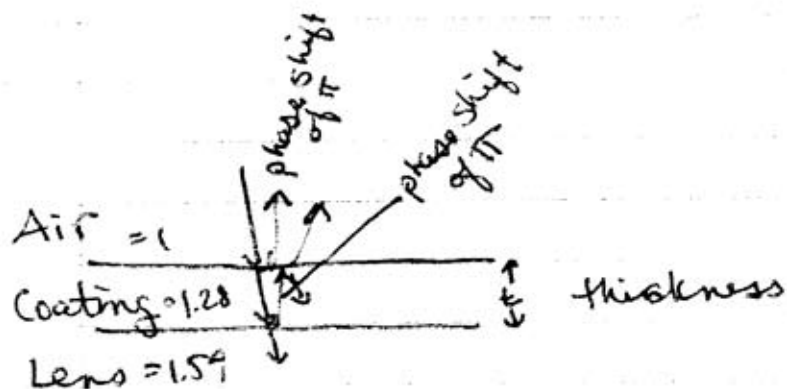


2.

$$f_{\text{green}} = \frac{3 \times 10^8}{510 \times 10^{-9}} = 5.88 \times 10^{14} \text{ Hz}$$



$$\text{phase diff} = \text{phase shift contribution} + \text{path diff contribution}$$

$$\pi = 0 + \left( \frac{2t \cdot n}{\lambda} \right) 2\pi$$

1st condition for destructive interference

$$1 = \frac{4tn}{\lambda} \quad t = \frac{\lambda}{4n} = \frac{510 \text{ nm}}{4(1.28)} = \underline{99.6 \text{ nm}}$$

thickness

constructive

$$2\pi = 0 + \left( \frac{2tn}{\lambda} \right) 2\pi \quad \lambda = 2tn$$

$$\lambda = 2(99.6)(1.28)$$

$$= 255 \text{ nm (not visible)}$$