



PHYSICS CH: 12 SOUND

Name: _____

Date: _____

Class: IX Sec: ____

I FILL IN THE BLANKS

1. Loudness of sound wave is directly proportional to ----- amplitude
2. The range of audible frequency for the human ear is.....
3. Sound needs a Medium for propagation
4. A sound wave of single frequency is called -----
5. Speed of sound highest in medium
6. The property of sound that is used by animals to find their way and locate their food.

II SHORT ANSWER TYPE

1. Which of the following sound waves we can hear: 10 Hz, 500 Hz, 1500 Hz, 12000 Hz, 205000 Hz.
2. Suppose you and your friend are on the moon. Will you be able to hear any sound produced by your friend?
- 3 Give 2 practical applications of reflection of sound wave
4. Explain how bats use ultrasound to catch their prey?
5. Sound is produced due to a vibrating motion. Then why a vibrating pendulum does not produce sound?
6. Explain why can echoes not be heard in a small room?
7. Distinguish between transverse wave and longitudinal waves
8. If the amplitude of the wave is doubled, what will be the effect on its loudness?

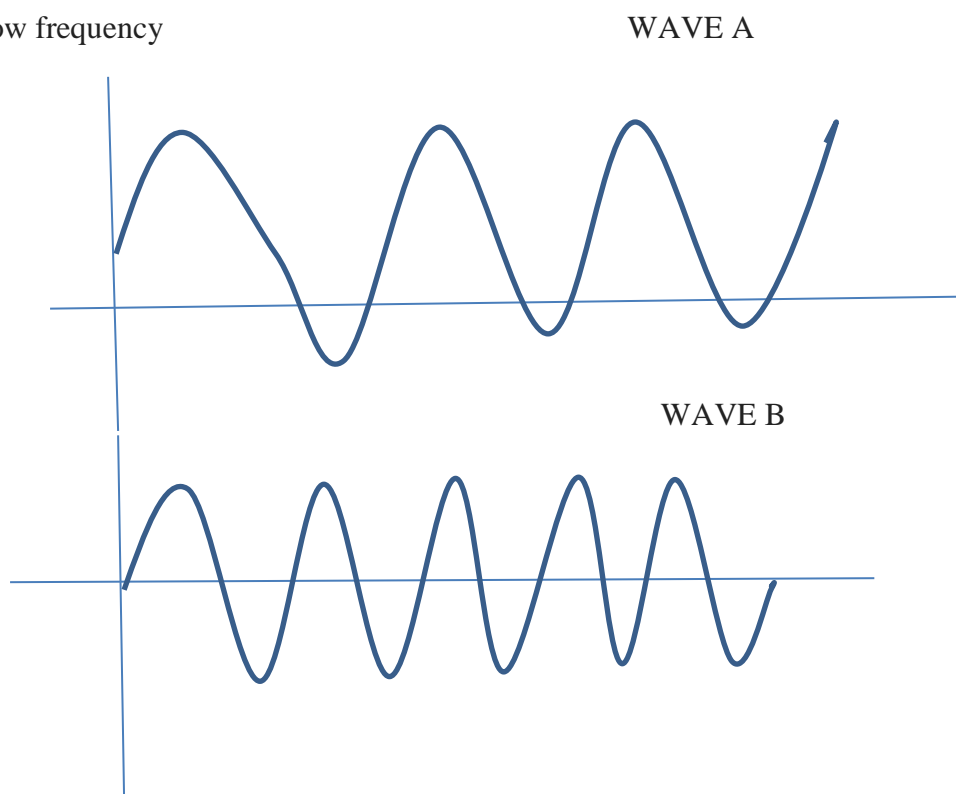
III NUMERICALS

1. A person fires a gun standing at a distance of 55m from a wall. If the speed of the sound is 330 m/ s. find the time for an echo to be heard
2. The pulse rate of a man is 80 beats in one minute. Calculate its frequency.
3. A sound source produces 40 crests and 40 troughs in 0.4s. Find the frequency of the wave.
4. A source is producing 1500 sound waves in 3s. If the distance covered by a compression and rarefaction be 68cm.
 - a) Frequency
 - b) wavelength
 - c) velocity of sound wave



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5. A person has hearing range of 20 Hz to 20 K Hz. Calculate the wavelength of sound waves in air corresponding to above frequencies. Speed of sound in air is 340 m/s.
6. What is the frequency of a wave whose time period is 0.05 s
7. A source is producing 15 waves in 3s. The distance between a crest and a trough is 10 cm. Find
a) Frequency b) Wavelength c) Velocity of the wave
8. Two sound waves A and B are shown in the figure .Identify the sound wave having
i) High frequency
ii) Low frequency



9. A boat at anchor is rocked by waves .whose consecutive crests are 100m apart. If the wave velocity of moving crests is 20 m/s, calculate the frequency at which the boat will rock?
10. A human heart on an average is found to beat 75 times in a minute. Calculate frequency.