



# PHYSICS

# **BOOKS - SURA PUBLICATION**

# Sound



**1.** Sound waves travel very fast in \_\_\_\_\_.

#### A. air

B. metals

C. vacuum

D. liquids

#### Answer:

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# 2. Which of the following are the

characteristice of vibrations?

A. Frequency

B. Time period

C. Pitch

D. Loudeness

Answer:

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3. The amplitude of the sound wave decides

it's \_\_\_\_.

A. speed

B. pitch

C. loudeness

D. frequency

Answer:

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4. What kind of musical instrument is a sitar?

A. String instrument

**B.** Percussion instrument

C. Wind instrument

D. None of these

#### Answer:



#### 5. Find the odd one out.

A. Harmonium

B. Flute

C. Nadaswaram

#### D. Violin

#### Answer:

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6. Noise is produced by \_\_\_\_\_

A. vibration with high frequency

B. regular viberation

C. regular and periodic viberation

D. irregular and non-periodic vibration

#### Answer:



**7.** The range of audible frequency for thr human ear is \_\_\_\_\_.

A. 2 Hz to 2000 Hz

B. 20 Hz to 2000 Hz

C. 20 Hz to 20000 Hz

D. 200 Hz to 20000 Hz

#### Answer:



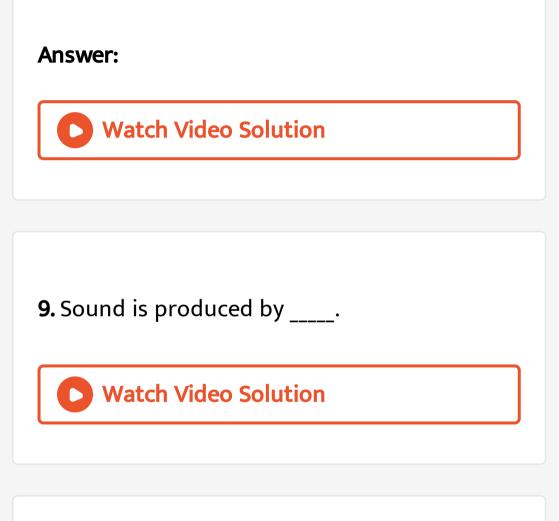
**8.** If the amplitude and frequency of a sound wear are increased, which of the following is true?

A. Loudness increases and pitch is higher

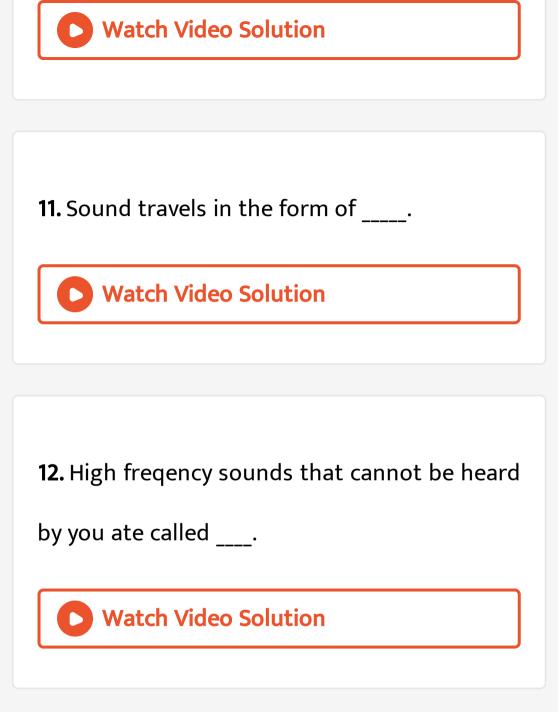
B. Loudness increases and pitch is unchanged

C. Loudeness increases and pitch is lower

#### D. Loudeness decreases and pitch is lower



**10.** The vibations of a simpel pendulum are also known as .



13. pitch of a sound depends on the \_\_\_\_\_
viberation.
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14. If the thickness of a vibrating string is

increased, its pitch .?

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**15.** Assertion & Reason : Direction : Mark the correct choice as : Assertion : When lightning strikes, the sound is heard a little after the flash is seen. Reason : The velocity of light is greater then of the sound.

A. If both assertion and reson are true and reason is the correct explanation of assertion.

B. If both assertion and reason are true but

reason is not the correct explanation of

assertion.

