

Physics General Science Test Hard Mode

| Sr | Questions | Answers Choice |
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| 1 | 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 |
| 2 | The motion without consideration of its cause is studied in: | A. Kinematics B. Mechanics C. Statics D. Modern Physics |
| 3 | The acceleration 'a' in m/s^2 of a particle is given by $a = 3t^2 + 2t + 2$, where 't' is the time if the particle starts out with a velocity $v = 2 m/s$ at $t = 0$, then the velocity at the end of 2 second is | A. 12 m/s B. 24 m/s C. 18 m/s D. 36 m/s |
| 4 | A man pushes a wall but fails to displace it. He does: | A. Negative work B. Maximum positive work C. Positive work but not maximum D. No work |
| 5 | A particle moving in a magnetic field has increase in its velocity then its radius of the circle | A. Decreases B. Increases C. Remains the same D. Becomes half |
| 6 | Ultra-violet radiation of 6.2 eV falls on an aluminium surface K.E of fastest electrons emitted is (work function = 4.2 eV) | A. $3.2 \times 10^{-21} J$ B. $3.2 \times 10^{-19} J$ C. $7 \times 10^{-25} J$ D. $9 \times 10^{-32} J$ |
| 7 | 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% |
| 8 | At $0^\circ K$ which of the following properties of a gas will be zero? | A. Kinetic energy B. Potential energy C. Vibrational energy D. Density |
| 9 | Steel is preferred for making springs over copper. Why? | A. Steel is cheaper B. Young's modulus of steel is more than that of copper C. Young's modulus of copper is more than that of steel D. Steel is less likely to be oxidized |
| 10 | The twinkling of stars is due to | A. The fact that stars do not emit light continuously B. The refractive index of the earth's atmosphere fluctuate C. Intermittent absorption of star light by its own atmosphere D. None of them |
| 11 | 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^{+2} D. Li^{+3} |
| 12 | If the period of oscillation of mass (M) suspended from a spring is 2s, then the period of mass 4M will be | A. 1 s B. 2 s C. 3 s D. 4 s |
| 13 | The sieman is the SI unit of | A. Resistance B. Specific Resistance C. Conductance D. Inductance |
| 14 | 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 |

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| 15 | At constant volume temperature is increased then | A. Collision on walls will be less B. Number of collisions per unit time will increase C. Collisions will be in straight lines D. Collisions will not change |
| 16 | To make the frequency double of an oscillator we have to | A. Double the mass B. Half the mass C. Quadruple the mass D. Reduce the mass to one-fourth |
| 17 | A cable breaks if stretched by more than 2 mm 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 | What will be the duration of the day and night (in hour) if the diameter of the earth is suddenly reduced to half its original value the mass remaining constant? | A. 12 B. 6 C. 3 D. 2 |
| 19 | The product of the pressure and volume of an ideal gas is | A. A constant B. Approximately equal to the universal gas constant C. Directly Proportional to its temperature D. Inversely proportional to its temperature |
| 20 | 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 |