Physics General Science Test Hard Mode

Sr	Questions	Answers Choice
1	Which quantity is increased in step-down transformer?	A. Current B. Voltage C. Power D. Frequency
2	A wire is stretched to double of its length.The strain is	A. 2 B. 1 C. Zero D. 0.5
3	What remains constant when the earth revolves around the sun?	A. Angular momentum B. Linear momentum C. Angular kinetic energy D. Linear kinetic energy
4	In which region of electromagnetic spectrum does the Lyman series of hydrogen atom lie	A. Ultraviolet B. Infra red C. Visible D. X-ray
5	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	A. 2n and 2E B. 4n and 4e C. 4n and E D. N and 4E
6	Electrons in the atom are held in the atom due to	A. Coulomb forces B. Nuclear forces C. Gravitational forces D. Van der Waal's forces
7	If the amplitude of sound is doubled and the frequency reduced to one-fourth the intensity of sound at the same point will be	A. Increasing by a factor of 2 B. Decreasing by a factor of 2 C. Decreasing by a factor of 4 D. Unchanged
8	Relation between pressure (P) and energy (E) of a gas is	A. P = 2/3 E B. P = 1/3 E C. P = 3/2 E D. P = 3 E
9	An ideal choke (used along with fluorescent tube) would be	A. A pure resistor B. A pure capacitor C. A pure inductor D. A combination of an inductor and a capacitor
10	A sun rise or sun set, the sun looks reddish because.	A. The sun is coldest at these times B. Of the effects of reflection and refraction C. The sun is hottest at these times D. Of the scattering of light
11	What is the ratio of r.m.s velocity for O_2 to H_2?	A. 1/4 B. 4 C. √4 : 1 D. 1 : √4
12	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
13	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
14	The part of a transistor which is heavily doped to produce large number of majority carriers is	A. Emitter B. Base C. Collector

		D. Any of the above depending on nature of transistor.
15	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
16	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
17	Two points charges A and B separated by a distance R attract each other with a force of 12 x 10^{-3} N. The force between A and B when the charges on them are doubled and distance is halved	A. 1.92 N B. 19.2 N C. 12 N D. 0.192 N
18	A particle is moving in a uniform magnetic field then	A. Its momentum changes but total energy remains the same B. Both momentum and total energy remains the same C. Both changes D. Total energy change but momentum remains
19	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
20	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