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JSUNIL TUTORIAL

PUNJABI COLONY GALI 01

1 Mark Questions

- Q1. Which sound has a higher pitch, guitar or car horn?
Q2. Name three animals which can hear ultrasonic vibrations.
Q3. How are the wavelength and frequency of a sound related to its speed?
Q4. Why sound wave is called a longitudinal wave?
Q5. Frequency of a source of sound is 100 Hz. How many times does it vibrate in a minute?
Q6. What is an echo?
Q7. What do waves transport - matter or energy?
Q8. What is a wave?
Q9. Which characteristics of the sound help us to identify a person by his voice if he is sitting in a dark room?
Q10. If the amplitude of a wave is doubled, what will be the effect on its loudness?

2 Marks Questions

- Q11. Which wave property determines a) loudness, b) Pitch?
Q12. Why are the ceilings of concert halls curved?
Q13. How is ultrasound used for cleaning?
Q14. Sound is produced due to a vibratory motion, then why a vibrating pendulum does not produce sound?
Q15. A sound produces 20 crests and 20 troughs in 0.4 sec. Find the frequency of the wave.
Q16. Why sound waves are called mechanical waves?

3 Marks Questions

- Q17. How is sound produced in school bell?
Q18. Bats have no eyes then how do they catch their prey?
Q19. What is SONAR?
Q20. Write three uses of multiple reflection of sound.

3 Marks Questions (Numerical)

- Q21. Calculate the wavelength of a sound whose frequency is 220 Hz and speed is 440 m/s in a given medium.
Q22. A body is vibrating 6000 times in 1 minute. If the velocity of sound in air is 360 m/s, find
(i) Frequency in Hz (ii) wavelength of sound.
Q23. A stone is dropped from a 500 m tall building into a pond. When is sound splash heard? Given $g=10 \text{ m/s}^2$, speed of sound = 340 m/s.
Q24. An echo is heard in 3 sec after the emission of sound. If speed of sound in air is 342 m/s, what is the distance of the reflecting surface from the source?

M.C.Q. (1 Mark each)

Q25. For reflection of sound wave, we need -

- a. A polished mirror
- b. A large size, opaque reflecting surface
- c. A concave surface
- d. A glass plate

Q26. The speed of sound in air is -

- a. Less than in solids & liquids
- b. Same as that in solids & liquids
- b. Greater than in solids and liquids
- d. None of these

Q27. We can sense a compression in a spring if-

- a. Turns are close together
- b. Neither closes nor apart
- b. Turns are further apart than normal
- d. None of these

Q28. When sound is allowed to fall normally on the reflecting surface, the angle at which the intensity of sound will be maximum is:

- a. 60°
- b. 90°
- c. 30°
- d. 0°

Q29. The mechanical wave is

- a. Sound Wave
- b. Microwave
- c. Radio Wave
- d. Light Wave

Q30. Sound wave cannot pass through

- a. Metals
- b. Water
- c. Air
- d. Vacuum

Q31. The persistence of sound in an auditorium is the results of

- a. Single reflection of sound
- b. Repeated reflection of sound
- c. Repeated refraction of sound
- d. Vibration of object placed in an auditorium

Q32. A wave set up a single disturbance of short duration is called

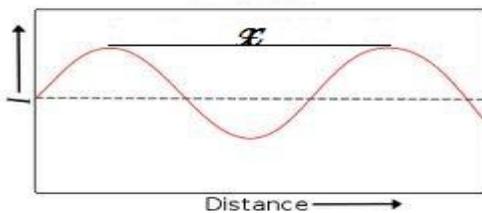
- a. A pulse
- b. Sound Wave
- c. A Wave
- d. None of these

Q33. To determine the velocity of a pulse propagated through a stretched slinky

- a. A slight jerk is given to the slinky
- b. No jerk is given to the slinky
- c. Sharp jerk is given to the slinky
- d. None of these.

Q34. The distance x in below diagram is-

- a. λ
- b. 2λ
- c. $3\lambda/2$
- d. $\lambda/2$



Q35. Two sounds of same pitch and loudness differ in

- a. Tone
- b. Note
- c. Quality
- d. All of these