Physics General Science Test Hard Mode

Sr	Questions	Answers Choice
1	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
2	The velocity v of a particle at time t is given by: v = at + b / t + c The dimensional formula of a,b and c care respectively:	A. L² ; T and LT² B. LT² ; LT and L C. LT⁻²; L and T D. L;LT and T⁻²
3	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
4	A person standing near the track of a fast moving train has tendency to fall towards it because of	A. Vibration due to motion of train B. Gravitation force of attraction between person and trains C. The high speed of train D. Some other effect
5	According to Stoke's law drag force depends on	A. Initial velocity B. Final velocity C. Terminal velocity D. Instantaneous velocity
6	A force of 10N is acting along y-axis its component along x-axis is	A. 10N B. 20N C. 100N D. Zero N
7	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
8	Velocity of sound in a diatomic as is 300 m/sec what is its rms velocity	A. 400 m/sec B. 40 m/sec C. 430 m/sec D. 300 m/sec
9	Radio waves of constant amplitude can be generated with	A. Rectifier B. Filter C. FET D. Oscillator
10	Mechanical waves on the surface of a liquid are	A. Transverse B. Longitudinal C. Torsional D. Both transverse and longitudinal
11	Absolute temperature can be calculated by	A. Mean square velocity B. Motion of the molecule C. Both (A) and (B) D. None of these
12	When sound waves travel from air to water which of these remains constant?	A. Velocity B. Frequency C. Wavelength D. All the above
13	A photocell with a constant p.d of V volt across it illuminated by a point source from a distance of 25 cm. When the source is moved to a distance of 1 m, the electrons emitted by the photocell	A. Carry 1/4th their previous energy B. Are 1/6th as numerous as before C. Are 1/4th as numerous as before D. Carry 1/4th their previous

		momentum
14	Blood has a density	A. Equal to water B. Greater then water C. Lesser then water D. None of these
15	When we apply reverse bias to a junction diode it	A. Lowers the potential barrier B. Raises the potential barrier C. Increase the majority carrier current D. Decrease the majority carrier current
16	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. 0.5 Ω C. 1.1 Ω D. 5.0 Ω
17	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
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	A moving charge will gain energy due to the application of	A. Electric field B. Magnetic C. Both of these D. None of these
20	How does the Young's modulus vary with the increase of temperature?	A. Decrease B. Increase C. Remains constant D. First increases and then decreases