

## Physics General Science Test Hard Mode

Sr	Questions	Answers Choice
1	Which of the following lists of physical quantities consists only of vectors:	A. Time,temperature,velocity B. Force,volume,momentum C. Velocity,acceleration,mass D. Force,acceleration,velocity
2	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
3	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
4	A body is dropped from a tower with zero velocity reaches ground in 4s. The height of the tower is about	A. 80 m B. 20 m C. 160 m D. 40 m
5	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 &nbsp;A D. 3.33 A
6	Two forces of 10N and 15N are acting simultaneously on an object in the same direction. Their resultant is	A. Zero B. 5N C. 25N D. 150N
7	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
8	Ball pen function on the principle of	A. Viscosity B. Boyle's law C. Gravitational force D. Surface tension
9	The minimum wavelength of the X-rays produced by electrons accelerated through a potential difference of V volts is directly proportional to	A. $\sqrt{V}$ B. $V^{>2</sup>}$ C. $1/\sqrt{V}$ D. $1/V$
10	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
11	To make the frequency double of na oscillator we have to	A. Double the mass B. Half the mass C. Quadruple the mass D. Reduce the mass to one-fourth
12	In which of the following states does the incandescent substance give continuous spectrum?	A. Vapours in atomic state B. Vapours in molecular state C. Solid or fluid in bulk state D. Solid or fluid in plasma state
13	The percentage errors in the measurements of mass and speed are 2% and 3% respectively. How much estimate of the kinetic energy obtained by measuring mass and speed	A. 11% B. 8% C. 5% D. 1%
	Two bodies of masses $m_1$ and $m_2$ have equal momentum their kinetic energies $E_1$ and $E_2$	A. $\sqrt{m_1 <sup>1</sup>}$  &nbsp;:&nbsp; $\sqrt{m_1 <sup>2</sup>}$ B. <span style="font-size: 14.44444465637207px;">&lt;sup&gt;1&lt;/sup&gt;</span> &nbsp;:&nbsp; <span style="font-size: 14.44444465637207px;">&lt;sup&gt;2&lt;/sup&gt;</span> C. <span style="font-size: 14.44444465637207px;">&lt;sup&gt;1&lt;/sup&gt;</span> &nbsp;:&nbsp; <span style="font-size: 14.44444465637207px;">&lt;sup&gt;2&lt;/sup&gt;</span> D. <span style="font-size: 14.44444465637207px;">&lt;sup&gt;1&lt;/sup&gt;</span> &nbsp;:&nbsp; <span style="font-size: 14.44444465637207px;">&lt;sup&gt;2&lt;/sup&gt;</span>

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	$\frac{1}{2}m_1v_1^2 = \frac{1}{2}m_2v_2^2$ $\Rightarrow m_1v_1 = m_2v_2$ $\Rightarrow \frac{m_1}{m_2} = \frac{v_2}{v_1}$ $\Rightarrow \frac{E_1}{E_2} = \frac{\frac{1}{2}m_1v_1^2}{\frac{1}{2}m_2v_2^2} = \frac{m_1v_1^2}{m_2v_2^2} = \frac{m_1}{m_2} \left(\frac{v_2}{v_1}\right)^2 = \frac{m_1}{m_2} \left(\frac{m_1}{m_2}\right)^2 = \frac{m_1^3}{m_2^3}$ $\Rightarrow \frac{E_1}{E_2} = \left(\frac{m_1}{m_2}\right)^3$
15	Which of the following is equal to: joule x ohm / volt x second ?	<p>A. Ampere  B. Volt  C. Watt  D. Tesla</p>
16	A couple produces	<p>A. Purely linear motion  B. Purely rotational motion  C. Linear and rotational motion  D. No motion</p>
17	How much water a pump of 2kW can raise in one minute to a height of 10 m. take $g = 10 \text{ m/s}^2$ ?	<p>A. 1000 liters  B. 1200 liters  C. 100 liters  D. 2000 liters</p>
18	The nucleus ${}^6\text{C}^{12}$ absorbs an energetic neutron and emits a beta particle ( $\beta$ ) The resulting nucleus is	<p>A. <math>{}^7\text{N}^{14}</math>  B. <math>{}^5\text{B}^{13}</math>  C. <math>{}^7\text{N}^{13}</math>  D. <math>{}^6\text{C}^{13}</math></p>
19	In which region of electromagnetic spectrum does the Lyman series of hydrogen atom lie	<p>A. Ultraviolet  B. Infra red  C. Visible  D. X-ray</p>
20	In LCR series AC circuit the phase angle between current and voltage is	<p>A. Any angle between 0 and <math>\pi/2</math>  B. <math>\pi/2</math>  C. <math>\pi</math>  D. Any angle between 0 and <math>\pi/2</math></p>