Sound Short Notes

Keywords

Sound: A sound is a form of energy that produces the sensation of hearing in our ears, it is produced by a vibrating body.

Frequency: The number of vibrations produced by a vibrating body in one second

Stringed instrument: These make use of a string or wire to produce vibrations or sound

Amplitude: The maximum vertical displacement of a wave from its mean position

Pitch: The characteristics of a sound wave which determines the sharpness or shrillness of a sound wave.

Monotone: A continuous sound, especially someone's voice that doesn't rise and fall, in pitch

Loudness: The loudness of a wave is highly dependent on energy, greater the energy louder is the sound

Membrane instrument: Drum instruments have stretched membranes that are generally made of leather. Musical notes are produced by vibrating such membranes

Wind instruments: Wind instruments ore made of long and hollow pipes with a certain number of drilled holes

Chapter at a Glance

- Sound is produced by the vibration of objects. The number of vibrations made by the vibrating body in one second is catted frequency or pitch.
- The sound wave has the following characteristics like loudness, pitch and timbre. The amplitude of sound wave tells about the loudness.
- Larger the amplitude higher the energy. Higher the frequency shriller is the sound.
- Violin and guitar are some examples of string instruments. Table and drums are percussion instruments.
- Wind instruments are flute and trumpet.
- Instruments which produce different musical notes are catted musical instruments.
- The amplitude of vibration is indicated by the height of the crest and the depth of the trough of the sound wave.
- The difference in the quality of different sounds is because of the shape of the waves.
- Noise is the unpleasant sound that we dislike. Music is the sound that is soothing to our ears.
- Constant exposure to sound is bad for human health.

Sound DPP - 1

Tick the correct option.

1. If the amplitude of vibrations is halved then the loudness will become (one fourth/ four times/half).
2. Pitch of a sound is directly proportional to (loudness/amplitude/frequency).
3. (Greater/lower) the amplitude of vibrations, louder the sound will be.
4. Sounds produced by regular vibrations of the sound producing source are called (noise/music/monotone).

Fill in the blanks.

5. Sound is that form of …….. that makes us hear.
6. Vibration is the rapid back and forth movement of an object about a …… position.
7. Sound wave consists of compressions and ……
8. The four type of musical instruments are stringed, ……, …….. and plate type musical instruments.
9. The difference in the quality of different sounds is because of the ……. of the waves.

Write T for true and F for false statements. Correct the false statements.

10. Sound is produced when a body vibrates.
11. Sound does not need a medium to travel.
12. Loudness of a sound is directly proportional to the square of the amplitude.
13. Sound becomes physically painful above 80 dB.
14. A man has a Low pitch and a woman has a high pitched voice.

Name the following.

15. The minimum distance in which a sound wave repeats itself
16. Reciprocal of time period
17. Loudness of the softest sound which the human ear can hear...
18. Another term used for quality of sound
19. Term used for unpleasant sounds
20. Two membrane type rhythm instruments

Sound DPP - 2

1. Categories the musical instruments below according to their types.
   Noot, cymbals, mridangam, tanpura, ektara, harmonium, flute, dhapli, tabla, piano, bell, ghatam.

Define the following terms.

2. Sound
3. Frequency
4. Stringed instrument
5. Pitch
6. Amplitude
7. **Match the following**

Column A	Column B
1. Minimum distance in which a sound wave repeats itself	a. Frequency
2. Maximum displacement of the particles of the medium from their original undisturbed positions	b. Wavelength
3. The time required to complete one wave cycle or one vibration	c. Amplitude
4. The number of complete waves produced in one second	d. Time period

Find odd one. Give reason.

8. Sitar, flute, guitar, santoor
9. Blowing of horn, barking of dog, students talking in class, melodious song
10. Wavelength, amplitude, decibel, frequency

Give reason for the following.

11. Sound is considered a longitudinal wave.
12. Sounds produced by different musical instruments can be distinguished even without seeing them.
13. Noise is produced by some sources of sound.

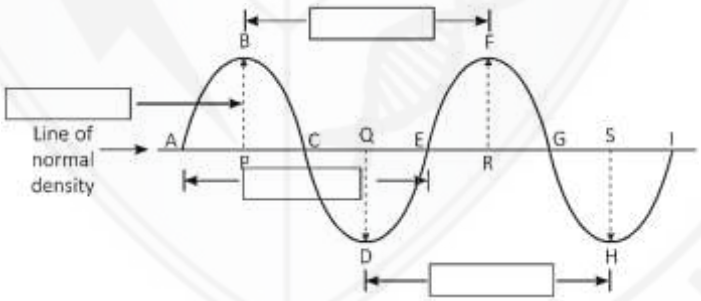
Sound DPP - 3

1. Complete the following table:

Sound	Loudness
1. Normal breathing	
2. Whispering	
3. Normal conversation	
4. Busy street	
5. Average factory	
6. Very noisy factory	
7. Loud music in disco	
8. A jet aeroplane taking off	

Name of the musical instrument	Type of instrument	How the vibrations are produced
Veena		
Shehnai		
Dholak		
Cymbals		

Picture based questions:



2. Label the given diagram. Fill up the blank boxes in the above diagram.

3. Draw the waves representing the Low frequency and high frequency of sounds produced by a beating drum and a blowing whistle.

Answer the following.

4. How will you prove the dependence of loudness of sound on the amplitude of vibrations?

5. List any two examples of sources producing noise.

6. Explain how musical sound is produced in a jal tarang instrument?