

G. A. V PUBLIC SCHOOL, PATAUDA

WINTER VACATION WORK

CLASS. - 9TH

SUBJECT : PHYSICS

- Q. 1 Define rarefaction.
- Q. 2 Define compression.
- Q. 3 Write down the SI unit of frequency, wavelength and time period.
- Q. 4 Define sound. Which type of wave is it?
- Q. 5 Explain how sound is produced by your school bell.
- Q. 6- Why are sound waves called mechanical waves?
- Q. 7 Suppose you and your friend are on the moon. Will you be able to hear any sound produced by your friend?
- Q. 8 Which wave property determines (a) loudness, (b) pitch?
- Q. 9 What are wavelength, frequency, time period and amplitude of a sound wave?
- Q. 10 How are the wavelength and frequency of a sound wave related to its speed?
- Q. 11 Calculate the wavelength of a sound wave whose frequency is 220 Hz and speed is 440 m/s in a given medium.
- Q. 12 In which of the three media; air, water or iron does the sound travel the fastest at a particular temperature?
- Q. 13 An echo returned in 3 s. What is the distance of the reflecting surface from the source, given that the speed of sound is 342 m /s?
- Q. 14 A person is listening to a tone of 500 Hz sitting at a distance of 450 m from the source of the sound. What is the time interval between successive compressions from the source?
- Q. 15 Distinguish between loudness and intensity of sound.
- Q. 16 Why are the ceilings of concert halls curved?
- Q. 17 What is the audible range of the average human ear?
- Q. 18 What is the range of frequencies associated with (a) Infrasound (b) Ultrasound

Q 19 A submarine emits a SONAR pulse, which returns from an underwater cliff in 1.02 s. If the speed of sound in salt water is 1531 m/s, how far away is the cliff ?

Q. 20 Define reflection.