C. If the assertion and reason is false.

D. If both assertion and reason are false,

#### Answer:

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**16.** Assertion & Reason : Direction : Mark the correct choice as : Assertion : Two persons on the surface of moon cannot talk to each other. Reason : There is no atmosphere on moon.

A. If both assertion and reson are true and

reason is the correct explanation of assertion.

B. If both assertion and reason are true but reason is not the correct explanation of assertion.

C. If the assertion and reason is false.

D. If both assertion and reason are false,

#### Answer:



**17.** Sound cannot travel through \_\_\_\_.

A. Solid

B. liquid

C. vacuum

D. air

#### **Answer:**

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**18.** Vibration in a body produce \_\_\_\_.

A. pressure

B. sound

C. density

D. current

**Answer:** 



**19.** Frequency is expressed in \_\_\_\_.

A. hertz

B. metre

C. kilogram

D. second

Answer:

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**20.** Unwanted sounds are called \_\_\_\_.

#### A. noise

B. music

C. both a and b

D. None

#### Answer:

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#### **21.** pitch of sound is determined by its \_\_\_\_.

A. speed

B. loudness

C. amplitude

D. frequency

#### Answer:

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22. The hearing range of human ear is \_\_\_\_\_.

A. 20 Hz to 20 k Hz

B. less then 20 Hz

C. more than 20 k Hz

#### Answer:

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**23.** The voices of men, women and children differ because of difference in their \_\_\_\_.

A. lungs

B. vocal cords

C. larynx

#### D. wind pipe

#### Answer:

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**24.** The time taken for one complete vibration is called its \_\_\_.

A. loudness

B. pitch

C. time period

#### D. frequency

#### Answer:

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**25.** \_\_\_\_\_ instruments produce a specific sound when they are struck, scrapped or clashed together.

A. Reed

**B. Stringed** 

#### C. Percussion

D. None

#### **Answer:**



#### **26.** Bats produce \_\_\_\_ sound during screaming.

A. infrasonic

B. ultrasonic

C. noise

#### Answer:

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27. The outer and visible part of the human ear

is called \_\_\_\_.

A. ear drum

B. cochlea

C. pinna

#### D. canal

#### Answer:

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# **28.** \_\_\_\_ is produced by the regular patterns of vibration.

A. Music

B. ultrasonic

C. Ear drum

#### Answer:

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# **29.** The speed of sound \_\_\_\_ with increase in

humidity.

A. decreases

B. increases

C. remains same

#### Answer:

Watch Video Solution

**30.** Transverse waves are produced only in \_ and liquids.

A. solids

B. gases

C. both a and b

#### Answer:

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**31.** A device used in laboratory to produce pure sound of some particular frequency is called \_\_\_.

A. tuning fork

B. sonar

#### C. sonometer

D. none

#### Answer:



# **32.** \_\_\_\_ is produced when an object is set to

vibrate.

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**33.** The substance through which sound is transmitted is called . Watch Video Solution **34.** Sound cannot travel in . Watch Video Solution **35.** The speed of sound is \_\_\_\_ in solids than in liquids.



**36.** \_\_\_\_\_ is the distancc between two consecutive particles, which are in the same phase of vibration.

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**37.** \_\_\_\_ is the number of vibrations in the

medium in one second.

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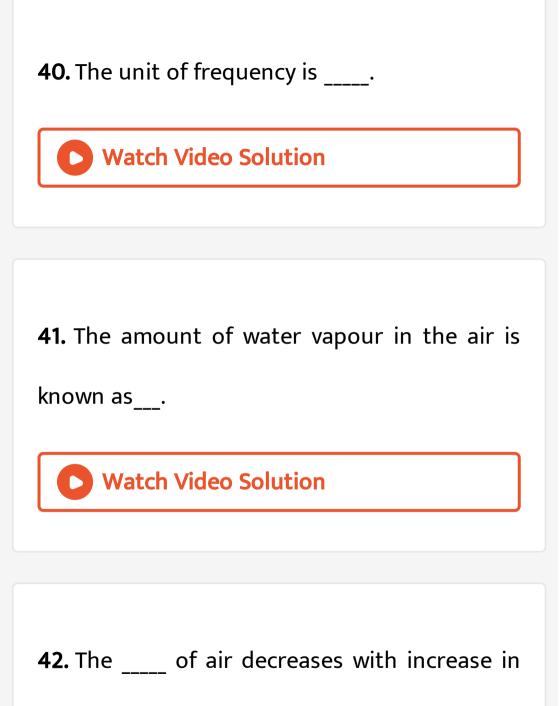
**38.** In any medium, as the \_\_\_\_ increases, the speed of sound also increases.

