



INDIAN SCHOOL DARSAIT DEPARTMENT OF PHYSICS



Subject : Physics	Topic : Sound	Worksheet No.
Resource Person : Mrs. Jayalakshmi Ratish	Date : _____	
Name of the Student : _____	Class & Division : IX A/B	Roll Number : ____

Very Short Answer Questions

- 1 Which property of sound leads to formation of echoes? 1
- 2 Name three characteristics of musical sound. 1
- 3 What is sonic boom? 1
- 4 Name the device which is used to produce sound in laboratory experiments. 1
- 5 Calculate the frequency of a wave whose time period is 0.02 s. 1
- 6 Define the term wavelength of a sound wave. What is its SI unit? 1
- 7 Name the three small bones present in the middle part of ear. 1

Short Answer Questions

- 8 Describe an experiment to show that sound requires a medium to travel. 2
- 9 Calculate the speed of sound wave whose frequency is 3 kHz and wavelength is 35cm. 2
- 10 Distinguish between longitudinal wave and transverse wave. 2
- 11 What is reverberation? How can reverberations in a big hall or auditorium be reduced? 2
- 12 Explain how bats use ultrasonic sound to catch their prey. 2
- 13 The echo of a sound is heard after 5 seconds. If the speed of sound in air be 342 m/s, calculate the distance of the reflecting surface. 2
- 14 What are ultrasonic waves? Name two animals that produce ultrasonic waves. 2
- 15 Draw the sketches of two waves A and B such that wave A has twice the wavelength and half the amplitude of wave B. 2

- 16 The longitudinal waves travel in a coiled spring at a rate of 4 m/s. the distance between two consecutive compressions is 20 cm. Find – 2
- (a) wavelength of wave
- (b) frequency of the wave.

Long Answer Questions

- 17 Draw a neat labeled diagram of the human ear. Also explain the part of a ear and function of each part. 3
- 18 What is the minimum distance between source of sound and a reflecting surface to hear an echo? 3
- 19 Explain briefly three applications using ultrasonic waves. 3
- 20 What is SONAR? Explain its use. A sonar station picks up a return signal after 3 seconds. How far away is the object? (speed of sound in water 1440 m/s) 3
- 21 Explain how sound is produced and how it is propagated. 3
- 22 A source is producing 1500 sound waves in 3 seconds. If the distance covered by a compression and an adjacent rarefaction be 68 cm, find – 3
- (a) Frequency, (b) wavelength, (c) velocity of sound wave.
- 23 State the laws of reflection of sound. Describe briefly any one application of reflection of sound. 3