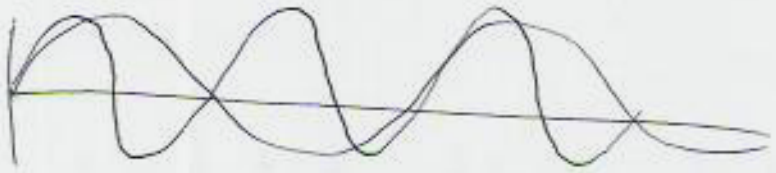
c) i) $v = f\lambda \Rightarrow f = \frac{v}{\lambda} = \frac{0.5}{0.05} = 10\,Hz$

ii) 10 wavelengths pass X per sec.

ii) 10.

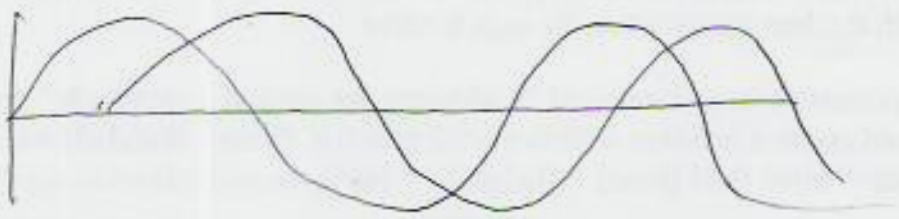
2)

i)

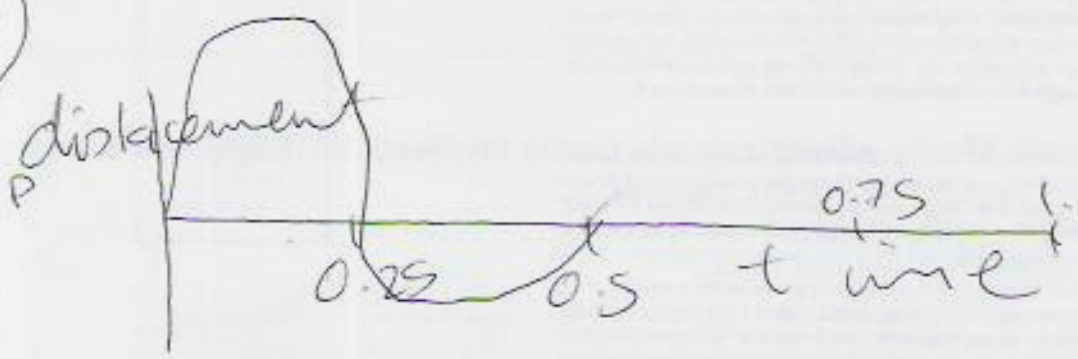


ii)

iii)



3)



$d = st$

$t = \frac{0.5}{2} = 0.25$

4) $I = \frac{P}{d^2} = \frac{10}{4\pi d^2} = 10^{-12}$

$d^2 = \frac{10}{4\pi 10^{-12}}$ = [illegible]

$d = 8.92 \times 10^5$ m (weather & wind)