

- Q.3 Explain concept of a musical scale. (2)
- Q.4 On what factors do the response of human ear depends? (2)
- Q.5 Explain quality or timber of a sound. (2)
- Q.6 Define progressive wave? How ripples on water surface create wave pulse? (2)
- Q.7 A wire is vibrating in its fifth overtone between two rigid supports of 1.8m apart. Find the distance between successive nodes. (2)
- Q.8 A wire is having a linear density 0.1 kg/m is kept under a tension of 490N. The wire resonates at a frequency of 400 Hz and the next higher frequency is 450 Hz. Calculate the length of the wire. (2)

Section C
Attempt any Two

- Q.9 State conditions for node and antinode and hence prove that distance between node and antinode is ' $\lambda/4$ ' (3)
- Q.10 Explain with diagram superposition of two waves pulses of equal amplitude and opposite phase moving towards each other. (3)
- Q.11 A set of 8 tuning forks is arranged in a series of increasing order of frequencies. Each fork gives 4 beats per second with the next one and the frequency of last fork is twice that of the first. Calculate the frequencies of the first and the last fork. (3)

Section D
Attempt any One

- Q.12 How can we practically determine the end correction? (4)
- A sound wave in a certain fluid medium is reflected at an obstacle to form a standing wave. The distance between two successive nodes is 3.75 cm. If the velocity of sound is 1500 m/s, find the frequency.
- Q.13 State the characteristics of stationary waves. (4)