

MDCAT Physics Chapter 5 Oscillations Online Test

| Sr | Questions | Answers Choice |
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| 1 | Which one of the following is an example of SHM. | A. Motion in a plane B. Motion in swing C. Motion in a car D. None of these |
| 2 | The time period of a simple pendulum is independent of its: | A. Length B. Mass C. Value of g D. Both A and B |
| 3 | Amplitude in SHM is equivalent to _____ in circular motion. | A. Diameter B. Radius C. Circumference D. None of these |
| 4 | The tension T in the string of a simple pendulum acts: | A. Velocity down load B. Along the string C. Vertically upward D. None of these |
| 5 | The unit of spring constant is: | A. J-Sec B. Metre C. Nm⁻¹ D. None of these |
| 6 | A mass attached to a spring vibrates with a frequency of 0.6 cycles/sec. Its angular velocity W comes out to be : | A. 3.77 rad/sec B. 10.4 rad/sec C. 1.67 rad/sec D. None of these |
| 7 | The time period of a simple pendulum is 1 second. If $g = 9.8 \text{ m/sec}^2$, then length of the simple pendulum will be: | A. 380 m B. 0.25 m C. 2.5 m D. None of these |
| 8 | Free oscillations are always produced by: | A. An applied force B. Gravitational force C. Restoring force and inertia D. Inertia only |
| 9 | Pendulums having same lengths will vibrate with: | A. Same frequency B. Different periods C. Different frequencies D. None of these |
| 10 | In SHM there is always a constant ratio between displacement of a body and its: | A. Velocity B. Period C. Mass D. Acceleration |
| 11 | Half wavelength corresponds to: | A. 0° B. 90° C. 180° D. 360° |
| 12 | A body of mass 0.031 kg attached to one end of a spring of spring constant 0.3 N/m , then time period of spring mass system will be: | A. 1.5 sec B. 2.0 sec C. 2.3 sec D. 2.5 sec |
| 13 | The string of a simple pendulum should be | A. Heavy B. Extensible C. Inextensible D. None of these |
| 14 | Which of the following is responsible for the motion of the bob of the simple pendulum: | A. $mg \sin \theta$ B. Tension T C. $mg \cos \theta$ D. mg |
| 15 | A mass attached to a spring completes 60 vibrations in half minute. Its frequency is: | A. 120 Hertz B. 60 Hertz C. 30 Hertz D. 2 Hertz |

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| 16 | The change in length of the spring in a spring -mass system is directly proportional to: | A. Frequency B. Applied force C. Velocity D. None of these |
| 17 | An oscillating body oscillates due to: | A. Applied force B. Restoring force C. Frictional force D. None of these |
| 18 | If L is length of a simple pendulum and T is its time period, then graph between different values of L and T^2 will be | A. A curve B. A straight line C. A sine curve D. None of these |
| 19 | A second's pendulum completes 5 vibrations in: | A. 5 seconds B. 10 seconds C. 2.5 seconds D. 15 seconds |
| 20 | If the waves produced in a microwave oven are of wave-length 12 cm, then their frequency will be: | A. 2500 MHz B. 0.25 MHz C. 2500 KHz D. None of these |
