

Physics ECAT Pre Engineering Chapter 19 Dawn of Modern Physics Physics Online Test

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Sr	Questions	Answers Choice
1	The inside cavity of the black body is	A. painted white B. painted silver C. blackened with soot D. painted red
2	The mass 'm' of a body moving at 0.8 c (whose rest mass is mo) becomes	A. 2 mo B. 1.67 mo C. 0.67 mo D. 2.67 mo
3	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)
4	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
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	The energy of a photon in a beam of infrared radiation of wavelength 1240 nm is	A. 100 ev B. 10 ⁶ e v C. 10 ³ e v D. 1.0 e v
7	If a body reaches a speed equal to the speed of light, then its mass will became	A. zero B. very small C. infinity D. none of these
8	The value of threshold frequency for different metals is	A. different B. same C. may be different or may be same D. none of these
9	The speed of a pendulum is measured to be 3.0 s in the inertial reference frame of the pendulum. What is its period measured by an observer moving at a speed of 0.95 c with respect to the pendulum	A. 2.9 s B. 3.0 s C. 6.6 s D. 9.6 s
10	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
11	In process of annihilation of matter, the two photons produced move in opposite direction to converse	A. momentum B. charge C. energy D. mass
12	An electron is accelerated through a potential difference of 50v. its de-Brogile wavelength is	A. 1.66 x 10 ⁻²⁹ m B. 1.74 x 10 ⁻¹⁰ cm C. 17.4 x 10 ⁻⁶ m D. 1.74 x 10 ⁻¹⁰ m
13	According to Einstein, with the great increase in the speed of the body the relativistic length of the body	A. Remains constant B. Decreases C. Increases D. Reduces to zero
14	Wave nature of particle was proposed by	A. Einstein B. Plank C. De-Brogile D. Max well
		A. 500 m

15	The threshold frequency of sodium is 6 x 10^6MHz . The cut-off wavelength for this metal will be	B. 500 nm C. 500 km D. 500 cm E. None of these
16	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
17	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
18	Absolute motion cannot be detected	A. in its own frame of references B. in a different frame of references C. both in its frame and different frame of references D. none of these
19	If you are moving at relativistic speed between two points that are a fixed distance apart, then the distance between the two points appers	A. larger B. shorter C. equal D. none of these
20	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 ⁻¹⁰ m C. 1.66 x 10 ⁻²⁹ cm D. 1.66 x 10 ⁻²⁹ m