



PHYSICS

BOOKS - NAND LAL PUBLICATION

SOUND

Questions Asked In Between The Chapter

1. How do you come to know that a 'period' is over in your school?



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2. How is blindfolded person able to guess which player is closest to her?



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3. List sources of noise pollution in your surroundings.



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4. How is sound produced?



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5. Touch the school bell when not in use. What do you feel?



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6. Touch the school bell when not in use. What do you feel?



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7. How can you feel air ?



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8. Strike the plate with the stick and hold it tightly with your hands immediately after striking. Do you still hear the sound?



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9. Touch the plate after it stops producing sound. Can you feel the vibrations now?



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10. Do you hear any sound? Does the band vibrate?



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11. Do you hear any sound?





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12. Strike the plate with the stick and hold it tightly with your hands immediately after striking. Do you still hear the sound?



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13. Do you see any waves there when you strike a plate?



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14. Why do we observe water droplets on the outer surface of a glass containing ice cold water ?



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15. Is there a hint to connect sound with the vibrations of a body?



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16. Play this instrument and identify its vibrating part.



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17. Make a list of familiar musical instruments and identify their vibrating parts. A few examples are given in Table . Complete the rest of the Table .



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18. Speak loudly for a while or sing a song or buzz like a bee. Put your hand on your throat as shown in Fig. Do you feel any vibrations?



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19. When you call up your friend who is standing at a distance, your friend is able to hear your voice. How does the sound travel to her?



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20. Does the sound become fainter as you suck?



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21. Does the sound become louder again?



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22. Can you think of an explanation? Is it possible that the decreasing amount of air in

the tumbler had something to do with decreasing loudness of the ring?



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23. Does sound travel in liquids?



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24. Does sound travel in liquids?



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25. Can you hear the sound of the scratching?

Ask your friends around you if they were able to hear the same sound?



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26. Can you say that the sound can travel through strings?



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27. How does the sound produced by the vibrating object in a medium reach your ear ?



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28. Observe what happens to the grains. Why do the grains jump up and down?



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29. Is the sound louder when the tumbler is struck hard?



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30. In which case is the amplitude larger?



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31. Boojho wonder why his voice is different from that of my teacher?



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32. Every day you hear the voices of children and adults. Do you find any difference in their voices? Can you say that the frequency of the voice of a child is higher than that of an adult?



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33. We hear different types of sound around us. Is the sound always pleasing? Does a

sound sometimes cause discomfort to you?



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34. Are the sounds coming from the construction site pleasing?



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35. Do you enjoy sound produced by horns of buses and trucks?



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36. In a classroom, if all students speak together, what would the sound produced be called?



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37. But if the musical sound becomes too loud, would it remain melodious?



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38. List sources of noise pollution in your surroundings.



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39. What sources in the home may lead to noise?



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40. What is noise pollution? Explain the effects of noise pollution?



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41. How can the noise pollution be controlled in a residential area?



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Exercises

1. Sound can travel through

A. gases only

B. solids only

C. liquids only

D. gases, liquids and solids

Answer: D



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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

Answer: C



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Exercises True Or False

1. Can sound travel in vacuum?



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2. True or False

The number of oscillations per second of a vibrating object is called its time period.



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3. True or False

If the amplitude of vibration is large, sound is feeble.



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4. True or False

For human ears, the audible range is 20Hz to 20,000 Hz



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5. True or False

The lower the frequency of vibration, the higher is the pitch.



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6. True or False

Unwanted or unpleasant sound is termed as music.



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7. True or False

Noise pollution may cause partial hearing impairment.



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Exercises Fill In The Blanks

1. Fill in the blank

Time taken by an object to complete one oscillation is called.....



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2. Fill in the blank

Loudness is determined by theof
vibration



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3. The unit of frequency is:



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4. Fill in the blank

Unwanted sound is called



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5. Fill in the blank

Shrillness of a sound is determined by the
of the vibration.



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6. A pendulum oscillates 40 times in 4 seconds. Find its time period and frequency.



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7. The sound from a mosquito is produced when it vibrates its wings at an average rate of 500 vibrations per second. What is the time period of the vibration?



