

1. A list of mediums is given below.

- (i) wood
- (ii) water

- (iii) air
- (iv) vacuum

In which of these mediums can sound travel?

- (a) i & ii only
- (b) i, ii & iii only
- (c) iii & iv only
- (d) ii, iii & iv only

2. The loudness of sound depends on:

- (a) its amplitude.
- (b) its frequency.
- (c) its time period.
- (d) its speed.

3. Which of the following statements are correct?

- (i) Sound is produced by vibrations.
  - (ii) Sound requires a medium for propagation.
  - (iii) Light and sound both require a medium for propagation.
  - (iv) Sound travels slower than light.
- (a) i & ii only
  - (b) i, ii & iii only
  - (c) ii, iii & iv only
  - (d) i, ii & iv only

4. An object is vibrating at 50 hertz. What is its time period?

- (a) 0.02 s
- (b) 2 s
- (c) 0.2 s
- (d) 20.0 s

5. In order to reduce the loudness of a sound we have to

- (a) decrease its frequency of vibration of the sound.
- (b) increase its frequency of vibration of the sound.
- (c) decrease its amplitude of vibration of the sound.
- (d) increase its amplitude of vibration of the sound.

6. Loudness of sound is measured in units of

- (a) decibel (dB)
- (b) hertz (Hz)
- (c) metre (m)
- (d) metre/second (m/s)

7. The loudness of sound is determined by the
- (a) amplitude of vibration
  - (b) ratio of amplitude and frequency of vibration
  - (c) frequency of vibration
  - (d) product of amplitude and frequency of vibration
8. 1 hertz is equal to
- (a) 1 vibration per minute
  - (b) 10 vibrations per minute
  - (c) 60 vibrations per minute
  - (d) 600 vibrations per minute
9. Pitch of sound is determined by its
- |               |              |
|---------------|--------------|
| (a) frequency | (c) speed    |
| (b) amplitude | (d) loudness |
10. Ultrasound has frequency of vibration
- (a) between 20 and 20,000 Hz
  - (b) below 20 Hz
  - (c) above 20,000 Hz
  - (d) between 500 and 10,000 Hz

11. Lightning can be seen the moment it occurs. Paheli observes lightning in her area. She hears the sound 5 s after she observed lightning. How far is she from the place where lightning occurs? (speed of sound = 330 m/s).
12. Does any part of our body vibrate when we speak? Name the part.
13. Boojho saw a cracker burst at night at a distance from his house. He heard the sound of the cracker a little later after seeing the cracker burst. Give reason for the delay in hearing the sound.

1. Choose the correct answer.

Sound can travel through

(a) gases only

(b) solids only

(c) liquids only

(d) solids, liquids and gases.

2. Voice of which of the following is likely to have minimum frequency?

(a) Baby girl

(b) Baby boy

(c) A man

(d) A woman

3. In the following statements, tick 'T' against those which are true, and 'F' against those which are false.

- (a) Sound cannot travel in vacuum. (T/F)
- (b) The number of oscillations per second of a vibrating object is called its time period. (T/F)
- (c) If the amplitude of vibration is large, sound is feeble. (T/F)
- (d) For human ears, the audible range is 20 Hz to 20,000 Hz. (T/F)
- (e) The lower the frequency of vibration, the higher is the pitch. (T/F)
- (f) Unwanted or unpleasant sound is termed as music. (T/F)
- (g) Noise pollution may cause partial hearing impairment. (T/F)