Physics ECAT Pre Engineering Chapter 19 Dawn of Modern Physics

Sr	Questions	Answers Choice
1	When platinum wire is heated, then at the temperature of 500 ^{o}C, it becomes:	A. Yellow B. Orange red C. Dull red D. White E. Cherry red
2	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
3	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
4	the symbol to be used in relativity problems denotes:	A. Dilated time B. Proper time C. Life time D. Half time E. None of these
5	The existence of position was predicted by Dirace in	A. 1920 B. 1925 C. 1930 D. 1928
6	In process of annihilation of matter, the two photons produced move in opposite direction to converse	A. momentum B. charge C. energy D. mass
7	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
8	S.I. unit of planks constant is	A. J-s⁻¹ B. J.s C. J.s⁻² D. J.s²
9	Victor de-Brogile received the Nobel prize in physics in	A. 1925 B. 1929 C. 1932 D. 1935
10	Momentum is a parameter associated with	A. wave motion B. particle motion C. neither wave nor particle motion D. none of these
11	An electron is accelerated through a potential difference of 50v. its de-Brogile wavelength is	A. 1.66 x 10⁻²⁹m B. 1.74 x 10⁻¹⁰cm C. 17.4 x 10⁻⁶m D. 1.74 x 10⁻¹⁰m
12	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
13	The special theory of relativity is based on the	A. one postulate B. two postulates C. three postulates D. four postulates
14	When a position 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
		A. an accelerated frame of reference B. an unaccelerated frame of

15	Newton's law of motion do not hold in	reference C. both of these D. none of these
16	According to the electromagnetic wave theory of light, increasing the intensity of incident light should increase the	A. number of photoelectrons B. size of the photoelectrons C. charge on photoelectrons D. K.E of photoelectrons
17	The ratio of energy E to the corresponding frequency (f) of the radiation (emitted or absorbed) is called:	A. Wien's constant B. Stefen's constnat C. Planck's constant D. Boltzmann's constant E. 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	A particle of mass 5.0 mg moves with a speed of 8.0 m/s. Its de-Brogile wavelength is	A. 1.66 m B. 1.66 x 10⁻¹⁰m C. 1.66 x 10⁻²⁹cm D. 1.66 x 10⁻²⁹m
20	Wave nature of particle was proposed by	A. Einstein B. Plank C. De-Brogile D. Max well