# Physics General Science Test Hard Mode

| Sr | Questions | Answers Choice |
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| 1 | A capacitor acts as an infinite resistance for | A. AC<br>B. DC<br>C. Both AC and DC |
| 2 | Two points charges A and B separated by a distance R attract each other with a force of 12 x $10^{-3}$ N. The force between A and B when the charges on them are doubled and distance is halved | A. 1.92 N<br>B. 19.2 N<br>C. 12 N<br>D. 0.192 N |
| 3 | Light appears to travel in straight lines since | A. It is not absorbed by the atmosphere<br>B. It is reflected by the atmosphere<br>C. Its wavelength is very small<br>D. Its velocity is very large |
| 4 | Center of mass is a point | A. Which is geometric center of a body<br>B. From which distance of particles are same<br>C. Where the whole mass of the body is supposed to be centered<br>D. Which is the origin of reference frame |
| 5 | The velocity of a particle at an instant is 10 m/s and after 5 s the velocity of the particle is 20 m/s.The velocity 3s before in m/s is: | A. 8<br>B. 4<br>C. 6<br>D. 7 |
| 6 | A particle is moving in a uniform magnetic field then | A. Its momentum changes but total energy remains the same<br>B. Both momentum and total energy remains the same<br>C. Both changes<br>D. Total energy change but momentum remains |
| 7 | With the propagation of a longitudinal wave through a material medium the quantities transmitted in the propagation direction are | A. Energy momentum and mass<br>B. Energy<br>C. Energy and mass<br>D. Energy and linear momentum |
| 8 | Ball pen function on the principle of | A. Viscosity<br>B. Boyle's law<br>C. Gravitational force<br>D. Surface tension |
| 9 | A particle moves along a circular path under the action of a force. The work done by the force is | A. Zero<br>B. Positive and non-zero<br>C. Negative and non zero<br>D. None of above |
| 10 | A body is dropped from a tower with zero velocity reaches ground in 4s. The height of the tower is about | A. 80 m<br>B. 20 m<br>C. 160 m<br>D. 40 m |
| 11 | When we apply reverse bias to a junction diode it | A. Lowers the potential barrier<br>B. Raises the potential barrier<br>C. Increase the majority carrier current<br>D. Decrease the majority carrier current |
| 12 | Two sources of sound are said to be coherent if | A. They produce sounds of equal intensity<br>B. They produce sounds of equal frequency<br>C. They produce sound waves vibrating with the same phase |

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| | | D. They produce sound waves with zero or constant phase difference all instant of time |
| 13 | Which of the following four statements is false? | A. A body can have zero velocity and still be accelerated<br>B. A body can have a constant velocity and still have a varying speed<br>C. A body can have a constant speed and still have a varying velocity<br>D. The direction of the velocity of a acceleration is constant |
| 14 | 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 x 10-21 J<br>B. 3.2 x 10-19 J<br>C. 7 x 10-25 J<br>D. 9 x 10-32 J |
| 15 | A couple produces | A. Purely linear motion<br>B. Purely rotational motion<br>C. Linear and rotational motion<br>D. No motion |
| 16 | Shunt required in an ammeter of resistance R to decrease its deflection from 30 ampere to 10 ampere is | A. R/4<br>B. R/3<br>C. R/2<br>D. R |
| 17 | The essential distinction between X-rays and y-rays is that | A. y-rays have smaller wavelength than X-rays<br>B. y-rays emanate from nucleus while X-rays emanate from outer part of the atom<br>C. y-rays have greater ionizing power than X-rays<br>D. y-rays are more penetrating than X-rays |
| 18 | At constant volume temperature is increased then | A. Collision on walls will be less<br>B. Number of collisions per unit time will increase<br>C. Collisions will be in straight lines<br>D. Collisions will not change |
| 19 | At 0° K which of the following properties of a gas will be zero? | A. Kinetic energy<br>B. Potential energy<br>C. Vibrational enegy<br>D. Density |
| 20 | The dot product of two vectors is negative when | A. They are parallel vectors<br>B. They are anti-parallel vectors<br>C. They are perpendicular vectors<br>D. None of the above is correct |