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39. The speed of sound in air is  $331 m s^{-1}$  at

\_\_and\_\_ at  $22^{\,\circ} C$ .

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humidity.



## **43.** The region of high pressure is called as \_\_\_

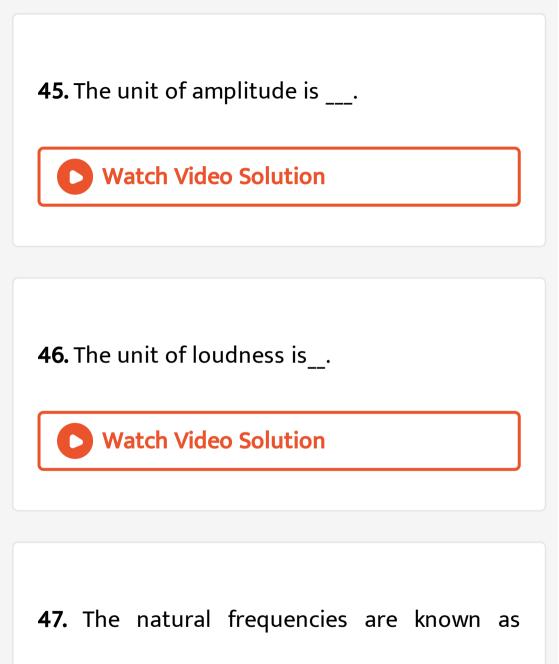
and the region of low pressure is called as

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#### **44.**\_\_\_\_waves are produced only in solids and

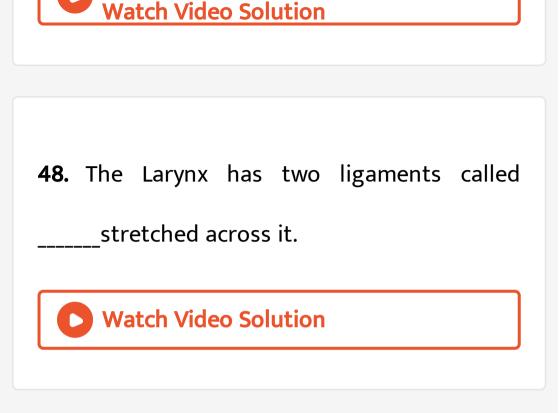
liquids.





the\_\_\_\_\_ of the guitar string.





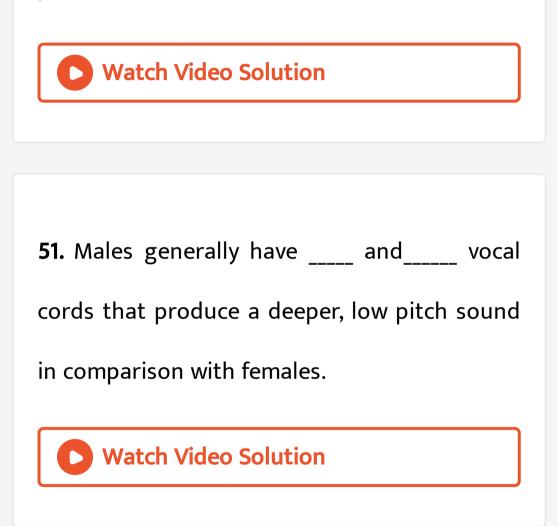
49. The outer and visible part of the human

ear is called \_\_\_\_.

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**50.** \_\_\_\_\_is produced by the irregular and non-

periodic vibrations.



**52.** Mark the correct choice as : (a) Both assertion and reason are true and reason is the correct explanation of assertion. (b) Both assertion and reason are true but reason is not the correct explanation of assertion. (c) Assertion is true but reason is false. (d) Assertion is false but reason is true. (e) Both Assertion and reason are false. Assertion : Sound waves do not travel through vacuum. Reason : The speed of sound is too small when compared to speed of light.



