Physics ECAT Pre Engineering Chapter 19 Dawn of Modern Physics

Sr	Questions	Answers Choice
1	The photon of radio-waves has energy of about	A. 1 Me V B. 1 Ke v C. 10⁻¹⁰e v D. 10¹⁰e v
2	The energy of a photon is represented by	A. h/c² B. h/T C. hc² D. hf/c²
3	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
4	Photocell is a device which converts	A. chemical energy into electrical energy B. electrical energy into light energy C. heat energy into electrical energy D. light energy into electrical energy
5	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
6	An intertial frame of reference is a frame of reference which is	A. at rest B. moving with uniform velocity C. either at rest or moving with uniform velocity D. none of these
7	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
8	Position was discovered by Carl Anderson in	A. 1920 B. 1925 C. 1928 D. 1932
9	The existence of position was predicted by Dirace in	A. 1920 B. 1925 C. 1930 D. 1928
10	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
11	A particle having mass and charge equal to that of an electron is called:	A. Proton B. Positron C. Pion D. Pi-meson E. Both (C) and (D)
12	0.1 kg mass will be equivalent to the energy	A. 9 x 10¹⁵J B. 5 x 10⁸J C. 6 x 10¹⁶J D. 9 x 10⁻¹⁶J
13	The Stephen-Boltzmann law for the black body radiation is given by	A. E = T² B. E = -T² C. E = T⁴ D. E = -T⁴
14	According to the de-Brogile 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
15	G.P. Thomson observer experimentally that electrons and neutrons possess	A. particle-like properties B. wave-like properties C. neither particle nor wave like properties D. none of these
16	Which one of the following physical quantities changes with relativistic speed	A. Length B. Mass C. Time D. All of the above
17	The intensity of emitted energy (with wavelength) radiated from a black body at different temperatures was initially measured by:	A. Lummer B. Planck C. Pringsheim D. Both (A) and (B) E. Both (A) and (C)
18	The energy of the 4th orbit in hydrogen atom is	A. 2.5 ev B. - 3.5 ev C. -0.85 ev D. -13.6 ev
19	Compton shift refers to:	A. Photon B. Meson C. Proton D. Positron E. Both (B) and (D)
20	According to Einstein, with the great increase in the speed of the body, the relativistic mass of the body	A. Remains constant B. Decreases C. Increases to infinity D. Reduced to zero