

## ECAT Pre General Science Physics Chapter 19 Dawn of Modern Physics

Sr	Questions	Answers Choice
1	If $\lambda$ represents linear momentum and $c$ , the velocity of light, then unit of $\lambda c$ in international system of units is:	A. Newton B. Joule C. Joule-Sec D. Joule-s <sup>-1</sup> E. Watt
2	The special theory of relativity is based on:	A. Four postulates B. Three postulates C. Two postulates D. One postulate E. None of these
3	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
4	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 light D. All of the above
5	When a platinum wire is heated, it appears dull red at about	A. 500°C B. 900°C C. 1100°C D. 1300°C
6	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)
7	As compared to the distance measured by an observer on Earth, the distance from Earth to a star measured by an observer in a moving spaceship would seem:	A. Smaller B. Lerger C. Same D. Much larger E. 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	de-Broglies hypthesis was experimentally verified by	A. Maxwell B. Compton C. Einstein D. Davison and Germer
10	Max Planck received the Nobel Prize for his discovery of energy quants in:	A. 1718 AD B. 1918 AH C. 1818 AD D. 1918 AD E. None of these
11	Compton was awarded Nobel prize in physics in	A. 1921 B. 1923 C. 1925 D. 1927
12	The Nobel Prize on the explanation of photoelectric effect was awarded to:	A. Max. Planck B. Maxwell C. Bohr D. Rutherford E. None of these
13	In order to produce pair production, a photon must have a energy	A. 0.511 Me v B. 0.256 Me v C. 1.02 Me v D. 0.956 Me v
14		A. less than one B. Equal to one

14	Practically the quantity $v/c$ is always:	C. Greater than one D. all of these E. None of these
15	According to the special theory of relativity	A. mass and energy are same entities B. mass and energy are same entities but interconvertible C. mass and energy are different entities but interconvertible D. mass and energy are different entities but non-interconvertible
16	The concept of direction is purely:	A. Absolute B. Relative C. Relative to stars always D. Relative to the sun always E. None of these
17	A bar 1.0 m in length and located along x-axis 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
18	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. $a \neq 0$ or $a \neq 0$ D. $a = 0$
19	The threshold frequency of sodium is $6 \times 10^6$ MHz. The cut-off wavelength for this metal will be	A. 500 m B. 500 nm C. 500 km D. 500 cm E. None of these
20	the dilation of time applies to the timing processes which are:	A. Physical B. Chemical C. Biological D. All of these E. None of these