Characteristics of Sound

A. Choose the correct answer:

1. Which characteristic of sound determines how high or low a sound is?

(a) Loudness
(b) Pitch
(c) Echo
(d) Frequency

2. What determines the loudness of a sound?

(a) Wavelength
(b) Amplitude of vibration
(c) Frequency
(d) Speed of sound

3. Which of the following sounds has higher pitch?

(a) Drum
(b) Guitar
(c) Whistle
(d) Thunder

B. Fill in the Blanks:

1. The loudness of a sound depends on the _____ of vibrations.

2. The pitch of a sound depends on the _____ of vibrations.

3. Sound travels in the form of _____ waves.

C. Case Study:

During a school assembly, a student played two different musical instruments—a flute and a drum. The flute produced a soft, high-pitched sound while the drum made a loud, low-pitched sound. The science teacher used this opportunity to explain characteristics of sound.

Case Study Questions:

1. What made the flute sound high-pitched compared to the drum?

2. Why was the drum sound louder than the flute?

3. Which characteristic of sound is related to the frequency of vibration?

4. What does amplitude determine in a sound wave?

D. Short Answer Questions:

1. Define pitch and loudness.

2. How are frequency and pitch related?

3. What role does amplitude play in sound?

E. Long Answer Questions:

1. Describe the main characteristics of sound—pitch, loudness, and quality—with examples.

2. How do musical instruments produce different sounds using the characteristics of sound?

3. Explain how sound waves carry information about loudness and pitch to the human ear.