

Physics General Science Test Hard Mode

Sr	Questions	Answers Choice
1	The number of translation degrees of freedom for a diatomic gas is	A. 2 B. 3 C. 5 D. 6
2	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
3	For production of beats the two sources must have	A. Different frequencies and same amplitude B. Different frequencies C. Different frequencies same amplitude and same phase D. Different frequencies and same phase.
4	Choose the correct statement	A. Both an ammeter and voltmeter should have small resistance B. Both an ammeter and a voltmeter should have large resistance C. An ammeter should have large resistance and a voltmeter should have small resistance D. An ammeter should have small resistance and a voltmeter should have large resistance
5	The frequency of the incident light falling on a photosensitive metal plate is doubled the kinetic energy of the emitted photoelectrons is	A. Double the earlier value B. Unchanged C. More than doubled D. Less than doubled
6	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
7	Relation between pressure (P) and energy (E) of a gas is	A. $P = \frac{2}{3} E$ B. $P = \frac{1}{3} E$ C. $P = \frac{3}{2} E$ D. $P = 3 E$
8	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
9	In an L-R circuit time constant is that time in which current grows from zero to the value	A. $0.63 I$ B. $0.50 I$ C. $0.73 I$ D. I
10	In an AC circuit a resistance of R ohm is connected in series with an inductance L if phase angle between voltage and current be 45° the value of inductive reactance will be	A. $R/4$ B. $R/2$ C. R
11	The peak voltage in a 200 volt A.C supply is nearly	A. 220 B. 253 C. 311
12	The temperature at which the speed of sound becomes double as was at 27°C is	A. 273°C B. 0°C C. 927°C D. 1027°C
13	The primary winding of transformer has 500 turns whereas its secondary has 5000 turns	A. 200 V, 50 Hz

13	The primary is connected to an a.c supply of 20 V, 50 Hz The secondary will have an output of	B. 2 V, 50 Hz C. 200 V, 500 Hz
14	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
15	The average power dissipation in a pure capacitor in AC circuit is	A. $\frac{1}{2} CV^2$ B. CV^2 C. $2CV^2$ D. Zero
16	At 0° K which of the following properties of a gas will be zero?	A. Kinetic energy B. Potential energy C. Vibrational energy D. Density
17	The average binding energy of a nucleon inside an atomic nucleus is about	A. 8 MeV B. 8 eV C. 8 Joules D. 8 ergs
18	A p-n junction has a thickness of the order of	A. 1 cm B. 1 mm C. 10^{-6} cm D. 10^{-12} cm
19	Planck's constant has the dimensions of:	A. Energy B. Momentum C. Frequency D. Angular momentum
20	The contrast in the fringes in any interference pattern depends on	A. Fringe width B. Intensity ratio of the sources C. Distance between the slits D. Wavelength