

NCERT Physics Questions

Chapter 11: Sound

Theory questions

Short theory questions

1. What is a medium for sound?
2. What is a wave in a medium?
3. What is the meaning of a mechanical wave? Give example of mechanical and non mechanical wave.
4. Give the three characteristics of a sound wave.
5. Define wavelength and give its SI unit.
6. Formal definition of one oscillation of a sound wave.
7. Define frequency and give its SI unit.
8. What is time period of a wave.
9. Formula relation between frequency and time period of a wave.
10. What is pitch of a sound wave?
11. Define amplitude of a wave and its unit.
12. What is loudness? What does the definition of loudness and pitch have in common?
13. What is a tone and a note? How is it different from noise?

14. Another name for sound quality. Also give an informal definition of quality of a sound.
15. Give the formula of speed of sound using a) Time period, b) frequency.
16. Define intensity of sound.
17. Give the two properties that speed of sound depends on.
18. State the law of reflection of sound.
19. What is the time delay between sound reflections for our brains to register it as a separate echo?
20. What is reverberation and how do we reduce it?
21. Audible range of sound for the average human.
22. What is infrasound and ultrasound, and give some real world examples for each.
23. What is echocardiography?
24. Explain ultrasonography.

Long theory questions

1. Explain the propagation of sound in terms of
 - (a) its effect on each particle in the medium.
 - (b) pressure differences in the medium.
2. Definition and difference between longitudinal wave and transverse wave.
3. Define the peak and trough of a wave.
4. Give the difference between amplitude, intensity, and loudness of a sound wave. Are they related to one another?
5. Give 3 uses of reflection of sound to our advantage.
6. (*very big*) Briefly explain each of the five applications of ultrasound.