	A. an accelerated frame of reference B. an unaccelerated frame of reference C. both of these D. none of these
12	When platinum wire is heated, it appears cherry red at	A. 1600°C B. 900°C C. 1100°C D. 1300°C
		A. particle-like properties

13	G.P. Thomson observer experimentally that electrons and neutrons possess	B. wave-like properties C. neither particle nor wave like properties D. none of these
14	The photoelectric effect, the maximum energy of photoelectrons depends on the	A. particular metal surface B. frequency of incident light C. both of them D. none of them
15	The emission of electrons from a metal surface when exposed to light of suitable frequency is called the	A. pair production B. Compton effect C. photoelectric effect D. relativity
16	The special theory of relativity is based on the	A. one postulate B. two postulates C. three postulates D. four postulates
17	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
18	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
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	From the theory of relativity, momentum p of the photon is related to energy as	A. p = hfc B. p = hf/c C. p = f(hc,f) D. p = cf/h