

DR. M.K.K. ARYA MODEL SCHOOL

ASSIGNMENT

CHAPTER-SOUND

CLASS-VIIIth

ONE MARK QUESTION

Que-1 Through which materials can sound travel? Can it travel through vacuum?

Ans. Sound can travel through solids, liquids and gases. It cannot travel through vacuum.

Que-2 What is vibration?

Ans. To and fro or back and forth motion of an object is called vibration.

Que-3 What is frequency? Write its unit.

Ans. The number of oscillations per second is called frequency. Its unit is Hertz(Hz).

Que-4 Which part of the voice box vibrates to help produce sound in humans

Ans. The vocal cords in the voice box vibrate to help produce sound in humans.

Que-5 How are we able to distinguish between different sounds?

Ans. We are able to distinguish between different sounds due to their different frequencies and different amplitudes.

Que-6 What is the unit of loudness of sound?

Ans. The unit of loudness of sound is decibel (dB).

Que-7 What is noise pollution?

Ans. The presence of excessive and unwanted sounds in the environment is called noise pollution.

Que-8 At what point does noise become painful?

Ans. When loudness is above 80 dB, the noise becomes painful.

Que-9 What is the range of audible frequency for humans?

Ans. Between 20 Hz and 20,000 Hz.

Que-10 What is the range of inaudible frequency for humans?

Ans. Below 20Hz and above 20000 Hz

Que-11 What is unique about the hearing ability of dogs?

Ans. Dogs can hear sounds of frequencies higher than 20,000 Hz. So the police use whistles of high frequency that dogs can hear but humans cannot.

TWO MARKS QUESTION

Que 1 What is the relation of loudness of sound and amplitude of vibration?

Ans. Square of the amplitude of the vibration of the sound is proportional to the loudness of the sound.

Que 2 What is the relation of pitch of sound and frequency of vibration?

Ans. The frequency determines the shrillness or pitch of a sound. If the frequency is higher, the sound is shrill and has a higher pitch and vice versa.

Que 3 What is the difference between the voice of a woman and that of man?

Ans. Generally, the voice of a woman has a higher frequency and is shriller than that of a man.

Que 4 What happens when amplitude of vibration is large?

Ans. The loudness of sound is directly proportional to its amplitude. When the amplitude of vibration is large, the sound produced is loud.

Que 5 What are harmful effects of noise pollution?

Ans. The harmful effects of noise pollution are-

1. Insomnia (lack of sleep)
2. Hypertension (high blood pressure)
3. Anxiety
4. Temporary or permanent impairment
5. Heart related problems etc.

Que 6 Name some musical instruments that are used commonly by being struck or beaten.

Ans. Musical instruments that are used by being struck or beaten are kartal, ghatam(cymbals), manjira and noot(mudpots)

Que 7 Write the frequency range at which an ultrasound equipment works. Is it audible to us?

Ans. The ultrasound equipment used for investigating and tracking medical problems works at frequencies higher than 20,000 Hz.

No, this frequency range is not audible to us.

THREE MARKS QUESTION

Que 1 Describe how sound is produced by humans.

Ans. In humans, sound is produced by the voice box or larynx. It is at upper end of the wind pipe. Two vocal cords are stretched across the voice box or larynx in such a way that it leaves a narrow slit between them for the passage of air. When lungs force air through the slit, the vocal cords vibrate to produce sound. Muscles attached to the vocal cords can make the cords tight or loose. When the vocal cords are tight and thin, the type or quality of voice is different from that when they are loose and thick.

Que 2 Describe how our ears help in hearing.

Ans. When sound enters our ears, it travels down a canal at the end of which a thin membrane is stretched tightly. It is called eardrum. The eardrum is like a stretched rubber sheet. Sound vibrations make the eardrum vibrate. The eardrum sends vibrations to the inner ear. From there, the signal goes to the brain. That is how we hear.

Que 3 Mention some measures to reduce noise pollution.

Ans. Some measures to reduce noise pollution are given below

1. Industries that can lead to noise pollution should be set up away from residential areas.
2. Use of horns in vehicle should be minimized.
3. TVs and music systems should be played at low volumes.
4. Silencing device should be used in automobiles and machinery to lower their noise levels.
5. Trees must be planted along the roads and around buildings to reduce the noise reaching the residents.

Que 4 What is the difference between noise and music? What are the causes of noise pollution?

Ans. Sound that is pleasant and enjoyable to hear is called music. Sound from a musical instrument is music.

Sound that is unpleasant to hear is called noise. Sound of vehicles and horns on the road is noise.

Common causes of noise pollution are-

1. Sounds of vehicle and their horns
2. Machines
3. Loudspeakers
4. Explosions including bursting of crackers
5. Noise from factories, industries and automobiles
6. Playing TVs and radios at high volumes