53. Mark the correct choice as : (a) Both assertion and reason are true and reason is the correct explanation of assertion. (b) Both assertion and reason are true but reason is not the correct explanation of assertion. (c) Assertion is true but reason is false. (d) Assertion is false but reason is true. (e) Both Assertion and reason are false.Reason : Sound is mechanical wave, which require medium to travel. Assertion : We cannot hear the sound

produced by a vibrating pendulum. Reason :

The frequency of the pendulum is very less.

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**54.** Mark the correct choice as : (a) Both assertion and reason are true and reason is the correct explanation of assertion. (b) Both assertion and reason are true but reason is not the correct explanation of assertion. (c) Assertion is true but reason is false. (d) Assertion is false but reason is true. (e) Both

Assertion and reason are false. Assertion : Trees should be planted along the road to control noise pollution. Reason : Trees act as noise buffers.



**55.** Mark the correct choice as : (a) Both assertion and reason are true and reason is the correct explanation of assertion. (b) Both assertion and reason are true but reason is not the correct explanation of assertion. (c)

Assertion is true but reason is false. (d) Assertion is false but reason is true. (e) Both Assertion and reason are false.Assertion : Women have shriller sound than men. Reason : Men produced higher frequency sound than women.

**56.** Solve the following cross word with the help of the given clues : Clues Across : The

bouncing back of sound wave when it strikes a

hard surface.



57. Solve the following cross word with the

help of the given clues : Clues Across : Form of

matter of fixed shape other than liquid or gas.

**58.** Solve the following cross word with the help of the given clues : Clues Across : Maximum distance moved by a vibrating body form its position of rest.

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**59.** Solve the following cross word with the help of the given clues : Clues Across : Waves which need a material medium for its propagation.



**60.** Solve the following cross word with the help of the given clues : Clues Across : A kind of raepid to and fro motion of an object.

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**61.** Solve the following cross word with the help of the given clues : Clues Across : Down : A unit used to measure the loudness or intensity of sound.



**62.** Solve the following cross word with the help of the given clues : Clues Across : Sound wave whose frequency is too high to be heard by humans.

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**63.** Solve the following cross word with the help of the given clues : Clues Across : Sound

wave whose frequency is too high to be heard

by humans.



**64.** Solve the following cross word with the help of the given clues : Clues Across : A reflection of sound.



**65.** Solve the following cross word with the help of the given clues : Clues Across : The branch of science deals with the study of seismic waves.

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**66.** Transverse waves are produced only in \_ and liquids.

A. solids

B. gases

C. both a and b

D. none

#### **Answer:**



# 67. The amplitude of the sound wave decides

it's

A. speed

B. pitch

C. loudness

D. frequency

#### Answer:

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68. Frequency is expressed in

A. hertz

B. metre

C. kilogram

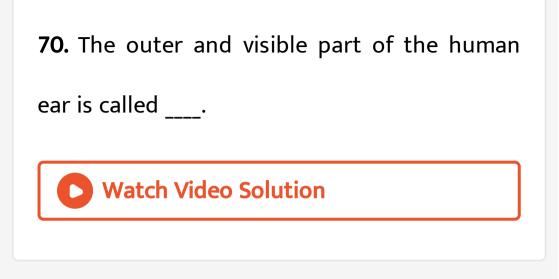
## D. second

#### **Answer:**

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69. The vibrations of a simple pendulum are

also known as \_\_\_\_.



71. The amount of water vapour in the air is

known as\_\_\_.



**72.** True or False - if false, give the correct statement : The frequency of sound is varied by varying the length of the vibrating wire.



## 73. Write true or false, if false, correct the

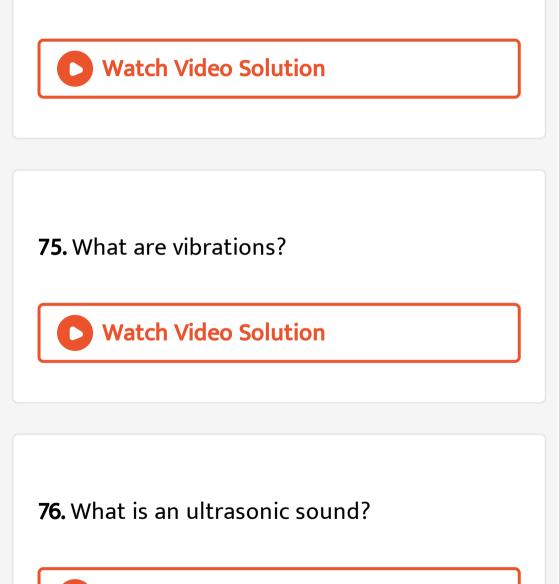
statement. : Longitudinal waves are produced

in solids liquids and also in gases.



