

Physics General Science Test Hard Mode

Sr	Questions	Answers Choice
1	Which of the following is equal to: joule x ohm / volt x second ?	A. Ampere B. Volt C. Watt D. Tesla
2	As the electron in Bohr orbit of hydrogen atom passes from stat $n = 2$ to $n = 1$ the kinetic energy K and potential energy U change as	A. K two-fold,U also two-fold B. K four-fold,U also four-fold C. K four-fold,U two-fold
3	A motorist travels A to B at a speed at 40 km/h and returns at speed of 60 km/h. His average speed will be:	A. 40 km/h B. 48 km/h C. 50 km/h D. 60 km/h
4	Copper and germanium are cooled to 70 K from room temperature then	A. Resistance of copper increases while that of germanium decreases B. Resistance of copper decreases while that of germanium increases C. Resistance of both decreases D. Resistance of both increases
5	The sieman is the SI unit of	A. Resistance B. Specific Resistance C. Conductance D. Inductance
6	In a Millikan's oil drop experiment the charge on an oil drop is calculated to be 6.35×10^{-19} C. The number of excess electrons on the drop is	A. 3.9 B. 4 C. 4.2 D. 6
7	To get a resultant displacement of 10 m, two displacement vectors of magnitude 6 m and 8 m should be combined	A. Parallel B. Antiparallel C. At angle 60° D. Perpendicular to each other
8	The sum of the magnitude of two forces acting at a point is 18 and the magnitude of their resultant is 12. If the resultant is at 90° with the force of the smaller magnitude then their magnitude are:	A. 3, 15 B. 4, 14 C. 5, 13 D. 6, 12
9	A 50-volt battery is connected across 10-ohm resistor. The current is 4.5 A. The internal resistance of the battery is	A. Zero B. 0.5Ω C. 1.1Ω D. 5.0Ω
10	If 2.2 kilowatt power is transmitted through a 10 ohm line at 22000 volt, the power loss in the form of heat will be	A. 0.1 watt B. 1 watt C. 10 watt D. 100 watt
11	The volt/metre is the unit of:	A. Potential B. Work C. Force D. Electric field intensity
12	The primary winding of transformer has 500 turns whereas its secondary has 5000 turns The primary is connected to an a.c supply of 20 V, 50 Hz The secondary will have an output of	A. 200 V, 50 Hz B. 2 V, 50 Hz C. 200 V, 500 Hz
13	A prism splits a beam of white light into its seven constituent colors this is so because	A. Phase of different colors is different B. Amplitude of different colors is different C. Energy of different colors is different D. Velocity of different colors is different
14	When a Na ion and a Cl ion are placed in air a force F acts between them when they are separated by a distance of 1 cm from each other the permittivity of air and the dielectric constant of water are ϵ_0 and K respectively When a piece of salt is placed in water then the force between Na^+ and Cl^- ions separated by a distance of 1 cm will be	A. F B. FK/ϵ C. $F/K\epsilon$ D. F/K

15	The contrast in the fringes in any interference pattern depends on	<p>A. Fringe width B. Intensity ratio of the sources C. Distance between the slits D. Wavelength</p>
16	In a simple harmonic motion the kinetic energy (KE) and the potential energy (PE), are such that throughout the motion	<p>A. KE remains constant B. PE remains constant C. KE/PE is constant D. KE + PE remains constant</p>
17	If the metal bob of a simple pendulum is replaced by a wooden bob, then its time period will	<p>A. Increase B. Decreases C. Remain the same D. First 'A' then 'B'</p>
18	A monochromatic source of light is placed at a large distance d from a metal surface. Photoelectrons are ejected at rate n , kinetic energy being E . If the source is brought nearer to distance $d/2$, the rate and kinetic energy per photoelectron become nearly	<p>A. $2n$ and $2E$ B. $4n$ and $4E$ C. $4n$ and E D. n and $4E$</p>
19	Planck's constant has the dimensions of:	<p>A. Energy B. Momentum C. Frequency D. Angular momentum</p>
20	According to Hooke's law the force required to change the length of a wire by '1' is proportional to	<p>A. 1^2 B. 1 C. 1 D. 1^2</p>