(c) : $\mu_f = 2, \mu_g = 1.45, \lambda = 550$ nm

Let the thickness of the film to be coated t.

$2\mu_f t = n\lambda$

For first minima : $n = 1$

$$t = \frac{\lambda}{2\mu_f} = \frac{550 \times 10^{-9}}{2 \times 2} = 137.5 \times 10^{-9} \text{ m} = 137.5 \text{nm}$$