74. What is the name of the sound produced

by irregular vibrations?



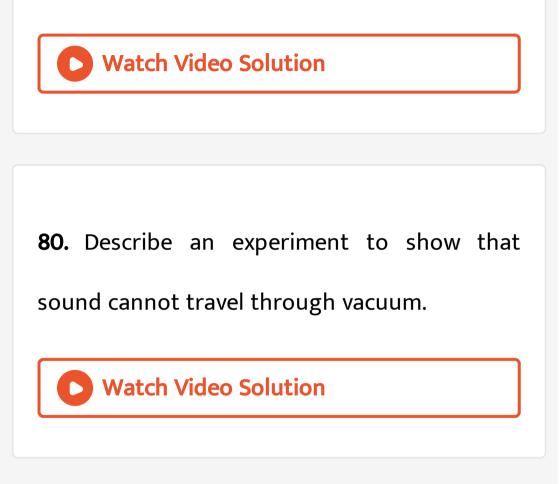
**77.** Mention any two ways to control noise pollution.

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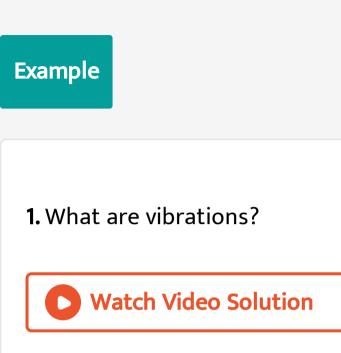
## 78. Give two differences between music and

noise.

79. What are the uses of infrasonic sound?



**81.** Describe the structure of cilia.



# 2. Give an example to show that travels faster

then sound.

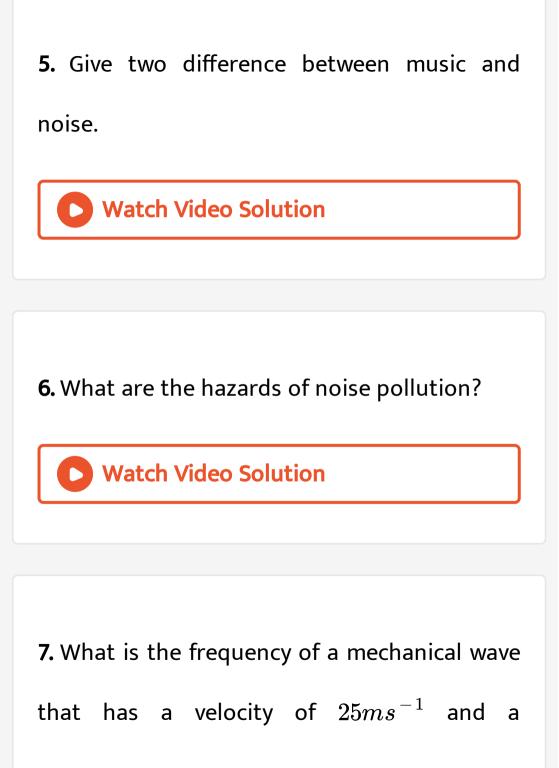
3. To increase loudness of sound by four times,

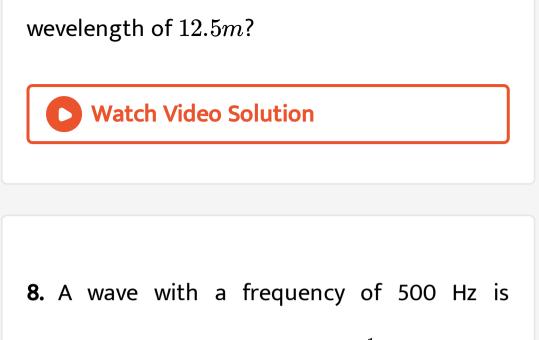
how much should the amplitude of vibration

be changed?



