Physics General Science Test Hard Mode

Sr	Questions	Answers Choice
1	A ten-ohm electric heater operates on a 110 V line Calculate the rate at which it develops heat in watts:	A. 1310 W B. 670 W C. 810 W D. 1210 W
2	If two non-zero vector $\overline{A}$ and $\overline{B}$ are parallel to each other, then $\overline{A}.\overline{B}$ is equal to	A. Zero B. AB C. A + B D. A - B
3	The distance between node and anti-node is	A. λ B. λ/2 C. λ/4 D. 2λ
4	How much water a pump of 2kW can raise in one minute to a height of 10 m. take g = 10 m/s^2?	A. 1000 liters B. 1200 liters C. 100 liters D. 2000 liters
5	The velocity v of a particle at time t is given by: v = at + b / t + c The dimensional formula of a,b and c care respectively:	A. L² ; T and LT² B. LT² ; LT and L C. LT⁻²; L and T D. L;LT and T⁻²
6	Which of the following is a scalar quantity	A. Density B. Displacement C. Torque D. Weight
7	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
8	With the propagation of a longitudinal wave through a material medium the quantities transmitted in the propagation direction are	A. Energy momentum and mass B. Energy C. Energy and mass D. Energy and linear momentum
9	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
10	Which of the following four statements is false?	A. A body can have zero velocity and still be accelerated B. A body can have a constant velocity and still have a varying speed C. A body can have a constant speed and still have a varying velocity D. The direction of the velocity of a acceleration is constant
11	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
		A. [ML²T²]

12	The dimensional formula of toque is:	B. [ML T ²] C. [ML ⁻¹T ⁻²] D. [ML ⁻²T ⁻²]
13	Blood has a density	A. Equal to water B. Greater then water C. Lesser then water D. None of these
14	A 2 kg body and a 3 kg body have equal momentum if the kinetic energy of 3 kg body is 10 j, the KE of 2 kg body will be	A. 6.66 j B. 15 j C. 22.5 j D. 45 j
15	Two bodies of masses m_1 and m_2 have equal momentum their kinetic energies E_1 and E_2 are in the ratio	A. √m₁ : √m₂ B. m ₁: m ₂ C. m ₂: m ₁ D. m ₁ ² : m ₂²
16	The structure of solids is investigated by using	A. Cosmic Rays B. X-rays C. Intra red Radiation D. y-rays
17	The volt/metre is the unit of:	A. Potential B. Work C. Force D. Electric field intensity
18	Which of the following particle would experience the largest magnetic force when projected with the same velocity perpendicular to a magnetic field?	A. Proton B. Electron C. He⁺ D. Li⁺
19	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
20	In a capacitive circuit	A. Current leads voltage by phase of π/2 B. Voltage leads current by phase of π/2 C. Current and voltage are in same phase D. Sometime current and sometime voltage leads