

Physics General Science Test Hard Mode

Sr	Questions	Answers Choice
1	The nucleus ${}^6_6\text{C}$ absorbs an energetic neutron and emits a beta particle (β) The resulting nucleus is	<p>A. ${}^{14}_7\text{N}$</p> <p>B. ${}^{13}_5\text{B}$</p> <p>C. ${}^{13}_7\text{N}$</p> <p>D. ${}^{13}_6\text{N}$</p>
2	To make the frequency double of an oscillator we have to	<p>A. Double the mass</p> <p>B. Half the mass</p> <p>C. Quadruple the mass</p> <p>D. Reduce the mass to one-fourth</p>
3	When the displacement is half of the amplitude the ratio of potential energy to the total energy is	<p>A. 1/2</p> <p>B. 1/4</p> <p>C. 1</p> <p>D. 1/8</p>
4	If two non-zero vectors \vec{A} and \vec{B} are parallel to each other, then $\vec{A} \cdot \vec{B}$ is equal to	<p>A. Zero</p> <p>B. AB</p> <p>C. $A + B$</p> <p>D. $A - B$</p>
5	At constant volume temperature is increased then	<p>A. Collision on walls will be less</p> <p>B. Number of collisions per unit time will increase</p> <p>C. Collisions will be in straight lines</p> <p>D. Collisions will not change</p>
6	The part of a transistor which is heavily doped to produce large number of majority carriers is	<p>A. Emitter</p> <p>B. Base</p> <p>C. Collector</p> <p>D. Any of the above depending on nature of transistor.</p>
7	A person standing on a rotating platform has his hands lowered. He suddenly outstretches his arms. The angular momentum	<p>A. Becomes zero</p> <p>B. Increases</p> <p>C. Decreases</p> <p>D. Remains the same</p>
8	The dimensional formula of torque is:	<p>A. $[\text{ML}^2\text{T}^2]$</p> <p>B. $[\text{ML}^2\text{T}^{-2}]$</p> <p>C. $[\text{ML}^{-1}\text{T}^{-2}]$</p> <p>D. $[\text{ML}^{-2}\text{T}^{-2}]$</p>
9	The angle between rectangular components of a vector is	<p>A. 0°</p> <p>B. 60°</p> <p>C. 90°</p> <p>D. 120°</p>
		<p>A. $R_1 = 2R_2$</p> <p>B. $R_2 = 2R_1$</p>

