Physics General Science Test Hard Mode

Sr	Questions	Answers Choice
1	The average power dissipation in a pure capacitor in AC circuit is	A. 1/2 CV² B. CV² C. 2CV² D. Zero
2	Which of the following sources give discrete emission spectrum?	A. Incandescent electric bulb B. Sun C. Mercury vapour lamp D. Candle
3	In a simple harmonic motion the kinetic energy (KE) and the potential energy (PE), are such that throughout the motion	A. KE remains constant B. PE remains constant C. KE/PE is constant D. KE + PE remains constant
4	A couple produces	A. Purely linear motion B. Purely rotational motion C. Linear and rotational motion D. No motion
5	With the increase of temperature viscosity	A. Increase B. Decrease C. Remains same D. Doubles
6	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
7	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
8	Two masses of 1 g and 4 g are moving with equal kinetic energies The ratio of the magnitudes of their linear moments is:	A. 4 : 1 B. √2 : 1 C. 1 : 2 D. 1 : 16
9	In LCR series AC circuit the phase angle between current and voltage is	A. Any angle between 0 and ±π/2 B. π/2 C. π D. Any angle between 0 and π/2
10	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
11	Which quantity is increased in step-down transformer?	A. Current B. Voltage C. Power D. Frequency
12	In a common base transistor circuit the current gain is 0.98.On changing the emitter current by 5.00 mA, the change in collector current is:	A. 0.196 mA B. 2.45 mA C. 4.9 mA D. 5.1 mA
13	According to the Hooke's law the force required to change the length of a wire by '1' is proportional to	A. 1⁻² B. 1⁻¹ C. 1 D. 1²
14	When boron is added as an impurity to silicon the resulting material is	A. n type conductor B. n type semiconductor C. p-type conductor D. p-type semiconductor
15	The velocity of falling raindrops attains limited value because of	A. Up thrust of air B. Vlscous force exerted by air C. Surface tension effect

		D. Air currents atmosphere
16	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
17	A body of mass 2 kg is thrown up vertically with K.E of 490 joules If the acceleration due to gravity is 9.8 m/s^2 the height at which the K.E of the body becomes half its original value is give by:	A. 50 m B. 12.5 m C. 25 m D. 10 m
18	The sieman is the SI unit of	A. Resistance B. Specific Resistance C. Conductance D. Inductance
19	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
20	Two point charges placed at distance of 20 cm in air repel each other with a certain force.When a dielectric slab of thickness 8 cm and dielectric constant K is introduced between these point charges force of interaction becomes half of its previous value Then K is approximately.	A. 2 B. 4 C. √2 D. 1