# ECAT Pre General Science Physics Chapter 7 Oscillations

| Sr | Questions | Answers Choice |
|---|---|---|
| 1 | 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 |
| 2 | To and from motion of a body about its mean position is known as: | A. Translatory motion<br>B. Vibratory motion<br>C. Rotatory motion<br>D. None of these |
| 3 | The restoring force is always directed towards: | A. Rest position<br>B. Equilibrium position<br>C. Mean position<br>D. All of them |
| 4 | If a mass of 10 gm is suspended from a spring of k = 9.8 $Nm^{-1}$, then the extension will be: | A. 1 cm<br>B. 1 m<br>C. 10 mm<br>D. None of these |
| 5 | The wave form of SHM is | A. Pulsed wave<br>B. Square wave<br>C. Triangular waved<br>D. Sine wave |
| 6 | The graph showing the variation of displacement with time is a: | A. Sine curve<br>B. Straight line<br>C. Parabola<br>D. None of these |
| 7 | The number of vibration in two seconds can be expressed as _____ of frequency of vibration is f: | A. f<br>B. 2 f<br>C. 3 f<br>D. 1/2 f |
| 8 | 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 |
| 9 | Vibratory motion is always under | A. Applied force<br>B. Restoring force<br>C. Periodic force<br>D. Gravitational force |
| 10 | If a given spring of spring constant k is cut into two indentical segments, the spring constant of each segment is: | A. k/2<br>B. 2 k<br>C. 4 k<br>D. None of these |
| 11 | 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 |
| 12 | The restoring force is _____ amd opposite to the 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 |
| 13 | The body oscillates due to _____ accelerates and overshoots the rest position due to _____ | A. Applied force, Inertia<br>B. Restoring force, Friction<br>C. Frictional force, Inertia<br>D. Restoring force, Inertia |
| 14 | In vibrational motion(SHM) | A. P.E remains conserved<br>B. Average K.E remain constant<br>C. Neither P.E nor K.E remains constant<br>D. Total energy remains constant |
| 15 | A body with frequency of would complete one vibration in: | A. f seconds<br>B. 1/f seconds |

| | | |
|---|---|---|
| | A body with frequency 3f would complete one vibration in: | C. 1 second<br>D. f<sup>2</sup>second |
| 16 | The maximum distance of body from mean position when body is executing SHM is called | A. Time period<br>B. Displacement<br>C. Amplitude<br>D. Frequency |
| 17 | Amplitude in SHM is equivalent to _____ in circular motion | A. Diameter<br>B. Radius<br>C. Circumference<br>D. None of these |
| 18 | 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 |
| 19 | 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<br>B. 2.0 sec<br>C. 2.3 sec<br>D. 2.5 sec |
| 20 | The unit of spring constant is: | A. J-sec<br>B. Metre<br>C. Nm<sup>-1</sup><br>D. None of these |