

Speed of Propagation through Water

Solution:

The correct answer is e.)

Recall that the speed of an EM wave in a medium of refractive index n is given by

$$v = \left(\frac{c}{n} \right)$$

where c = speed of the wave in vacuum.

$$\Rightarrow v = \left(\frac{3 \times 10^8 \text{ m/s}}{9} \right) = 3.333 \times 10^7 \text{ m/s}$$