Physics General Science Test Hard Mode

Sr	Questions	Answers Choice
1	What will be the duration of the day and night (in hour) if the diameter of the earth is suddenly reduced to half its original value the mass remaining constant?	A. 12 B. 6 C. 3 D. 2
2	A couple produces	A. Purely linear motion B. Purely rotational motion C. Linear and rotational motion D. No motion
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 capacitor acts as an infinite resistance for	A. AC B. DC C. Both AC and DC
5	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
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	In an L-R circuit time constant is that time in which current grows from zero to the value	A. 0.63 I_o B. 0.50 I_o C. 0.73 I_o D. I _o
8	A bullet is short from a rifle. As a result the rifle recoils, The kinetic energy of rifle as compared to that of bullet is	A. Less B. Greater C. Equal D. Cannot be concluded
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	Which one of the following phenomena is not explained by Huygen's construction of wavefront?	A. Refraction B. Reflection C. Diffraction D. Origin of spectra
11	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
12	If a diamagnetic substance is brought near north or south pole of a bar magnet it is	A. Attracted by the poles B. Repelled by the poles C. Repelled by north pole and attracted by the south pole D. Attracted by the north pole and repelled by the south pole
13	The distance between node and anti-node is	A. λ B. λ/2 C. λ/4 D. 2λ
		A. √m₁

14	Two bodies of masses m_1 and m_2 have equal momentum their kinetic energies E_1 and E_2 are in the ratio	: √m₂ B. m₁: m₂ C. m₂: m₁ D. m₁² : m₂²
15	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
16	At constant volume temperature is increased then	A. Collision on walls will be less B. Number of collisions per unit time will increase C. Collisions will be in straight lines D. Collisions will not change
17	In a Millikan's oil drop experiment the charge on an oil drop is calculated to be 6.35 x 10-19 C. The number of excess electrons on the drop is	A. 3.9 B. 4 C. 4.2 D. 6
18	A 220 V, 50 Hz, AC source is connected to an inductance of 0.2.H and a resistance of 20 ohm in series What is the current in the circuit?	A. 10 A B. 5 A C. 33.3 A D. 3.33 A
19	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
20	A particle moves along a circular path under the action of a force. The work done by the force is	A. Zero B. Positive and non-zero C. Negative and non zero D. None of above