**Karan Arora**  **R.L. Institute M: 9416974837**

**Max Time : 1 hr** **Class = 9th Science Test Max Marks : 25**

**SOUND**

1. Multiple choice questions : [ 1 X 5 = 5 ]
2. For hearing distinct echoes, the minimum distance of the obstacle from the source of sound must be :

|  |  |  |  |
| --- | --- | --- | --- |
| a) 16.2 m | b) 17.2 m | c) 18.2 m | d) 19.2 m |

1. In which of the following media will sound travel the faster?

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| --- | --- | --- | --- |
| a) Solid | b) liquid | c) gas | d) none of these |

1. Infrasonic waves has frequencies :

|  |  |
| --- | --- |
| a) Below 20 Hz | b) Between 20 Hz to 20,000 Hz |
| c) Above 20,000 Hz | d) no upper and lower limit of frequencies |

1. When we change feeble sound into loud sound we increase its :

|  |  |  |  |
| --- | --- | --- | --- |
| a) frequency | b) amplitude | c) velocity | d) wavelength |

1. A thunder clap is heard 5.5 seconds after lightning flash. The distance of the flash is (velocity of the sound in air = 330 m/s.)?

|  |  |  |  |
| --- | --- | --- | --- |
| a) 1750 m | b) 1815 m | c) 3000 m | d) 3500 m |

1. What does wave transfer – matter or energy? [ 1 ]
2. Where is the density of air higher – at compressions or at rarefactions? [ 1 ]
3. On what factor does the pitch of a sound depends? [ 1 ]
4. Name the soundwaves used by bats while flying in the dark. [ 1 ]
5. What is sound and how is it produced? [ 1 ]
6. Why is sound wave called as a longitudinal wave? [ 1 ]
7. Name the characteristics which help us to distinguish between a man’s voice and a woman’s voice, even without seeing them. [ 1 ]
8. What is reverberation? How can it be reduced? [ 2 ]
9. Write any 3 applications of ultrasound also explain them. [ 2 ]
10. A sonar device on a submarine send out a signal and receives an echo 5s later. Calculate the speed of sound in water if the distance of the object from the submarine is 3625 m. [ 2 ]
11. Draw diagram to represent soft and loud sound. [ 2 ]
12. Define the following terms : Wavelength and Frequency. [ 2 ]
13. Which wave characteristics determine the (a) loudness (b) Pitch of sound? Draw two waveforms and mark these characteristics on it. [ 3 ]

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