

Date: - 9.12.24

Sub: - PHYSICS

TENDER HEART HIGH SCHOOL; SEC-33B, CHD

CLASS-VII, CH Sound (continue)

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TEACHER: - CHARANJEET KAUR

Q35: - What is an Echo?

Ans: - Echo is the sound heard after reflection from the rigid surface such as a cliff, a hillside, the wall of a big hall etc.

Q36: - What minimum distance is required between the source of sound and the reflecting surface to hear an echo?

Ans: - It must be $16.5 \text{ m} \approx 17 \text{ m}$ (approximately)

Q37: - Name the four substances that are good absorbers of sound.

Ans: - Cloth, wood, paper and thermocol etc.

Q38: - State two uses of reflection of sound.

Ans: - Sound board and trumpet

⇒ Numerical 1: - A gun is fired in the air at a distance of 660 m from the person. He hears the sound of gun after 2 sec. Find the speed of sound.

Solution: - Distance (d) = 660 m

time = 2 sec.

$$\therefore \text{Speed of sound} = \frac{\text{Distance}}{\text{time}} = \frac{660 \text{ m}}{2 \text{ sec}} = 330 \text{ m/s}$$

⇒ Numerical 2: - During a thunderstorm, the thunder is heard 2.5 sec. after the flash of lightning is seen. If the speed of sound is 330 m/s, find the distance at which lightning took place.

Solution: -

time = 2.5 sec.

So, distance = ?

Speed of sound = 330 m/s

as Speed = $\frac{\text{Distance}}{\text{time}}$

$$\text{Or Distance} = \text{Speed} \times \text{time}$$

$$= 330 \times 2.5$$

$$= 330 \times \frac{25}{10} = 825 \text{ m}$$

$$\underline{\text{Distance}} = \underline{825 \text{ m}} \quad \underline{\text{Ans}}$$

Ques 39:- Give reason:-

(i) Why the walls and floors of auditoriums are covered with Curtains and Carpets?

Ans:- The walls and floors of auditoriums are covered with curtains and carpets so that ^{the} effect of an echo can be reduced. Curtains and Carpets are the ^{good} sound absorbing materials. so they do not reflect the sound. By doing so, we can understand and enjoy the original sound.

