

## Physics ECAT Pre Engineering Chapter 7 Oscillations

Sr	Questions	Answers Choice
1	If a given spring of spring constant $k$ is cut into two identical segments, the spring constant of each segment is:	<p>A. <math>k/2</math>            B. <math>2k</math>            C. <math>4k</math>            D. None of these</p>
2	Which one of the following is an example of SHM:	<p>A. Motion in a plane            B. Motion in a swing            C. Motion in a car            D. None of these</p>
3	Amplitude in SHM is equivalent to _____ in circular motion:	<p>A. Diameter            B. Radius            C. Circumference            D. None of these</p>
4	A particle is moving along a circular path with uniform speed. Its projection will execute _____ along the _____ of the circle:	<p>A. Circular motion, circumference            B. Vibratory, chord            C. SHM, diameter            D. SHM, circumference</p>
5	The restoring force is _____ and opposite to the applied force within _____:	<p>A. Equal, elastic limit            B. Different, the walls of the laboratory            C. Different, elastic limit            D. None of these</p>
6	If there identical strings each of constant $K$ are hooked together the spring constant of resultant spring will be:	<p>A. <math>3K</math>            B. <math>2K</math>            C. <math>K/4</math>            D. <math>K/3</math></p>
7	The restoring force is _____ and opposite to the applied force within _____	<p>A. Equal, Elastic limit            B. Different, The walls of the laboratory            C. Different, Elastic limit            D. None of these</p>
8	Amplitude in SHM is equivalent to _____ in circular motion	<p>A. Diameter            B. Radius            C. Circumference            D. None of these</p>
9	When quarter of a cycle is completed, the phase of vibration is:	<p>A. <math>90^\circ</math>            B. <math>180^\circ</math>            C. <math>45^\circ</math>            D. <math>360^\circ</math></p>

- |    |  |   |
|----|--|---|
| 10 | The time taken to complete one vibration is called:  | A. Frequency<br>B. Amplitude<br>C. Time<br>D. Time period                             |
| 11 | 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  |
| 12 | A particle executes SHM with frequency. The frequency with which its K.E oscillates is                             | A. f/2<br>B. 2f<br>C. f<br>D. 4f  |
| 13 | If a given spring of spring constant K is cut into two identical segments, the spring constant of each segment is: | A. K/2<br>B. 2 K<br>C. 4 K<br>D. None of these  |
| 14 | In SHM, there is always a constant ratio between displacement of body and its:                                     | A. Velocity<br>B. Period<br>C. Mass<br>D. Acceleration                                |
| 15 | A body with frequency of would complete one vibration in:  | A. f seconds<br>B. 1/f seconds<br>C. 1 second<br>D. f <sup>2</sup> second             |
| 16 | Vibratory motion is always under   | A. Applied force<br>B. Restoring force<br>C. Periodic force<br>D. Gravitational force |
| 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 time period of a pendulum is doubled by increasing its length, then its frequency will                          | A. Also be doubled<br>B. Become half<br>C. Become one fourth<br>D. Becomes four times |
| 19 | 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                  |
| 20 | An object undergoes SHM. Its maximum equilibrium positions:  | A. Maximum<br>B. Half of its maximum value<br>C. Zero<br>D. None                      |