

# CLASS IX

## SAMPLE PAPER

### SCIENCE

---

#### Vandana Tutorial

#### Sound

1. what is persistence of hearing? (1)
2. what does the slope of speed-time graph indicate? (2)
3. name the characteristics of sound which depends on:
  - (i) Amplitude
  - (ii) waveform
4. give one use of ultrasound in industry and one in hospitals? (1)
5. A sonar station picks up a return signal after 3seconds. How far away is object? (speed of sound in water=1440m/s) (1)
6. Name that part of ear which vibrates when outside sound fall on it? (1)
7. What type of waves are sound waves in air.
8. State the general name of the waves in which the particles of the medium vibrate:
  - i. Compression and rarefaction
  - ii. Crest and troughs.
9. name the type of waves when a tuning fork is struck in air.
10. Are the sound waves longitudinal or transverse?
11. Which type of waves is represented by
  - i. By density – distance graph
  - ii. By displacement – distance graph
12. If there are 60 sound waves are produced by a source in 4 second. Calculate the frequency of the source.
13. The wave length of sound emitted by a source is  $1.7 \times 10^{-2}$  m. Calculate the frequency of the sound, if the velocity of the sound in air is 345 m/s.
14. A source is producing 4500 sound waves in 3 seconds. If the distance covered by a compression and an adjacent rarefaction be 98 cm, find (i) Frequency (ii) wavelength (iii) velocity of the sound wave.
15. Explain the term 'amplitude'.
16. What is the s.i. unit of frequency?
17. A sound signal of 128 vibrations peer second having wavelength 2.7 m. Calculate the speed of with which the wave travels.
18. Calculate the speed of the sound wave whose frequency is 2 kHz and wavelength is 65 cm.
19. Name the device which is used to produce sound in laboratory.

20. How does sound from a sound producing body travel through air to reach our ear.
21. How is sound produced?
22. Why sound can not travel in vacuum.
23. Name the type of the waves which are used by astronauts to communicate with one another on moon?
24. Is the speed of the sound more in water or steel?
25. The flash of a gun is seen by a man 3 seconds before the sound is heard. Calculate the distance of the gun from the man if the speed of the sound in air 332 m/s.
26. Give the law of reflection of sound.
27. Give some applications reflections of sound.
28. What is sound board.
29. Calculate the minimum distance for echo.
30. What do you mean by ultra sound.
31. Give some applications of ultrasound.
32. Give the full form of sonar and explain its use.
33. A sonar station picks up a return signal after 3 second. How far away is the object?  
Speed of sound in water 1440 m/s.
34. Name an animal which navigates and find food by echolocation.
35. Give the working and construction of human ear.

**Sanjeev\_29nov@rediffmail.com**

# 9897632688