Homework

Q1) What are two conditions required for total internal reflection?

* Light must be travelling from a optically dense medium to less optically dense medium.

* Angle of incidence should be greater than the critical angle.

Q2) A fish in the pond of water appears at a depth of 6 cm. What is the actual depth of the fish if the wrt water is 3/4?

Actual depth = apparent depth × refractive index

$= 6 \times \frac{3}{4/2} = 4.5$ cm

Q5) A rectangular glass slab of thickness 8 cm is placed on a figure. The eye is kept above this slab. If the refractive index of glass is 1.6, then by what distance the figure will appear to raised?

$$\text{Apparant thickness} = \frac{\text{real thickness}}{\text{Refractive index}}$$

$$= \frac{8}{1.6} = 5 \text{ cm}$$

Thickness - apparant thickness = 8 - 5 = 3cm

The figure will appear to raised by 3cm.