ECAT Pre General Science Physics Chapter 7 Oscillations Online Test

Sr	Questions	Answers Choice
1	Velocity of particle executing SHM will be maximum at	A. Extreme position B. Mean position C. b/w mean and extreme D. None
2	When a mass attached to a spring begins to move left or right from the equilibrium position, its P.E.:	A. Increases B. Decreases C. Remains constant D. None of these
3	In SHM, there is always a constant ratio between displacement if body and its:	A. Velocity B. Period C. Mass D. Acceleration
4	Amplitude is the displacement of the vibrating body from:	A. One extreme position to the other extreme position B. Mean position any one extreme position C. Both A and B are correct D. None of these
5	SHM is type of _____ motion	A. Vibratory B. Linear C. Circular D. None
6	An oscillating body oscillates due to:	A. Applied force B. Restoring force C. Frictional force D. None of these
7	Which of the following forces is responsible for SHM	A. Applied force B. Restoring force C. Fractional force D. Elastic force
8	Vibratory motion is always under	A. Applied force B. Restoring force C. Periodic force D. Gravitational force
9	The unit of spring constant is:	A. J-sec B. Metre C. Nm^{-1} D. None of these
10	Amplitude in SHM is equivalent to _____ in circular motion	A. Diameter B. Radius C. Circumference D. None of these
11	An object undergoes SHM. Its maximum equilibrium positions:	A. Maximum B. Half of its maximum value C. Zero D. None
12	When quarter of a cycle is completed, the phase of vibration is:	A. 90° B. 180° C. 45°

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D. 360°

#	Question	Options
13	The restoring force is always directed towards:	A. Rest position B. Equilibrium position C. Mean position D. All of them
14	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
15	The string of a simple pendulum should be:	A. Heavy B. Extensible C. In-extensible D. None of these
16	When a body is vibrating, the displacement from mean position:	A. Increases with time B. Decreases with time C. Changes with time D. None of these
17	A particle executes SHM with frequency. The frequency with which its K.E oscillates is	A. f/2 B. 2f C. f D. 4f
18	Distance covered during one vibration of an oscillating body in terms of amplitude A is:	A. A B. 2 A C. 3 A D. 4 A
19	The graph showing the variation of displacement with time is a:	A. Sine curve B. Straight line C. Parabola D. None of these
20	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
21	Hertz is unit of:	A. Time period B. Displacement C. Amplitude D. Frequency
22	Amplitude in SHM is equivalent to_____ in circular motion:	A. Diameter B. Radius C. Circumference D. None of these
23	A particle moving uniformly along circle its projection along diameter performs	A. Linear motion B. Projectile motion C. SHM D. Rotatory motion
24	The unit of spring constant is	A. J-sec B. Metre C. Nm^{-1} D. None of these
25	The number of vibration in two seconds can be expressed as _____ of frequency of vibration is f:	A. f B. 2 f C. 3 f D. 1/2 f
26	If a given spring of spring constant K is cut into two identical segments, the spring constant of each segment is:	A. K/2 B. 2 K C. 4 K D. None of these
27	If a given spring of spring constant k is cut into two indentical segments, the spring constant of each segment is:	A. k/2 B. 2 k C. 4 k D. None of these

		D. None of these
28	An object in SHM will have maximum speed when its displacement from equilibrium position is:	A. Infinity B. Maximum C. Zero D. Minimum
29	A body with frequency would complete one vibration in:	A. f seconds B. 1/f seconds C. 1 second D. f^2 second
30	Amplitude in SHM is equivalent to _____ in circular motion:	A. Diameter B. Radius C. Circumference D. None of these
31	The restoring force is _____ and opposite tot he applied force within _____	A. Equal, Elastic limit B. Different, The walls of the laboratory C. Different, Elastic limit D. None of these
32	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. Vibrator, chord C. SHM, diameter D. SHM, circumference
33	The restoring force is _____ amd opposite to the applied force within _____:	A. Equal, elastic limit B. Different, the walls of the laboratory C. Different, elastic limit D. None of these
34	The displacement of body executing SHM is	A. $x_o coswt$ B. $x_o sinwt$ C. $x_o sin^2 wt$ D. Both A, B
35	When a body is vibrating, the displacement from mean position	A. Increases with time B. Decreases with time C. Changes with time D. None of these
36	Acceleration of body executing SHM is always directed towards	A. Extreme position B. Mean position C. Along the direction of motion D. None
37	The S.I unit of frequency is	A. Vibrations s^{-2} B. Ms^{-1} C. Hertz D. s^{-1}
38	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
39	When quarter of a circle is completed, the phase of vibration is:	A. 90° B. 180° C. 45° D. 360°

