

ECAT Pre General Science Physics Chapter 8 Waves Online Test

Sr	Questions	Answers Choice
1	Energy is dissipated and consequently the energy mass system do not oscillate indefinitely because of	A. very small energy B. very large energy C. frictional forces D. acceleration due to gravity
2	The total energy of spring mass system is	A. zero B. changing with time C. constant D. none of them
3	When the bob of simple pendulum is at mean position, its K.E will be	A. maximum B. minimum C. zero D. all of them
4	When the bob of simple pendulum is at extreme position, its K.E. will be	A. maximum B. minimum C. zero D. all of them
5	When a mass 'm' is pulled slowly through a distance ' x_0 ', the elastic potential energy of the spring would be	A. $P.E = Kx^2$ B. $P.E = \frac{1}{2}Kx$ C. $P.E = \frac{1}{2}Kx^2$ D. $P.E = Kx^2$
6	When a mass 'm' is pulled slowly, the spring stretches by an amount x_0 , then the work done will be	A. $W = Kx$ B. $W = \frac{1}{2}Kx$ C. $W = \frac{1}{2}Kx^2$ D. $W = 4Kx$
7	When a mass 'm' is pulled slowly, the spring stretches by an amount x_0 , then the average force would be	A. $F = Kx_0$ B. $F = \frac{1}{2}Kx_0$ C. $F = 2Kx_0$ D. $F = 4Kx_0$
8	If the time period a simple pendulum is 2 s, its frequency would be	A. 2 Hz B. 1.5 Hz C. 1.0 Hz D. 0.5 Hz
9	If the length of a simple pendulum is 0.25 m its time period would be	A. 1.0 s B. 2.0 s C. 3.0 s D. 4.0 s
10	Time period of simple pendulum is independent of	A. length B. mass C. acceleration due to gravity D. none of them
11	Time period of a simple pendulum depends upon the	A. length of the pendulum B. acceleration due to gravity C. none of them D. both of them
12	If the length of second pendulum becomes four times then its time period will become	A. Four time B. Two times C. Six times D. Eight times
13	The weight 'mg' of the bob is resolved into	A. one component B. two components C. three components D. four components
14	The bob of a simple pendulum is suspended by	A. string B. heavy inextensible string C. light extensible string D. light inextensible string

15	A simple pendulum consists of a	A. small light bob B. small heavy bob C. big light bob D. big heavy bob
16	Acceleration of the mass at any instant is given by	A. $a = k/m \times$ B. $a = -m/k \times$ C. $a = -k/m \times$ D. $a = m/k \times$
17	The phase determines the	A. displacement B. amplitude C. frequency D. state of motion of vibrating body
18	The characteristic of a body executing S.H.M is that its acceleration is	A. inversely proportional to displacement B. directly proportional to displacement C. independent of displacement D. equal to zero
19	The instantaneous velocity of a body moving along a circle is directed	A. along the radius B. along the tangent C. away from the circle D. none of them
20	When half of the cycle of a body executing S.H.M is completed, then the phase of the vibration will be	A. 45° B. 90° C. 135° D. 180°
21	Angular frequency 'w' is basically a characteristics of	A. linear motion B. circular motion C. both of them D. none of them
22	The expression for restoring force is	A. $F = ma$ B. $F = kx$ C. $F = -kx$ D. $Kx = ma$
23	If $F = 0.04 \text{ N}$ and $X = 4 \text{ cm}$ then $K =$	A. 1 Nm^{-1} B. 2 Nm^{-1} C. 3 Nm^{-1} D. 4 Nm^{-1}
24	The expression of Hook's law is	A. $F = ma$ B. $F = kx$ C. $F = -kx$ D. $-kx = ma$
25	SI unit of frequency is	A. second B. hertz C. revolution D. vibrations/sec
26	SI units of time period is	A. second B. hertz C. revolution D. vibration/sec
27	An object undergoes S.H.M has maximum acceleration when its displacement from the mean position	A. maximum B. zero C. half of the maximum value D. one third of the maximum value
28	An object undergoes S.H.M has maximum speed when its displacement from the mean position is	A. maximum B. zero C. half of the maximum value D. one third of the maximum value
29	The wave form of S.H.M will be	A. square wave B. sine wave C. rectified wave D. saw-tooth wave
30	If the displacement of a body executing S.H.M is plotted against time, then the curve is known as	A. frequency of S.H.M B. period of S.H.M C. wave form D. none of them

