ECAT Physics Online Test

Sr	Questions	Answers Choice
1	An aircraft is moving with a velocity of 300 ms^{-1}. If all the forces acting on it are balanced, then	A. It still moves with the same velocity B. It will be just floating at the same point in space C. It will be fall down instantaneously D. It will lose its velocity gradually
2	The bicycle pump provides a good example of	A. first law of thermodynamics B. second law of thermodynamics C. third law of thermodynamics D. none of them
3	A body is thrown from a height h with speed u, it hits the ground with speed V	A. The value of V is maximum if the body is thrown vertically downward B. The value of V is maximum if the body is thrown vertically upwards C. The value of V is minimum if the body is thrown horizontally D. The value of V does not depend on the direction of which it is thrown
4	The SI unit of magnetic flux is	A. NmA⁻² B. NmA⁻¹ C. NAm⁻¹ D. Nm²A⁻¹
5	A gas is compressed adiabatically till its temperature is double. The ratio of its final volume to initial volume will be	A. 1/2 B. More than 1/2 C. Less than 1/2 D. Between 1 and 2
6	An amount of water of mass 20 g at 0°C is mixed with 40 g of water at 10°C. Final temperature of mixture is	A. -20°C B. 6.67°C C. 5°C D. 0°C
7	Hydrogen atom with only one proton and one neutron in its nucleus, and one electron, is called	A. deuterium B. protium C. tritium D. none of these
8	Silicon is one of the mot commonly used:	A. onductor B. Dielectric C. Insulator D. Semiconduction E. Both (B) and (C)
9	Pressure exerted by a gas is	A. Independent of density of the gas B. Inversely proportional to the density of the gas C. Directly proportional to the square of the density of the gas D. Directly proportional to the density of the gas
10	The unit of viscosity is SI system is:	A. Kg⁻¹m sec⁻¹ B. Kgm⁻¹ sec⁻¹ C. Kg⁻¹m⁻¹ sec D. None of these
11	Referring to the above figure, the binding energy per nucleon increases upto mass number equal to:	A. 50 B. 100 C. 150 D. 200 E. 250

12	Heavy water is made of one oxygen atom and two atoms of:	A. Protium B. Deuterium C. Tritium D. Any of these E. None of these
13	It is customary represent a current flowing towards the reader by a symbol	A. (x) B. (+) C. (.) D. (-) E. (÷) <o:p></o:p>
14	A coil of constant area is placed in a constant magnetic field. An induced current is produced in the coil when	A. The coil is distorted B. The coil is rotated C. The coil is neither distorted nor rotated D. Both A and B E. None of these
15	If an amount of heat enters the system it could	A. decrease the internal energy B. not change the internal energy C. increase the internal energy D. none of them
16	Acceleration in a body is always produced in the directin of:	A. Velocity B. Weight C. Force D. Botha B and C
17	If electric and gravitational force on an electron in a uniform electric field will be	A. E=mg/q B. E=q/mg C. E=,g/q D. E=qg/m
18	The velocity of sound in air depends upon	A. Density and elasticity of gas B. Pressure C. Wavelength D. Amplitude and frequency of sound
19	When a wave is travels from one place to another, it transfers:	A. Matter B. Energy C. Momentum D. Both B and C
20	A charge Q is divided into two parts q and Q - q and separated by a distance R. The force of repulsion between them will be maximum when	A. q = Q/4 B. q = Q/2 C. q = ! D. None of these