

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	A person standing near the track of a fast moving train has tendency to fall towards it because of	A. Vibration due to motion of train B. Gravitation force of attraction between person and train C. The high speed of train D. Some other effect
3	To explain his theory Bohr used	A. Conservation of linear momentum B. Conservation of angular momentum C. Conservation of quantum frequency D. Conservation of energy
4	If two non-zero vector \vec{A} and \vec{B} are parallel to each other, then $\vec{A} \cdot \vec{B}$ is equal to	A. Zero B. AB C. $A + B$ D. $A - B$
5	How much water a pump of 2kW can raise in one minute to a height of 10 m . take $g = 10\text{ m/s}^2$?	A. 1000 liters B. 1200 liters C. 100 liters D. 2000 liters
6	A couple produces	A. Purely linear motion B. Purely rotational motion C. Linear and rotational motion D. No motion
7	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 are respectively:	A. $L^{2/3}$; T and $LT^{2/3}$ B. $LT^{2/3}$; LT and L C. $14.4444465637207\text{px}^{2/3}$; $14.4444465637207\text{px}^{1/3}$; L and T D. $L; LT$ and $14.4444465637207\text{px}^{1/3}; T$
8	In LCR series AC circuit the phase angle between current and voltage is	A. Any angle between 0 and $\pi/2$ B. $\pi/2$ C. π D. Any angle between 0 and $\pi/2$
9	In which case does the potential energy decreases?	A. On compressing a spring B. On stretching a spring C. One moving a body against gravitational force D. One the rising of an air bubble in water
10	The average power dissipation in a pure capacitor in AC circuit is	A. $1/2 CV^2$ B. CV^2 C. $2CV^2$ D. Zero
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. $\sqrt{2}$ D. 1
12	A person standing on a rotating platform has his hands lowered. He suddenly outstretches his arms. The angular momentum	A. Becomes zero B. Increases C. Decreases D. Remains the same
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. 1007°C

14	Boyle's law is applicable in	A. Isochoric process B. Isothermal process C. Isobaric process D. Isotonic process
15	A train of 150 m length is going towards north direction at a speed of 10 ms^{-1} . A parrot flies at a speed of 5 ms^{-1} towards south direction parallel to the railway track. The time taken by the parrot to cross the train is equal to	A. 12 s B. 8 s C. 15 s D. 10 s
16	If the metal bob is a simple pendulum is replaced by a wooden bob, then its time period will	A. Increase B. Decreases C. Remain the same D. First 'A' then 'B'
17	A cable breaks if stretched by more than 2 mm. If it is cut into two equal parts, how much either part can be stretched without breaking?	A. 0.25 m B. 0.5 m C. 1 mm D. 2 mm
18	The peak voltage in a 200 volt A.C. supply is nearly	A. 220 B. 253 C. 311
19	Which of the following is equal to: joule x ohm / volt x second ?	A. Ampere B. Volt C. Watt D. Tesla
20	The motion without consideration of its cause is studied in:	A. Kinematics B. Mechanics C. Statics D. Modern Physics
