

ECAT Pre General Science Physics Chapter 8 Waves Online Test

Sr	Questions	Answers Choice
1	Fidelity refers to	A. Reproduction of original sound B. Reproduction of original image C. Reproduction of music D. Reproduction of a CD from original copy
2	The loudness and pitch of a sound note depends on	A. Intensity and velocity B. Frequency and velocity C. Intensity and frequency D. Frequency and number of harmonic
3	The velocity of sound in air not effected by changes in	A. Moisture contents in air B. Temperature of air C. The atmosphere pressure D. The composition of air
4	The ratio of velocity of sound in air at 4 atm pressure and that at 1 atm pressure would be	A. 1 : 2 B. 4 : 1 C. 1 : 4 D. 2 : 1
5	It is possible to recognize a person by hearing his voice even if he is hidden behind a solid wall. This is due to the fact that his voice	A. Has a definite pitch B. Has a definite quality C. Has a definite capacity D. Can penetrate the wall
6	If two waves of length 50 cm and 51 cm produced 12 beats per second, the velocity of sound is	A. 360 m/s B. 306 m/s C. 331 m/s D. 340 ms
7	To hear a clear echo, the reflecting surface must be at a minimum distance of	A. 10 m B. 16.5 m C. 33 m D. 66 m
8	The speed of sound in a medium depends on	A. The elastic property but not on the inertia property B. The inertia property but not on the elastic property C. The elastic property as well as the inertia property D. Neither the elastic property nor the inertia property
9	When two waves with same frequency and constant phase difference phase difference interfere	A. There is a gain of energy B. There is a loss of energy C. The energy is redistributed and the distribution changes with time D. The energy is redistributed and the distribution remains constant with time
10	Which of the following changes at an antinode in a stationary wave?	A. Density only B. Pressure only C. Both pressure and density D. Neither pressure nor density
11	The velocity of sound in air depends upon	A. Density and elasticity of gas B. Pressure C. Wavelength D. Amplitude and frequency of sound
12	In stationary waves	A. Energy is uniformly distributed B. Energy is minimum at nodes and maximum at antinodes C. Energy is maximum at nodes and minimum at antidotes D. Alternating maximum and minimum energy producing at nodes and antinodes
13	When a wave is reflected from a free end	A. Increases B. Decreases C. Remains same D. Increases or decreases

13	When temperature increase, the frequency of a tuning fork	C. Remains same D. Increase or decreases depending on the material
14	If a wave can be polarized, it must be	A. An electromagnetic wave B. A longitudinal wave C. A progressive wave D. A transverse wave
15	Which one of the following could be the frequency of ultraviolet radiation?	A. 1.0×10^6 Hz B. 1.0×10^9 Hz C. 1.0×10^{12} Hz D. 1.0×10^{15} Hz
16	The principle of superposition states that	A. The total displacement due to several waves is the sum of the displacement due to those waves acting individually B. Two stationary waves superimpose to give two progressive waves C. A diffraction pattern consists of many interference patterns superimposed on one another D. Two progressive waves superimpose to give a stationary wave
17	Ultra-violet rays differ from X-rays in that they	A. Cannot be diffracted B. Cannot be polarized C. Have a lower frequency D. Are deviated when they pass through a magnetic field
18	Progressive waves of frequency 300 Hz are superimposed in produced a system of stationary waves in which adjacent nodes are 1.5 m apart. What is the speed of the progressive waves?	A. 100 ms^{-1} B. 200 ms^{-1} C. 450 ms^{-1} D. 900 ms^{-1}
19	Data transmitted along glass-fiber cables is in the form of pulses of monochromatic red light each of duration 2.5 ns. Which of the following is the best estimate of the number of wavelength in each pulse?	A. 10^3 B. 10^6 C. 10^9 D. 10^{12}
20	There is no net transfer of energy by particle of medium in	A. Longitudinal wave B. Transverse wave C. Progressive wave D. Stationary wave
21	Through which character we can distinguish the light waves from sound waves	A. Interference B. Refraction C. Polarization D. Reflection
22	Decibel is unit of	A. Intensity of light B. x-ray radiation capacity C. sound loudness D. Energy of radiation
23	A stationary sound wave has frequency 165 Hz (speed of sound in air = 330 m/s) then distance between two consecutive nodes is	A. 2 m B. 1 m C. 0.5 m D. 4 m
24	Sound waves in air always	A. Longitudinal B. Transverse C. Stationary D. Electromagnetic
25	The waves moving from a sitar to a listener in air are	A. Longitudinal progressive B. Longitudinal stationary C. Transverse progressive D. Transverse stationary
26	The velocity of sound at same temperature is maximum in	A. H_2 B. N_2 C. O_2 D. NH_3
27	If two waves of amplitude 'a' produce a resultant wave of amplitude a, then the phase difference between them will be	A. 60° B. 90° C. 120° D. 180°

28	Two sound waves of slightly different frequencies propagating in the same direction produce beats due to	<div>A. Interference</div> <div>B. Diffraction</div> <div>C. Polarization</div> <div>D. Refraction</div>
29	When two progressive waves of nearly same frequencies superimpose and give rise to beats, then	<div>A. Frequency of beat changes with time</div> <div>B. Frequency of beat changes with location of observer</div> <div>C. All particles of medium vibrate simple harmonically with frequency equal to the difference between frequencies of component waves</div> <div>D. Amplitude of vibration of particles at any point changes simple harmonically with frequency equal to difference between two component waves</div>
30	In the production of beats by 2 waves of same amplitude and nearly same frequency, the maximum intensity to each of the constituent waves is	<div>A. Same</div> <div>B. 2 times</div> <div>C. 4 times</div> <div>D. 8 times</div>