ECAT Physics Online Test

Sr	Questions	Answers Choice
1	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
2	The energy of a photon is represented by	A. h/c² B. h/T C. hc² D. hf/c²
3	According to the Max plank, energy is redialed or absorbed in	A. discrete packets B. continuous waves C. either of them D. none of these
4	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
5	The value of the Stephen's constant for black body radiations is given by	A. 5.6 x 10⁸Wm⁻²K⁻⁴ B. 5.67 x 10⁻⁸Wm⁻²K⁻⁴ C. 2.9 x 10⁻³mK D. 2.9 x 10³mK
6	The Stephen-Boltzmann law for the black body radiation is given by	A. E = T² B. E = -T² C. E = T⁴ D. E = -T⁴
7	The inside cavity of the black body is	A. painted white B. painted silver C. blackened with soot D. painted red
8	A black body is	A. an ideal absorber B. an ideal radiator C. both of them D. none of them
9	When a platinum wire is heated, it appears white at	A. 1600°C B. 900°C C. 1100°C D. 1300°C
10	When platinum wire is heated, it appears cherry red at	A. 1600°C B. 900°C C. 1100°C D. 1300°C
11	When a platinum wire is heated, it appears yellow at	A. 1600°C B. 900°C C. 1100°C D. 1300°C
		A. 500<span style="color: rgb(84, 84,

12	When a platinum wire is heated, it appears orange red at	84); font-family: arial, sans-serif; font-size: small;">°C B. 900°C C. 1100°C D. 1300°C
13	When a platinum wire is heated, it appears dull red at about	A. 500°C B. 900°C C. 1100°C D. 1300°C
14	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
15	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
16	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
17	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
18	The location and speed anywhere on earth can now be determined using relativistic effects by NAVISTAR to an accuracy of	A. 2 cm/s B. 20 cm/s C. 200 cm/s D. 2000 cm/s
19	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-interconveritble
20	The mass of an object will be doubled at speed	A. 1.6 x 10⁸ms⁻¹ B. 2.6 X 10⁸ms⁻¹ C. 2.6 x 10⁷ms⁻¹ D. 2.6 x 10⁹ms⁻¹
21	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
22	The Einstein's changes in length, mass and time are not observed in common life because	A. We dont observer then seriously B. The masses are too large C. Their speed is too small than the speed of right D. All of the above
23	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
24	If a material object moves with the speed of light 'C' its mass becomes	A. Equal to its rest mass B. Four times of its rest mass C. Double of its rest mass D. Infinite
25	Which one of the following physical quantities changes with relativistic speed	A. Length B. Mass C. Time D. All of the above
		A. Remains constant

26	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
27	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
28	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
29	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
30	The length contraction happens only	A. Opposite to the direction of motion B. along the direction of motion C. perpendicular to the direction of motion D. In any direction