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8. Identify the part which vibrates to produce sound in the following instruments?

Dholak

Sitar

Flute



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9. What is difference between noise and music? Can music become noise sometime?



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10. List sources of noise pollution in your surroundings.



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11. Briefly explain noise pollution.



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12. your parents are going to buy a house. They have been offered one on the roadside

and another three lanes away from the roadside. Which house would you suggest your parents should buy? Explain your answer.



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13. Sketch larynx and explain its function in your own words.



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14. Flash and thunder are produced simultaneously. But thunder is heard a few seconds after the flash is seen. Why?



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Additional Questions Multiple Choice Question

1. Sound can travel through

A. water

B. vacuum

C. air

D. wood

Answer: B



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2. Fill in the blank

Loudness is determined by theof
vibration

A. decibel

B. meter

C. hertz

D. newton

Answer: A



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3. What is audible range for human beings ?

A. 20 Hz to 2000 Hz

B. 20 Hz to 20,000 Hz

C. 200 Hz to 2000 Hz

D. 20 Hz to 200 Hz

Answer: B



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4. Speed of sound is than speed of light
in air.

A. more

B. equal

C. less

D. can't say.

Answer: C



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5. Which of the following will produce sound with minimum frequency?

A. a man

B. a woman

C. a bird

D. a baby boy

Answer: A



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Additional Questions Fill In The Blanks

1. Amplitude and.....are two important properties of any sound.



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2. Cite an experiment to show that sound need a material medium for its propagation?



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3. Sound is produced by a body.



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4. on the road side can reduce noise pollution.



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5. How do children with impaired hearing communicate?



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Additional Questions Write True Or False For The Following Statements

1. Sound travels fastest through liquids.



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2. Dogs can hear sounds with frequency more than 20,000 Hz.



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3. Fill in the blank

Shrillness of a sound is determined by the

of the vibration.



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4. Loudness decreases with increase in amplitude of vibration.



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5. True or False

Noise pollution may cause partial hearing impairment.



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Additional Questions Answer The Following Questions In One Word

1. How is frequency of vibration related to its time period?



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2. At what dB of loudness does the noise become physically painful?



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3. What would be the frequency of a vibrating object if it vibrates 30 times in one second?



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4. Name an instrument which produces sound due to vibrating air column.



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5. In which medium - solid , liquid or gas, do the sound waves travel fastest?



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[Additional Questions Very Short Answer](#)

1. What is loudness of sound ? What factors does it depend on ?



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2. Define vibration?



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3. What do you mean by amplitude of vibration?





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4. What is hearing?



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5. Define the terms compression , rarefaction, crest , trough , wavelength , frequency , time period .



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Additional Questions Short Answer

1. Why are the voices of men, women and children different from each other?



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2. What is the frequency of infra- sound and ultrasound?



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3. Why quality of voice is different for different people?



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4. Which sound is produced by musical instruments?



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5. Why are we not able to see the vibrations always?



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6. What determines shrillness or pitch of a sound? Explain giving suitable example.



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7. List various measures for control of noise pollution.



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8. Explain, how do we hear sound.



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9. How do bats navigate in dark?



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Additional Questions Value Based Question

1. Rahul was going to sleep at night when he suddenly heard a loud music coming from the ground floor. He inquired and found that a birthday celebration was going on in one of the flats. He went and humbly requested to play music at low volume. He also made people realize that because of loud music old-aged persons, small children and students having their examination must have been facing problem.

What could be the possible harms of loud music?



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2. What is difference between noise and music? Can music become noise sometime?



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3. Rahul was going to sleep at night when he suddenly heard a loud music coming from the ground floor. He inquired and found that a birthday celebration was going on in one of

the flats. He went and humbly requested to play music at low volume. He also made people realize that because of loud music old-aged persons, small children and students having their examination must have been facing problem.

What qualities of Rahul are reflected by this incident?



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Additional Questions Self Practice Problems

1. What do you mean by oscillatory motion?



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2. Are all periodic motions oscillatory?



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3. Sound travels fastest through liquids.



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