

Board – CBSE

Class – 9th

Topic – Sound

1. How are the wavelength and frequency of a sound wave related to its speed?
2. Why are sound waves called mechanical waves?
3. Calculate the wavelength of a sound wave whose frequency is 220 Hz and speed is 440 m/s in a given medium.
4. A submarine emits a sonar pulse, which returns from an underwater cliff in 1.02 s. If the speed of sound in salt water is 1531 m/s, how far away is the cliff?
5. Differentiate between longitudinal and transverse wave?
6. An underwater device directs ultrasounds of frequency 75 KHz towards water surface. What is the wavelength of sound in the air above the water surface and what is its frequency? Speed of sound in air = 340 m/s.
7. What is an echo? Name two areas of its application?
8. What do you understand by low pitched and high pitched sound?
9. What are laws of reflection of sound?
10. What are wavelength, frequency, time period and amplitude of a sound wave?
11. What happens when sound travels in air?
12. A cork on the surface of water moves up down completing five vibrations in 4s. The waves travel from a cork to the shore which is 20 m away in 10 s calculate
 - (a) the speed
 - (b) frequency
 - (c) wavelength
13. What is reverberation? What is done to reduce it?
14. A man standing in a valley between two parallel mountains fires a gun and hears echo at an interval of 2 s and 3.5 s. what is
 - a) the distance between two mountains
 - b) the location of the man with respect to the mountain.
15. What is SONAR? Write its working?