4. What is an ultrasonic sound?





travelling at a speed of  $200m^{-1}$  what is the wavelenhth?

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**9.** True or False - if false, give the correct statement : The seismic wave formed during

earthquake is an example for a transverse

wave



10. True or False - if false, give the correct

statement : The loudness of a sound depends

on its pitch.



**11.** True or False - if false, give the correct statement : The pitch is the characteristic of sound that enables us to distinguish between a flat sound and a shrill sound.



**12.** True or False - if false, give the correct statement : The voice of a female has a lower pitch than a male.

**13.** Write true or false, if false, correct the statement. : Longitudinal waves are produced in solids liquids and also in gases.



14. True or False - if false, give the correct

statement : Sound with the frequency ranging

from 20 Hz to 20,000 Hz is called sonic sound.



**15.** True or False - if false, give the correct statement : In a transverse wave, the particles of the medium vibrate in a direction, which is parallel to the direction of propagation of the wave.

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**16.** True or False - if false, give the correct statement : Sir Issac Newton invented the

phonograph, a device that played the

recorded sound.



17. True or False - if false, give the correct

statement : Sound is produced by vibrating

bodies.



**18.** True or False - if false, give the correct statement : The frequency of sound is varied by varying the length of the vibrating wire.



19. Pick out the odd one and give reason :

Trumpet, Flute, Saxophone, Mouthorgan.



20. Pick out the odd one and give reason :

Drum, Violin, Guitar, Sitar.

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**21.** Pick out the odd one and give reason : Sonar, Galton's whistle, Sonogram, hydrophone.

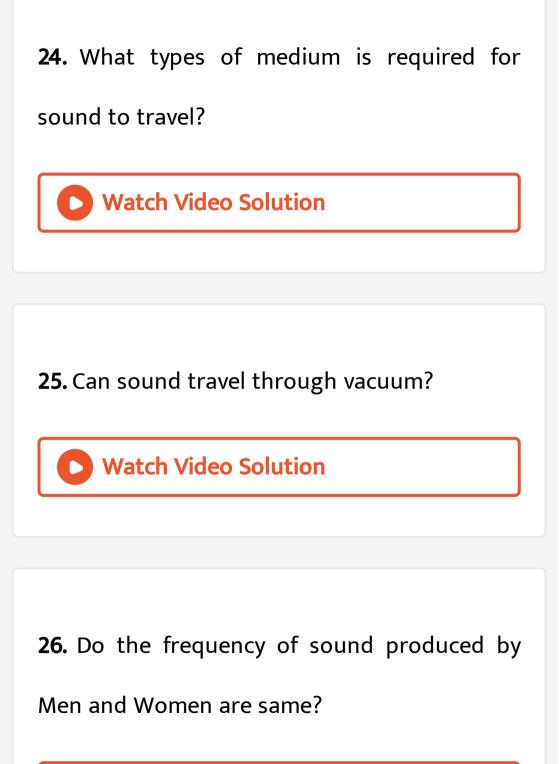
22. In which medium the speed of the sound is

maximum?

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# **23.** On which factor pitch of the sound depends?







**27.** Name the sound producing organ in human.

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28. What is the name of the sound produced

by irregular vibrations?

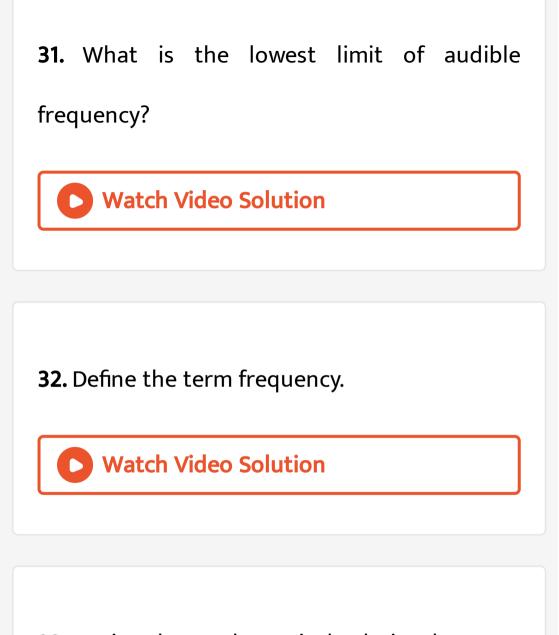
29. Mention the name of passage is the outer

ear which carries sound waves to the eardrum.



