

Wavelength in Air

Solution:

The correct answer is b.)

The relation between the speed (v), frequency (f) and wavelength (λ) for any wave is:

$$v = f\lambda$$

$$\Rightarrow \lambda_{air} = \frac{v_{air}}{f_{air}} = \frac{3 \times 10^8 \text{ ms}^{-1}}{433.92 \times 10^6 \text{ s}^{-1}} = 0.69137 \text{ m} = 69.137 \text{ cm}$$