

Quiz 6

Name: _____

Total = 10 marks

1. (4 marks) **Neatly** sketch the reflection and transmission coefficient as a function of the angle of incidence for s and p polarized light.

See lecture notes.

2. (2 marks) Consider light going from water to glass. Evaluate Brewster's angle if possible for each of s and p polarized light.

Brewster's angle is only defined for p polarized light.

$$\tan \theta_B = \frac{n_g}{n_{\text{water}}}$$

$$= \frac{1.5}{1.33}$$

$$= 1.13$$

$$\theta_B = 48.4^\circ$$

3. (4 marks) Birefringence
a) What is birefringence?

See lecture notes.

- b) How would you know if a material is birefringent?

One sees a double image when looking at an object through a birefringent material.