

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

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Sr	Questions	Answers Choice
1	According to the special theory of relativity	A. mass and energy are same entities B. mass and energy are same entities but interconverible C. mass and energy are different entities but interconverible D. mass and energy are different entities but non-interconverible
2	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
3	A bar 1.0 m in length and located along x-axix moves with a speed of 0.75 c with respect to a stationary observer. The length of the bar as measured by the stationary observer is	A. 1.66 m B. 1.0 m C. 0.66 m D. 2.66 m
4	When a platinum wire is heated, it appears yellow at	A. 1600°C B. 900°C C. 1100°C D. 1300°C
5	The energy of the 4th orbit in hydrogen atom is	A. 2.5 ev B 3.5 ev C0.85 ev D13.6 ev
6	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
7	The value of the Stephen's constant for black body radiations is given by	A. 5.6 x 10 ⁸ Wm ⁻² K ⁻⁴ B. 5.67 x 10 ⁻⁸ Wm ⁻² K ⁻⁴ C. 2.9 x 10 ⁻³ MK D. 2.9 x 10 ³ mK
8	The special theory of relativity is based on the	A. one postulate B. two postulates C. three postulates D. four postulates
9	When platinum wire is heated, it appears cherry red at	A. 1600 °C B. 900 °C C. 1100 °C D. 1300 °C
10	The energy of photon 'E' is proported to	A. The magnetic field H B. The electric field E C. Both the electric and magnetic field H and E D. Frequency
11	A photon is considered to have	A. Momentum B. Energy C. Wavelength D. All of the above
12	The value of the plank's constant 'h' is given by	A. 1.6 x 10 ⁻¹⁹ J B. 1.67 x 10 ⁻²⁷ Kg C. 6.63 x 10 ³⁴ Js D. 6.63 x 10 ⁻³⁴ Js
		A. An accelerated frame of reference

13	Strictly speaking, the earth is:	B. A non-inertial frame of reference C. An inertial frame of reference D. ^{A non-accelerated frame of reference} E. Both (A) and (B)
14	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
15	The idea of quantization of energy was proposed by:	A. Einstein B. Max.Planck C. Maxwell D. Bohr E. Rutherford
16	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
17	At the temperature, a body emits radiation which is principally	A. of long wavelengths in the visible region B. of long wavelengths in the invisible infrared region C. of short wavelength in invisible ultraviolet region D. none of these
18	There is no way to detect:	A. Absolute uniform motionB. Accelerated motionC. State restD. State of motionE. None of these
19	The photon of radio-waves has energy of about	A. 1 Me V B. 1 Ke v C. 10 ⁻¹⁰ e v D. 10 ¹⁰ e v
20	The inside cavity of the black body is	A. painted white B. painted silver C. blackened with soot D. painted red