

## ECAT Physics Online Test

Sr	Questions	Answers Choice
1	The penetration power of $\beta$ -particle is	<p>A. zero</p> <p>B. less than <math>\alpha</math>-particle</p> <p>C. equal to <math>\alpha</math>-particle</p> <p>D. greater than <math>\alpha</math>-particle</p>
2	The magnitude of induced emf depends upon the:	<p>A. Rate of decrease of magnetic field</p> <p>B. Rate of change of magnetic field</p> <p>C. Rate of increase of magnetic flux</p> <p>D. Constancy of magnetic field</p> <p>E. None of these</p>
3	A solenoid is a coil of wire which is:	<p>A. Short, loosely wound, cylindrical</p> <p>B. Long, tightly wound, spherical</p> <p>C. Long, loosely wound, cylindrical</p> <p>D. Long, tightly wound, cylindrical</p> <p>E. None of these</p>
4	The flow of an ideal fluid is	<p>A. streamline flow</p> <p>B. incompressible flow</p> <p>C. non-viscous</p> <p>D. all of the above</p>
5	The phase angle of a series RLC circuit at resonance is	<p>A. <math>180^\circ</math></p> <p>B. <math>90^\circ</math></p> <p>C. <math>0^\circ</math></p> <p>D. None of the these</p>
6	Two sound waves of slightly different frequencies propagating in the same direction produce beats due to	<p>A. Interference</p> <p>B. Diffraction</p> <p>C. Polarization</p> <p>D. Refraction</p>
		A. friction

7	The efficiency of petrol engine is usually not more than 25% to 30% because of	B. heat losses C. both of them D. none of them
8	With the help of 50 K v electron microscope, a resolution of	A. 0.5 to 1 m to possible B. 1 m to 10 m is possible C. 0.5 to 1 nm is possible D. 1 to 10 nm is possible
9	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
10	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
11	To make an LED, it is impracticable to use:	A. Silicon B. Gallium arsenide C. Gallium arsenide phosphide D. Iron E. Both (B) and (C)
12	The charged nucleus of an atom itself spins its magnetic field	A. equal to the field produced by orbital electrons B. greater than the field produced by orbital electrons C. much weaker than the field produced by orbital electrons D. none of these
13	In case of streamed lined flow of liquid, the loss of energy is	A. Maximum B. Minimum C. Infinite D. equal to what is in turbulent flow
14	Ferromagnetic substances lose their magnetism when heated above a certain temperature, known as	A. critical temperature B. curie temperature C. high temperature D. fixed temperature
15	Any superconductor with critical temperature above 77 K, is referred as	A. low temperature superconductor B. high temperature superconductor C. very low temperature superconductor D. none of them
16	When an electron is accelerated through a P.D. of an one volt, it will acquire energy equal to	A. One joule B. One erg C. One electron volt 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	The figure $1.007276\mu$ shows the mass of an:	A. Atom B. Positron C. Electron D. Neutron E. Proton
19	After alpha decay the atomic number of the atom	A. increase by four B. decreases by two C. increases by two D. decrease by four
20	The vertical and horizontal range will be equal id angle of projection is	A. $76^\circ$ B. $45^\circ$ C. $60^\circ$ D. $120^\circ$