

## ECAT Physics Chapter 7 Oscillations

Sr	Questions	Answers Choice
1	In vibrational motion(SHM)	A. P.E remains conserved B. Average K.E remain constant C. Neither P.E nor K.E remains constant D. Total energy remains constant
2	The restoring force is always directed towards:	A. Rest position B. Equilibrium position C. Mean position D. All of them
3	A body with frequency of would complete one vibration in:	A. f seconds B. 1/f seconds C. 1 second D. f <sup>2</sup> second
4	If a mass of 10 gm is suspended from a spring of $k = 9.8 \text{ Nm}^{-1}$ , then the extension will be:	A. 1 cm B. 1 m C. 10 mm D. None of these
5	Amplitude in SHM is equivalent to _____ in circular motion:	A. Diameter B. Radius C. Circumference D. None of these
6	The unit of spring constant is	A. J-sec B. Metre C. $\text{Nm}^{-1}$ D. None of these
7	The body oscillates due to _____ accelerates and overshoots the rest position due to _____	A. Applied force, Inertia B. Restoring force, Friction C. Frictional force, Inertia D. Restoring force, Inertia
8	The maximum distance of body from mean position when body is executing SHM is called	A. Time period B. Displacement C. Amplitude D. Frequency
9	An oscillating body oscillates due to:	A. Applied force B. Restoring force C. Frictional force D. None of these
10	If there identical strings each of constant K are hooked together the spring constant of resultant spring will be:	A. 3 K B. 2 K C. K/4 D. K/3
11	The wave form of SHM is	A. Pulsed wave B. Square wave C. Triangular waved D. Sine wave
12	When quarter of a cycle is completed, the phase of vibration is:	A. $90^\circ$ B. $180^\circ$ C. $45^\circ$ D. $30^\circ$

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D. 360<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">></span>

13	A particle is moving along a circular path with uniform speed. Its projection will execute ____ along the _____ of the circle:	A. Circular motion, circumference B. Vibratory, chord C. SHM, diameter D. SHM, circumference
14	Vibratory motion is always under	A. Applied force B. Restoring force C. Periodic force D. Gravitational force
15	Which one of the following is an example of SHM:	A. Motion in a plane B. Motion in a swing C. Motion in a car D. None of these
16	Free oscillations are always produced by:	A. An applied force B. Gravitational force C. Restoring force and inertia D. Inertia only
17	A spring of constant $k = 0.4 \text{ N m}^{-1}$ is to be extended through 10 cm at a place where $g = 10 \text{ m sec}^{-2}$ . The mass to be suspended should be:	A. 4 gms B. 0.4 gm C. 40 gms D. None of these
18	In SHM, there is always a constant ratio between displacement of body and its:	A. Velocity B. Period C. Mass D. Acceleration
19	The unit of spring constant is:	A. J-sec B. Metre C. $\text{Nm}^{-1}$ D. None of these
20	Velocity of particle executing SHM will be maximum at	A. Extreme position B. Mean position C. b/w mean and extreme D. None