

Acoustics Points to Remember

- ❑ Wave velocity is the velocity with which the wave travels through the medium.
- ❑ Velocity of a sound wave is maximum in solids because they are more elastic in nature than liquids and gases. Since gases are least elastic in nature.
- ❑ Infrasonic waves are sound wave with a frequency below 20 Hz. A human ear cannot hear these waves.
- ❑ Ultrasonic waves are sound waves with frequency greater than 20 kHz; A human ear cannot detect these waves.
- ❑ Reflections of sound waves obey the laws of reflection.
- ❑ When a compression hits the boundary of a rarer medium, it is reflected as a rarefaction.
- ❑ An echo is the sound reproduced due to the reflection of the original sound wave.
- ❑ The minimum distance between the source and the reflecting surface should be 17.2 m to hear an echo clearly.
- ❑ “The apparent frequency” is the frequency of the sound as heard by the listener.
- ❑

S. No.	Nature of the medium	Name of the Medium	Speed of sound (in m s^{-1})
1	Solid	Copper	5010
2		Iron	5950
3		Aluminium	6420
4	Liquid	Kerosene	1324
5		Water	1493
6		Sea water	1533
7	Gas	Air (at 0°C)	331
8		Air (at 20°C)	343