

SOUND (IX)

1. What is sound and how is it propagated?
2. What is the time period of a tuning fork whose frequency is 200Hz?
3. Calculate the frequency of a wave whose time period is 0.02sec.
4. What will be the change in wavelength of a sound wave in air if its frequency is doubled?
5. A sound signal of 128 vibrations per second has a wavelength of 2.7m. Calculate the speed with which the wave travels.
6. Define frequency and time period of a wave. What is the relation between the two?
7. Explain the terms 'crests' and 'troughs' of a wave?
8. Write the full name of 'SONAR'.
9. A man claps his hands near a mountain and hears the echo after 4sec. If the sound travels at 330m/s. calculate the distance of mountain from the man.
10. Why is it necessary that minimum distance from sound reflecting surface should be 17 meters to hear an echo?
11. What is meant by the quality or timber of sound? On what factor does the quality of sound depends?
12. Explain how flaws in a metal block can be detected by using ultrasound?
13. What is meant by the 'loudness' of sound? On what factor does the loudness of a sound depend?
14. Explain term 'pitch'. Draw labelled diagrams to represent sound of (a) low pitch (b) high pitch of the same loudness.
15. A stone is dropped from a tower 500m high into a pond when is the splash heard at the top . $g = 10\text{m/s}^2$ speed of sound = 340m/s.