

NAT I Engineering Physics

Sr	Questions	Answers Choice
1	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	<p>A. 11% B. 8% C. 5% D. 1%</p>
2	Two bodies with masses M_A and M_B are moving with equal kinetic energy. Their linear moments are numerically in a ratio $ P_A : P_B $ will be:	<p>A. $\frac{1}{2}$ B. $\frac{1}{\sqrt{2}}$ C. $\frac{1}{\sqrt{3}}$ D. $\frac{1}{2\sqrt{3}}$</p>
3	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>
4	A particle moves along a circular path under the action of a force. The work done by the force is	<p>A. Zero B. Positive and non-zero C. Negative and non zero D. None of above</p>
5	Choose the correct statement	<p>A. Both an ammeter and voltmeter should have small resistance B. Both an ammeter and a voltmeter should have large resistance C. An ammeter should have large resistance and a voltmeter should have small resistance D. An ammeter should have small resistance and a voltmeter should have large resistance</p>
6	Shunt required in an ammeter of resistance R to decrease its deflection from 30 ampere to 10 ampere is	<p>A. $\frac{R}{4}$ B. $\frac{R}{3}$ C. $\frac{R}{2}$ D. R</p>
7	Center of mass is a point	<p>A. Which is geometric center of a body B. From which distance of particles are same C. Where the whole mass of the body is supposed to be centered D. Which is the origin of reference frame</p>
		<p>A. 0.63 B. 0.50</p>

8	In an L-R circuit time constant is that time in which current grows from zero to the value	<p>$\frac{1}{RC}$</p> <p>C. 0.73×10^{-7}s</p> <p>D. 0.73×10^{-8}s</p>
9	In which of the following states does the incandescent substance give continuous spectrum?	<p>A. Vapours in atomic state</p> <p>B. Vapours in molecular state</p> <p>C. Solid or fluid in bulk state</p> <p>D. Solid or fluid in plasma state</p>
10	Copper and germanium are cooled to 70 K from room temperature then	<p>A. Resistance of copper increases while that of germanium decreases</p> <p>B. Resistance of copper decreases while that of germanium increases</p> <p>C. Resistance of both decreases</p> <p>D. Resistance of both increases</p>
11	The temperature at which the speed of sound becomes double as was at 27°C is	<p>A. 273°C</p> <p>B. 0°C</p> <p>C. 927°C</p> <p>D. 1027°C</p>
12	The nuclear model of atom was proposed by	<p>A. J.J Thomson</p> <p>B. E.Rutherford</p> <p>C. Neil Bohr</p> <p>D. Summerfield</p>
13	The henry is the unit for	<p>A. Resistance</p> <p>B. Magnetic flux</p> <p>C. Magnetic field</p> <p>D. Inductance</p>
14	A particle moving in a magnetic field has increase in its velocity then its radius of the circle	<p>A. Decreases</p> <p>B. Increases</p> <p>C. Remains the same</p> <p>D. Becomes half</p>
15	A capacitor acts as an infinite resistance for	<p>A. AC</p> <p>B. DC</p> <p>C. Both AC and DC</p>
16	A prism splits a beam of white light into its seven constituent colors this is so because	<p>A. Phase of different colors is different</p> <p>B. Amplitude of different colors is different</p> <p>C. Energy of different colors is different</p> <p>D. Velocity of different colors is different</p>
17	The dimensional formula of torque is:	<p>A. $[ML^2T^{-2}]$</p> <p>B. $[ML^2T^{-1}]$</p> <p>C. $[ML^2T^{-2}]$</p> <p>D. $[ML^2T^{-1}]$</p>
18	Which of the following particle would experience the largest magnetic force when projected with the same velocity perpendicular to a magnetic field?	<p>A. Proton</p> <p>B. Electron</p> <p>C. He^{++}</p> <p>D. Li^{++}</p>
19	Which of the following lists of physical quantities consists only of vectors:	<p>A. Time, temperature, velocity</p> <p>B. Force, volume, momentum</p> <p>C. Velocity, acceleration, mass</p> <p>D. Force, acceleration, velocity</p>
20	Huygen's wave theory of light cannot explain	<p>A. Diffraction</p> <p>B. Interference</p> <p>C. Polarization</p> <p>D. Photoelectric effect</p>