Class-VIII	Physics

## Sound

## Audible and Inaudible Sound

## AUDIBLE AND INAUDIBLE SOUND

It has been proved that the human ear is not sensitive to vibrations of all frequencies. In other words, we can only hear sounds that fall within a certain range of frequencies; any sound outside that frequency range is inaudible to our ears. We can hear sounds within frequencies ranging from 20 Hz to 20,000 Hz. This is called Audible frequency range of sound. Such vibrations are called sonic vibrations or sound vibrations.

Sound frequencies less than 20 Hz are called Infrasonic sound and sound frequencies more than 20,000 Hz (20 k Hz) are called Ultrasonic sound. Human beings cannot perceive either infrasonic or ultrasonic sounds. Hence, these are called 'Inaudible' sounds, i.e., sounds we cannot hear. Dogs, on the other hand, have much 'sharper' hearing, since they can hear sounds within the frequency range of 50 Hz to 45000 Hz! That is why your dog starts braking a welcome long before you have reached your front door; he has heard your footfalls or recognized the distinctive sound of your car as it enters the gate. Almost all animals have a wide range of hearing. Bats can detect frequencies as high as 100,000 Hz!