Physics General Science Test Hard Mode

Sr	Questions	Answers Choice
1	A charge Q is divided into two parts q and Q - q and separated by a distance R. the force of repulsion between them will be maximum when:	A. q = Q/4 B. q = Q/2 C. q = Q D. None of these
2	If the earth were to rotate faster than its present speed the weight of an object will	A. Increase at the equator but remain unchanged at the poles B. Decrease at the equator but remain unchanged at the poles C. Remain unchanged at the decrease but decrease at the poles D. Remain unchanged at the equator but increase at the poles
3	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
4	A conducting wire is drawn to double its length Final resistivity of the material will be	A. Double of the original one B. Half of the original one C. One-fourth of the original one D. Same as original one
5	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.
6	A moving charge will gain energy due to the application of	A. Electric field B. Magnetic C. Both of these D. None of these
7	The smooth or steady stream-line flow is know as	A. Laminar flow B. Turbulent flow C. Both a and b D. None of the above
8	In an ac circuit with voltage V and current 1 the power dissipated is	A. VI B. 1/2 VI C. 1/√2 VI D. Depends on the phase between V and 1
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	In case of p-n junction diode at high value of reverse bias the current rises sharply The value of reverse bias is known as	A. Cut off voltage B. Zener voltage C. Inverse voltage D. Critical voltage
11	In which case dose the potential energy decreases?	A. On compressing a spring B. On stretching s spring C. One moving a body against gravitational force D. One the rising of an air bubble in water
12	A force of 10N is acting along y-axis its component along x-axis is	A. 10N B. 20N C. 100N D. Zero N
13	Shunt required in an ammeter of resistance R to decrease its deflection from 30 ampere to 10 ampere is	A. R/4 B. R/3 C. R/2 D. R

14	The average power dissipation in a pure capacitor in AC circuit is	A. 1/2 CV² B. CV² C. 2CV² D. Zero
15	The time period of a simple pendulum is 2 seconds if its length is increased by 4 times then its period becomes	A. 16 s B. 12 s C. 8 s D. 4 s
16	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
17	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
18	To get a resultant displacement of 10 m, two displacement vectors of magnitude 6 m and 8 m should be combined	A. Parallel B. Antiparallel C. At angle 60° D. Perpendicular to each other
19	There are discrete energy levels in atoms. It was first experimentally demonstrated by	A. Rutherford's experiment B. Frank Hertz experiment C. Marsden's experiment D. Sommerfield experiment
20	The primary winding of transformer has 500 turns whereas its secondary has 5000 turns The primary is connected to an a.c supply of 20 V, 50 Hz The secondary will have an output of	A. 200 V, 50 Hz B. 2 V, 50 Hz C. 200 V, 500 Hz