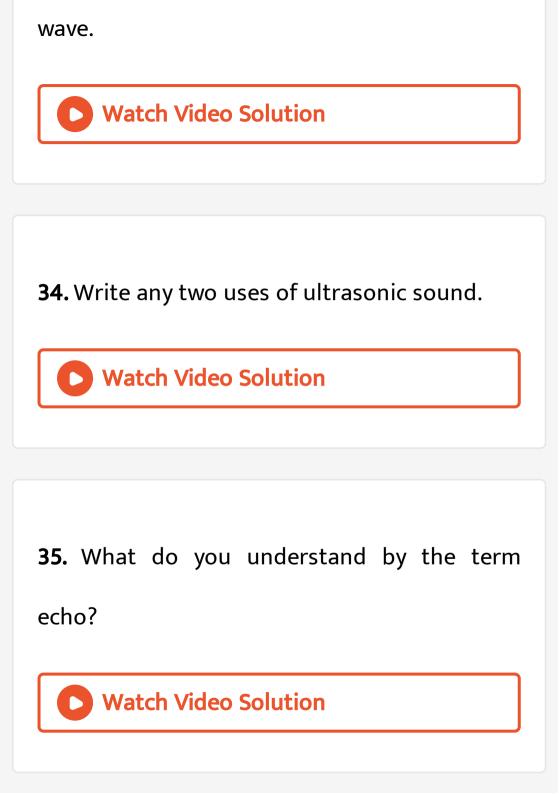
30. What happens to the speed of sound when

it gases from solid to gaseous state?

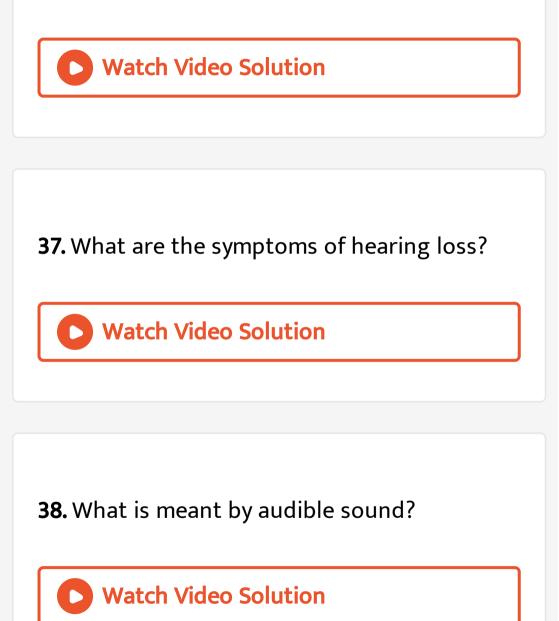


**33.** Derive the mathematical relation between

the frequency and the time period of a sound



**36.** What are the uses of infrasonic sound?

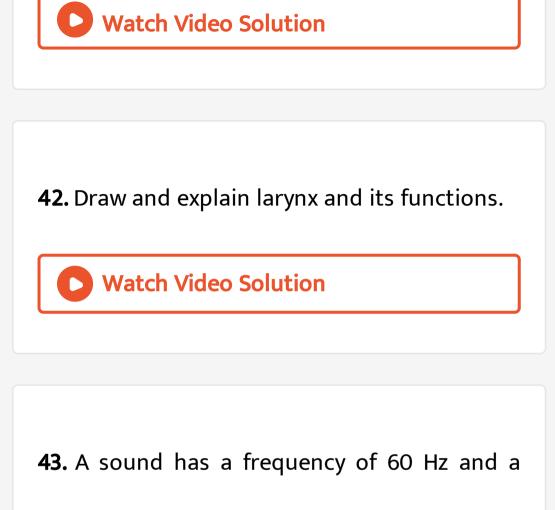


39. Mention any two ways to control noise pollution.
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40. Explain the four types of musical

instruments with examples.



**41.** Explain the types of mechanical wave.



wavelength of 20 m. What is the speed of the

sound?



**44.** A sound has a wavelength of 50 m and a speed of 10 ms 1. What is the frequency of the sound wave?