

**Test paper of X ICSE Topic: Sound**  
**Section 1 - Objective**

**Q1. In which medium sound does travels faster:**

1. Solid
2. Liquid
3. Gas
4. None of these

**Q2. Nature of sound wave is:**

1. Transverse
2. Longitudinal
3. Electromagnetic
4. NOT

**Q3. Sound waves in air are**

1. Longitudinal waves
2. Radio waves
3. Transverse waves
4. Electromagnetic waves

**Q4. The density of medium through which longitudinal waves propagates is minimum in a region which is called:**

1. Crest
2. Compression
3. Trough
4. Rarefaction

**Q5. Mechanical waves can travel:**

1. In vacuum as well as in a medium
2. In vacuum but not in a medium
3. In a medium but not in vacuum
4. Neither in a medium nor in vacuum

**Q6. The minimum distance between the source of sound and the obstacle for an echo to take place is (speed of sound us 340m/s)**

1. 17m
2. 172m
3. 17cm
4. 34.4m

**Q7. During summer, an echo is heard:**

1. Sooner than during winter
2. Later than during winter
3. After same time as in winter
4. Rarely

**Q8. The velocity of sound in air at 30°C is approximately:**

1.  $332\text{ms}^{-1}$
2.  $350\text{ms}^{-1}$
3.  $530\text{ms}^{-1}$
4.  $32\text{kms}^{-1}$

**Q9. Infrasonic frequency range is**

1. Below 20Hz
2. 20Hz to 20 kHz
3. Above 20 kHz
4. No limit

**Q10. Sound waves of wavelength  $\lambda$  travel from a medium in which their speed is  $V$  into a medium in which their speed is  $4V$ . The wavelength of the sound in the second medium is:**

1.  $\lambda$
2.  $2\lambda$
3.  $3\lambda$
4.  $4\lambda$

**Q11. A sonar echo takes 4.4s to return from a submarine. If the speed of sound in water is 1500m/s then the distance of submarine from the sonar is:**

1. 1500m
2. 3000m
3. 3300m
4. 3600m

**Q12. Ultrasonic waves are used in :**

1. SONAR
2. Emulsifications
3. Sonography
4. All of these

## Section 2 - Subjective

- 1. Distinguish between Transverse wave and Longitudinal wave.
- 2. Define Echo and State its uses.
- 3. State the working principle of SONAR.
- 4.
  1. A man stands at a distance of 68m from a cliff and fires a gun. After what time interval will he hear the echo, if the speed of sound in air is 340m/s? (I.C.S.E - 2010)
  2. If the man had been standing at a distance of 12m from the cliff would he have heard a clear echo?
- 5. A submarine emits a sonar pulse which returns from the underwater cliff in 1 sec. If the speed of sound in salt water is 1500m/s, how far away is the cliff?
- 6. State the conditions for the formation of echo

## Solutions for Section 1 & 2

### Objective

1. A	2. B	3. A	4. D	5. C	6. A
7. A	8. B	9. A	10. D	11. C	12. D

### Subjective

4. (i) 0.4s

(ii) No

5. 750 m



**WIN Educate**

7267871837, 7905199925