

Ques - 9 sound qth take equal

Time

(10)

Given $v_{\text{sound}} = 300 \text{ m/s}$

There is no effect of pressure on velocity of sound

$$\text{We know } v = \sqrt{\frac{p}{\rho}} = \sqrt{\frac{p}{\frac{m}{\text{vol}}}}$$

$$\Rightarrow v = \sqrt{\frac{p \times \text{vol}}{m}} \quad \text{Here } v \propto \frac{1}{\rho}$$

when $p' = 2p$ [Pressure is doubled]

then volume $v' = \frac{1}{2} \text{ vol.}$

$$\therefore \text{velocity of sound } v' = \sqrt{\frac{p' \text{ vol}'}{m}}$$

$$\Rightarrow v' = \sqrt{\frac{2p \times \frac{v}{2}}{m}} = \sqrt{\frac{pv}{m}} = v$$

no change in velocity of sound $v' = 300 \text{ m/s}$

$$v = \frac{m}{m} = v$$

no change in velocity of sound $v' = 300 \text{ m/s}$

WS-3 from sound

Integrated

T table $\rightarrow 4, 5, 6, 7, 8, 9, 10 \rightarrow$ same from WS-3
16, 17 8th

b1

L table $\rightarrow 1, 2, 3, 4, 5$ (same), 9, 10, 16, 17 - same
from WS-3
8th