40	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
41	Which of the following quantity for particle executing SHM is non-zero at mean position	A. Force B. Acceleration C. Velocity D. Displacement
42	If mass of 10 gm is suspended from a spring of K=0.8 Nm^{-1} then the extension will be:	A. 10 cm B. 1 m C. 10 mn D. None of these
43	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
44	When quarter of a circle is completed, phase of vibration is:	A. 90° B. 180° C. 45° D. 360°
45	Second's pendulum is the pendulum whose time period is:	A. 1 second B. 2 second C. 3 second D. None of these
46	An angle of 180° in circular motion is equivalent to _____ in SHM.	A. Half the vibration B. One vibration C. 3/4th of a vibration D. None of these
47	To and from motion of a body about its mean position is known as:	A. Translatory motion B. Vibratory motion C. Rotatory motion D. None of these
48	To and fro motion of a body is about its mean position is known as:	A. Translatory motion B. Vibratory motion C. Rotatory motion D. None of these
49	A body with frequency of would complete one vibration in:	A. f seconds B. 1/f seconds C. 1 second D. f^2 second
50	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^{-1} B. 25 N m^{-1} C. 2.5 N m^{-1} D. None of these
51	The SI unit of spring constant is identical with that of:	A. Force B. Surface tension C. Pressure D. Loudness

52	Which of the following is an example of SHM(in ideal situations)	A. Motion of simple pendulum B. Motion of horizontal spring man system C. Motion of violin string D. All of these
53	The time taken to complete one vibration is called:	A. Frequency B. Amplitude C. Time D. Time period
54	The SI unit of spring constant is identical with that of	A. Force B. Surface tension C. Pressure D. Loudness
55	The number of vibrations in two seconds can be expressed as_____if frequency of vibration is f.	A. f B. 2 f C. 3 f D. 1/2 f
56	If time period of a pendulum is doubled by increasing its length, then its frequency will	A. Also be doubled B. Become half C. Become one fourth D. Becomes four times
57	Free oscillations are always produced by:	A. An applied force B. Gravitational force C. Restoring force and inertia D. Inertia only
58	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
59	A spring of constant k = 0.4 N m^{-1} is to be extended thorugh 10 cm at a place where g = 10 m sec^{-2}. The mass to be suspended should be:	A. 4 gms B. 0.4 gms C. 40 gms D. None of these
60	The maximum distance of body from mean position when body is executing SHM is called	A. Time period B. Displacement C. Amplitude D. Frequency
61	The wave form of SHM is	A. Pulsed wave B. Square wave C. Triangular waved D. Sine wave
62	A spring of constant k = 0.4 N m^{-1} is to be extended through 10 cm at a place where g = 10 m sec^{-2}. The mass to be suspended should be:	A. 4 gms B. 0.4 gm C. 40 gms D. None of these
63	The graph showing the variation of displacement with time is a	A. Sine curve B. Straight line C. Parabola D. None of these
64	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^{-1} B. 25 N m^{-1} C. 2.5 N m^{-1} D. None of these
65	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
66	The acceleration of body executing SHM is directly proportional to	A. Applied force B. Amplitude C. Displacement D. Frictional force
67	The time period of a simple pendulum is independent of its:	A. Length B. Mass C. Value of g D. Both A and B
68	The body oscillates due to _____ accelerates and overshoots the rest position due to_____,:	A. Applied force, inertial B. Restoring force, friction C. Frictional force, inertial D. Restoring force, inertial
	A body of mass 0.031 kg attached to one end of a spring of spring constant 0.2 N/m, then	A. 1.5 sec B. 3.0 sec

69	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:	B. 2.0 sec C. 2.3 sec D. 2.5 sec
70	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 B. 1 m C. 10 mm D. None of these
71	In SHM, the acceleration is _____ when velocity is _____:	A. Zero, smallest B. Smallest, zero C. Zero, zero D. Zero, greatest
72	The restoring force is _____ and opposite to the applied force within _____,:	A. Equal, elastic limit B. Different, the walls of the laboratory C. Different, elastic limit D. None of these
73	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