Physics General Science Test Hard Mode

Sr	Questions	Answers Choice
1	The half life of a radio-isotope is 5 years The fraction of atoms decayed in this substance after 15 years will be	A. 1 B. 3/4 C. 7/8 D. 5/8
2	The motion without consideration of its cause is studied in:	A. Kinematics B. Mechanics C. Statics D. Modern Physics
3	If the metal bob is a simple pendulum is replaced by a wooden bob, then its time period will	A. Increase B. Decreases C. Remain the same D. First 'A' then 'B'
4	The mass defect for the nucleus of helium is 0.0303 a.m.u What is the binding energy per nucleon for helium in MeV?	A. 28 B. 7 C. 4 D. 1
5	Radio waves of constant amplitude can be generated with	A. Rectifier B. Filter C. FET D. Oscillator
6	In an AC circuit a resistance of R ohm i connected in series with an inductance L if phase angle between voltage and current be 45^{o} the value of inductive reactance will be	A. R/4 B. R/2 C. R
7	When n-type of semiconductor is heated	A. Number of electrons increases while that of holes decreases B. Number of holes increases while that of electrons decreases C. Number of electrons and holes remains same D. Number of electrons and holes increases equally
8	Ultra-violet radiation of 6.2 eV falls on an aluminium surface K.E of fastest electrons emitted is(work function = 4.2 eV)	A. 3.2 x 10-21 J B. 3.2 x 10-19 J C. 7 x 10-25 J D. 9 x 10-32 J
9	Quantity that remains unchanged in a transformer is	A. Voltage B. Current C. Frequency D. None of these
10	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/ε₀ C. F/Kε₀ D. F/K
11	To make the frequency double of na oscillator we have to	A. Double the mass B. Half the mass C. Quadruple the mass D. Reduce the mass to one-fourth
12	The dimensional formula for the modulus of elasticity is same as that for.	A. Stress B. Strain C. Velocity D. Surface tension
13	A photoelectric cell converts	A. Electrical energy to light energy B. Light energy to light energy C. Light energy to electrical energy D. Light energy to elastic energy
14	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

15	A piece of fuse wire melts when a current of 15 ampere flows through it.With this current, if it dissipates 22.5 W. the resistance of fuse wire will be	A. Zero B. 10 Ω C. 1 Ω D. 0.10 Ω
16	The de broglie wave corresponding to a particle of mass m and velocity v has a wavelength associated with it	A. h/mv B. hm v C. mh/v D. m/hv
17	Which of the following is equal to: joule x ohm / volt x second ?	A. Ampere B. Volt C. Watt D. Tesla
18	A train of 150 m length is going towards north direction at a speed of 10 ms^{-1} A parrot flies at a speed of 5 ms^{-1} towards south direction parallel to the railway track,The time taken by the parrot to cross the train is equal to	A. 12 s B. 8 s C. 15 s D. 10 s
19	Blood has a density	A. Equal to water B. Greater then water C. Lesser then water D. None of these
20	The distance between node and anti-node is	A. λ B. λ/2 C. λ/4 D. 2λ