

## ECAT Physics Online Test

Sr	Questions	Answers Choice
1	If an electron of charge 'e' is accelerated through a potential difference V., it will acquire energy	A. $Ve$ B. $V/e$ C. $e/V$ D. $2Ve$
2	The second law of thermodynamics is concerned with the circumstances in which	A. heat can be converted into work B. direction of flow of heat C. none of them D. both of them
3	The number of vibrating body at any instant from its equilibrium position is called	A. displacement B. frequency C. amplitude D. time period
4	When platinum wire is heated, it appears cherry red at	A. $1600^{\circ}\text{C}$ B. $900^{\circ}\text{C}$ C. $1100^{\circ}\text{C}$ D. $1300^{\circ}\text{C}$
5	If m is the mass of the gases ejected per second with velocity v relative to the rocket of mass M, then the acceleration of rocket is	A. $a = M/mv$ B. $a = mM/v$ C. $a = mv/M$ D. $a = v/mm$
6	What temperature is the same on Celsius scale as well as on Fahrenheit scale?	A. $32^{\circ}\text{C}$ B. $-32^{\circ}\text{C}$ C. $-40^{\circ}\text{C}$ D. $-212^{\circ}\text{C}$
7	A certain force gives an acceleration of $2\text{ m/sec}^2$ to a body mass 5 kg. The same force would give a 20 kg object an acceleration of:	A. $0.5\text{ m/sec}^2$ B. $5\text{ m/sec}^2$ C. $1.5\text{ m/sec}^2$ D. $9.8\text{ m/sec}^2$
8	A body whose momentum is constant must have constant	A. Acceleration B. Velocity C. Force D. None of these
9	For transmission of both transverse and longitudinal waves, we can use:	A. Solid B. Gas C. Plasma D. None of these
10	Force is a:	A. Scalar quantity B. Base quantity C. Derived quantity D. None of these
11	In full wave rectification, simultaneous action is that:	A. Two diodes conduct and two do not. B. One diode conduct and three do not. C. Three diodes conduct and one does not. D. All the four diodes conduct E. None of these

12	'K' is the proportionality constant of force experienced by conductor. What is the value of 'K' in SI units?	A. 0 B. 1 C. 0.5 D. -1
13	The second law gives the relationship between	A. mass and velocity B. force and acceleration C. velocity and acceleration D. mass and weight
14	The artillery shells travel along parabolic paths under the influence of	A. magnetic field B. electric field C. electromagnetic field D. gravitational field
15	Examples of polymeric substances are:	A. Plastic B. Synthetic rubbers C. Zirconia D. All of these E. Both (A) and (B)
16	The total reactance of a series RLC circuit at resonance is	A. zero B. Equal to the resistance C. Infinity D. Capacitive
17	A ball is dropped from a height of 4.2 meters. To what height will it rise if there is no loss of KE after rebounding?	A. 4.2 m B. 8.4 m C. 12.6 m D. none of these
18	If the mass of the simple pendulum becomes double, its time period	A. increase B. decreases C. remains constant D. none of them
19	A swing has	A. one natural frequency B. two natural frequencies C. three natural frequencies D. four natural frequencies
20	Newton's laws are adequate for speeds that are	A. low compared with the speed of light B. equal to the speed of light C. greater than the speed of light D. all of them