PHYSICS

BOOKS - VGS PUBLICATION-BRILLIANT

SOUND

Conceptual Understanding

1. When we say sound travels in a medium

A. the medium travels

B. the particles of the medium travel

C. the source travels

D. the disturbance travels

Answer: D

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2. A sound wave consists of

A. Number of compression pulses only

B. number if rarefactuin pulses only

C. number of compression and rarefaction pulses one after the other

D. vacuum only

Answer: C

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3. Hertz stands for oscillations per

A. second

B. minute

C. hour

D. milli second

Answer: A

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4. When we increase the loudness of sound of a TV, the property of sound that changes is

A. amplitude

B. frequency

C. wavelength

D. speed

Answer: A

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5. The characteristic of the sound that describes how the brain interprets the frequency of sound is called

A. pitch

B. loudness

C. quality

D. sound

Answer: A

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6. In a stethoscope, sound of heart beats travel through stethoscope tube

A. by bending along the tube

B. in a straight line

C. undergoing multiple reflections

D. all of the above

Answer: C

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7. Explain the following terms :

amplitude

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8. Explain the following terms :

wave lenght

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9. Explain the following terms:

Frequency.

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10. Name two quantities that vary periodically at a place in air as a sound wave travels through it.

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11. Define the wavelength of a sound wave. How is it related to the frequency and the wave spreed ?

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12. Find the time period of a source of a sound wave whose frequency is 400 Hz.

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13. A sound wave travels at a speed of 340 m/s. If its wavelength is 2 cm, what is the frequency of the wave ? Will it be in the audible range ?

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Asking Questions And Making Hypothesis

1. Which has larger frequency - infrasonic sound or ultrasonic sound?

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Application To Daily Life Concern To Biodiversity

1. The grandparents and parents of two year old girl are playing with her in a room. A sound source produces a 28 kHz sound. Who in the room is most likely to hear the sound?

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2. Why is soft furnishing avoided in concert halls ?

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3. Given that sound travels in air at 340 m/s, find the wavelegth of the waves in air produced by a 20 kHz sound source. If the same source is put in a water tank, what would

be the wavelenght of the sound waves in water? Speed of sound in water = 1,480 m/s.

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Try These

1. Write a relation between wavelength (λ), frequency (upsilon)` and speed of wave (c).

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2. Does the sound follow same laws of reflection as light does?

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3. Two source A and B vibrate with the same amplitude. They produce sounds of frequencies 1 kHz and 30 kHz respectively. What of the two waves will have larger power ?

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