

ECAT Physics Online Test

Sr	Questions	Answers Choice
1	The value of electrical constant of proportionality k is	A. $9 \times 10^9 \text{ Nm}^2 \text{ C}^{-2}$ B. $9 \times 10^{-9} \text{ Nm}^2 \text{ C}^{-2}$ C. $9 \times 10^{10} \text{ Nm}^2 \text{ C}^2$ D. $9.85 \times 10^{-12} \text{ N}^{-1} \text{ C}^{-2}$
2	The nuclei of an element having the same charge number but different mass numbers are called:	A. Isobars B. Isotopes C. Isomers D. Isobaric E. Isothermal
3	Good absorbers of heat are	A. Poor emitters B. Non emitters C. Good emitters D. Highly polarized
4	According to Stoke's law, drag force depends on	A. Initial velocity B. Final velocity C. Terminal velocity D. Instantaneous velocity
5	At high altitude the blood oozes out of the nose and ear because	A. The blood pressure increase at high altitudes B. The percentage of oxygen in the air increase C. The atmospheric pressure decrease there D. The density of blood decrease at high altitudes
6	A typical rocket ejects the burnt gases at speeds over	A. 400 ms^{-1} B. 40000 m s^{-1} C. 40000 ms^{-1} D. 60000 ms^{-1}
7	In the formula for finding the speed of waves in the spring, unit of m in Sln units is:	A. kg B. kg-meter C. kg/meter D. Meter/kg
8	The photon of radio-waves has energy of about	A. 1 Me V B. 1 Ke v C. 10^{-10} e v D. 10^{10} e v
9	The earliest heat engine was	A. petrol engine B. diesel engine C. electric engine D. steam engine
10	Bernoulli's equation is applicable for	A. turbulent flow B. streamline flow C. both (a) and (b) D. all kinds of flows
11	The SI unit of magnetic flux is	A. Nm^2 B. Nm^{-1} C. NAm^{-1} D. $\text{Nm}^2 \text{ A}^{-1}$
12	If $F=0.04 \text{ N}$ and $X=4 \text{ cm}$ then $K=$	A. 1 Nm^{-1} B. 2 Nm^{-1} C. 3 Nm^{-1} D. 4 Nm^{-1}
13	According to the equation of continuity, when water falls from the tap, it's speed increases and its cross-sectional area	A. decreases B. increases C. becomes zero D. none of them
14	A condenser of capacity $50 \mu\text{F}$ is charged to 10 V. The energy stored is	A. $1.25 \times 10^{-3} \text{ J}$ B. $3.75 \times 10^{-3} \text{ J}$ C. $2.5 \times 10^{-3} \text{ J}$ D. $5 \times 10^{-3} \text{ J}$

15	The force acting as one meter length of the conductor placed at right angle to the magnetic field, when one A current is passing through it, defines the	A. magnetic flux B. magnetic induction C. magnetic field D. self inductance
16	The resistance offered by a fluid to a solid moving inside it is called:	A. Drag force B. Surface force C. Viscosity D. None of these
17	The critical temperature of mercury is	A. 1.18 K B. 4.2 K C. 3.72 K D. 7.2 K
18	The amplifier which us used to perform mathematical operations electronically is known as	A. calculator B. OP-AMP C. computer D. any one of them
19	An ordinary glass gradually softens into a 'paste -like' state before it becomes a very viscous liquid. It happens almost at:	A. 800 ^o C B. 500 ^o C C. 300 ^o C D. 100 ^o C E. None of these
20	The instrument which detects the instant at which external pressure becomes equal to the systolic pressure is	A. stethoscope B. thermometer C. manometer D. barometer