# ECAT Physics Chapter 7 Oscillations

| Sr | Questions | Answers Choice |
|---|---|---|
| 1 | The number of vibrations in two seconds can be expressed as_____if frequency of vibration is f. | A. f<br>B. 2 f<br>C. 3 f<br>D. 1/2 f |
| 2 | The unit of spring constant is: | A. J-sec<br>B. Metre<br>C. Nm<sup>-1</sup><br>D. None of these |
| 3 | The string of a simple pendulum should be: | A. Heavy<br>B. Extensible<br>C. In-extensible<br>D. None of these |
| 4 | Velocity of particle executing SHM will be maximum at | A. Extreme position<br>B. Mean position<br>C. b/w mean and extreme<br>D. None |
| 5 | The time period of a simple pendulum is independent of its: | A. Length<br>B. Mass<br>C. Value of g<br>D. Both A and B |
| 6 | When a body is vibrating, the displacement from mean position: | A. Increases with time<br>B. Decreases with time<br>C. Changes with time<br>D. None of these |
| 7 | An oscillating body oscillates due to: | A. Applied force<br>B. Restoring force<br>C. Frictional force<br>D. None of these |
| 8 | A particle is moving along a circular path with uniform speed. Its projection will execute ___along the _____ of the circle: | A. Circular motion, circumference<br>B. Vibratory, chord<br>C. SHM, diameter<br>D. SHM, circumference |
| 9 | In SHM, there is always a constant ratio between displacement if body and its: | A. Velocity<br>B. Period<br>C. Mass<br>D. Acceleration |
| 10 | Acceleration of body executing SHM is always directed towards | A. Extreme position<br>B. Mean position<br>C. Along the direction of motion<br>D. None |
| 11 | Distance covered during one vibration of an oscillating body in terms of amplitude A is: | A. A<br>B. 2 A<br>C. 3 A<br>D. 4 A |
| 12 | The body oscillates due to _____ accelerates and overshoots the rest position due to_____,: | A. Applied force, inertial<br>B. Restoring force, friction<br>C. Frictional force, inertial<br>D. Restoring force, inertial |
| 13 | The restoring force is _____ and opposite tot he applied force within _____ | A. Equal, Elastic limit<br>B. Different, The walls of the laboratory<br>C. Different, Elastic limit<br>D. None of these |
| 14 | Which one of the following is an example of SHM: | A. Motion in a plane<br>B. Motion in a swing<br>C. Motion in a car<br>D. None of these |
| 15 | If a force of 0.05 N produces an elongation of 20 mm in string, then its spring constant will be: | A. 250 N m<sup>-1</sup><br>B. 25 N m<sup>-1</sup><br>C. 2.5 N m<sup>-1</sup> |

| | | |
|---|---|---|
| | | D. None of these |
| 16 | In SHM, the acceleration is _____ when velocity is _____: | A. Zero, smallest<br>B. Smallest, zero<br>C. Zero, zero<br>D. Zero, greatest |
| 17 | Amplitude in SHM is equivalent to _____ in circular motion | A. Diameter<br>B. Radius<br>C. Circumference<br>D. None of these |
| 18 | If a force of 0.05 N produces an elongation of 20 mm in a string, then its spring constant will be: | A. 250 N m<sup>-1</sup><br>B. 25 N m<sup>-1</sup><br>C. 2.5 N m<sup>-1</sup><br>D. None of these |
| 19 | If mass of 10 gm is suspended from a spring of K=0.8 $Nm^{-1}$then the extension will be: | A. 10 cm<br>B. 1 m<br>C. 10 mn<br>D. None of these |
| 20 | The restoring force is always directed towards: | A. Rest position<br>B. Equilibrium position<br>C. Mean position<br>D. All of them |