# NAT II Physical Science Physics

| Sr | Questions | Answers Choice |
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| 1 | A boy 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 |
| 2 | As the electron in Bohr orbit of hydrogen atom passes from stat n = 2 to n = 1, the kinetic energy K and potential energy U change as | A. K two fold, U also two fold<br>B. K four fold, U also four fold<br>C. K four fold, U two fold<br>D. K two fold, U four fold |
| 3 | The smooth or steady stream-line flow is know as | A. Laminar flow<br>B. Turbulent flow<br>C. Both a and b<br>D. None of the above |
| 4 | In a simple harmonic motion (SHM), which of the following does not hold? | A. To force on the particle is maximum at the ends<br>B. The acceleration in minimum at the mean position<br>C. The potential energy is maximum at the mean position<br>D. The kinetic energy is maximum at the mean position |
| 5 | A p-n junction has a thickness of the order of: | A. 1 cm<br>B. 1 mm<br>C. 10<sup>-6</sup>cm<br>D. 10<sup>-12</sup>cm |
| 6 | In a voltmeter the conduction takes place due to | A. Electrons only<br>B. Holes only<br>C. Electrons and holes<br>D. Electrons and ions |
| 7 | Which of the modulus of elasticity is involved in compression a rod to decrease its length? | A. Young's modulus<br>B. Bulk modulus<br>C. Modulus of rigidity<br>D. None of the above |
| 8 | A fly is sitting on the objective of a telescope pointed towards the moon.<br>What effect is expected on the photography of the moon taken through the telescope? | A. The entire of view blocked<br>B. There is an image of the fly on the photography<br>C. There is no effect at all<br>D. There is a reduction in the intensity of the image |
| 9 | The time period of a simple pendulum is 2 seconds. If its length is increased by 4 times, then its period becomes | A. 16 s<br>B. 12 s<br>C. 8 s<br>D. 4 s |
| 10 | Velocity of sound in a diatomic as is 300 m/sec, what is its rms velocity? | A. 400 m/sec<br>B. 40 m/sec<br>C. 430 m/sec<br>D. 300 m/sec |
| 11 | The dimensional formula for the modulus of elasticity is same as that for: | A. Stress<br>B. Strain<br>C. Velocity<br>D. Surface tension |
| 12 | The motion without consideration of its cause is studied in | A. Kinematics<br>B. Mechanics<br>C. Statics<br>D. Modern Physics |
| 13 | A voltmeter has resistance of 2000 ohms and it can measure up to 2V. If we want to increase its range to 10V then required resistance in series will be | A. 2000 ohm<br>B. 4000 ohm<br>C. 6000 ohm<br>D. 8000 ohm |
| 14 | In which of the following states does the incandescent substance give continuous spectrum? | A. Vapours in atomic state<br>B. Vapours in molecular state<br>C. Solid or fluid in bulk state |

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| | | D. Solid or fluid in plasma state |
| 15 | If a diamagnetic substance is brought near north or south pole of a bar magnet it is | A. Attracted by the poles<br>B. Repelled by the poles<br>C. Repelled by north pole and attracted by the south pole<br>D. Attracted by the north pole and repelled by the south pole |
| 16 | In which region of electromagnetic spectrum does the Lyman series of hydrogen atom lie | A. Ultraviolet<br>B. Infrared<br>C. Visible<br>D. X-ray |
| 17 | An object is placed at a distance of f/2 from a convex lens. The image will be | A. At one of the foci, virtual and double its size<br>B. At, 3f/2, real and inverted<br>C. At 2f, virtual and erect<br>D. At f, real and inverted |
| 18 | The product of the pressure and volume of an ideal gas is | A. A constant<br>B. Approximately equal to the universal gas constant<br>C. Directly proportional to its temperature<br>D. Inversely proportional to its temperature |
| 19 | A (100 W, 200 V) bulb is connected to a 160 V power supply. The power consumption would be | A. 64 W<br>B. 80 W<br>C. 100 W<br>D. 125 W |
| 20 | If yellow light emitted by sodium lamp in Young's double slit experiment is replaced by monochromatic blue light of the same intensity | A. Fringe width will decrease<br>B. Fringe width will increase<br>C. The fringe width will remain unchanged<br>D. Fringes will becomes less intense |