Physics ECAT Pre Engineering Chapter 7 Oscillations Online Test

Sr	Questions	Answers Choice
1	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
2	The string of a simple pendulum should be:	A. Heavy B. Extensible C. In-extensible D. None of these
3	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
4	Velocity of particle executing SHM will be maximum at	A. Extreme position B. Mean position C. b/w mean and extreme D. None
5	The acceleration of body executing SHM is directly proportional to	A. Applied force B. Amplitude C. Displacement D. Frictional force
6	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
7	SHM is type of _____ motion	A. Vibratory B. Linear C. Circular D. None
8	Second's pendulum is the pendulum whose time period is:	A. 1 second B. 2 second C. 3 second D. None of these
9	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 B. 2.0 sec C. 2.3 sec D. 2.5 sec
10	A body with frequency of would complete one vibration in:	A. f seconds B. 1/f seconds C. 1 second D. f²second
11	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
12	When quarter of a circle is completed, phase of vibration is:	A. 90<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;">° B. 180<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;">° C. 45<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial;

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13	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
14	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
15	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
16	A particle executes SHM with frequency. The frequency with which its K.E oscillates is	A. f/2 B. 2f C. f D. 4f
17	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
18	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
19	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
20	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
21	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
22	The graph showing the variation of displacement with time is a	A. Sine curve B. Straight line C. Parabola D. None of these
23	An object undergoes SHM. Its maximum equilibrium positions:	A. Maximum B. Half of its maximum value C. Zero D. None
24	The unit of spring constant is	A. J-sec B. Metre C. Nm⁻¹ D. None of these
25	Amplitude in SHM is equivalent to _____ in circular motion:	A. Diameter B. Radius C. Circumference D. None of these
26	The unit of spring constant is:	A. J-sec B. Metre C. Nm⁻¹ D. None of these
27	The SI unit of spring constant is identical with that of	A. Force B. Surface tension C. Pressure D. Loudness

28	A particle moving uniformly along circle its projection along diameter performs	A. Linear motion B. Projectile motion C. SHM D. Rotatory motion
29	When quarter of a cycle is completed, the phase of vibration is:	A. 90<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;">° B. 180<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;">° C. 45<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;">° 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;">°
30	Amplitude in SHM is equivalent to_____ in circular motion:	A. Diameter B. Radius C. Circumference D. None of these
31	The maximum distance of body from mean position when body is executing SHM is called	A. Time period B. Displacement C. Amplitude D. Frequency
32	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
33	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
34	In SHM, there is always a constant ratio between displacement if body and its:	A. Velocity B. Period C. Mass D. Acceleration
35	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
36	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
37	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
38	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
39	An oscillating body oscillates due to:	A. Applied force B. Restoring force C. Frictional force D. None of these
		A. 250 N m⁻¹

40	If a force of 0.05 N produces an elongation of 20 mm in string, then its spring constant will be:	B. 25 N m⁻¹ C. 2.5 N m⁻¹ D. None of these
41	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
42	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
43	The time taken to complete one vibration is called:	A. Frequency B. Amplitude C. Time D. Time period
44	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
45	The wave form of SHM is	A. Pulsed wave B. Square wave C. Triangular waved D. Sine wave
46	The SI unit of spring constant is identical with that of:	A. Force B. Surface tension C. Pressure D. Loudness
47	Which of the following quantity for particle executing SHM is non-zero at mean position	A. Force B. Acceleration C. Velocity D. Displacement
48	Vibratory motion is always under	A. Applied force B. Restoring force C. Periodic force D. Gravitational force
49	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
50	The restoring force is always directed towards:	A. Rest position B. Equilibrium position C. Mean position D. All of them
51	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
52	In SHM, the acceleration is _____ when velocity is _____:	A. Zero, smallest B. Smallest, zero C. Zero, zero D. Zero, greatest
53	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
54	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
55	Hertz is unit of:	A. Time period B. Displacement C. Amplitude D. Frequency
56	The graph showing the variation of displacement with time is a:	A. Sine curve B. Straight line C. Parabola D. None of these
57	The S.I unit of frequency is	A. Vibrations s⁻² B. Ms⁻¹ C. Hertz D. s⁻¹

58	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
59	Acceleration of body executing SHM is always directed towards	A. Extreme position B. Mean position C. Along the direction of motion D. None
60	An object in SHM will have maximum speed when its displacement from equilibrium position is:	A. Infinity B. Maximum C. Zero D. Minimum
61	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
62	Free oscillations are always produced by:	A. An applied force B. Gravitational force C. Restoring force and inertia D. Inertia only
63	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
64	A body with frequency would complete one vibration in:	A. f seconds B. 1/f seconds C. 1 second D. f²second
65	When quarter of a circle is completed, the phase of vibration is:	A. 90<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;">° B. 180<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;">° C. 45<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;">° 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;">°
66	The time period of a simple pendulum is independent of its:	A. Length B. Mass C. Value of g D. Both A and B
67	Amplitude in SHM is equivalent to _____ in circular motion	A. Diameter B. Radius C. Circumference D. None of these
68	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
69	When a mass attached to a spring begins to move left or right from the equilibrium position,	A. Increases B. Decreases

69	its P.E.:	C. Remains constant D. None of these
70	Which of the following forces is responsible for SHM	A. Applied force B. Restoring force C. Fractional force D. Elastic force
71	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
72	The displacement of body executing SHM is	A. x_ocoswt B. x_osinwt C. x_osin²wt D. Both A, B
73	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