**Refraction, Lenses, & Prisms** (p. 566 – 571)

**I. Refraction Of Light**

**1. Define the term refraction.**

Refraction –

**2. Which way does light bend from the normal if it goes from material with :**

High to low speed : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Low to high speed : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**3. The smaller the difference between light speeds, the more light bends between materials.**

Circle One : True False

**4. Where should a person aim when trying to spear a fish?**

Circle One : Above the fish. Right at the fish. Below the fish.

**5. Define the term mirage.**

Mirage –

**6. Explain why a mirage forms.**

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**II. Lenses**

**1. Define the term lens.**

Lens –

**2. Differentiate between a converging (*convex*) lens and diverging (*concave*) lens and**

**identify the type(s) of images formed by each lens.**

Converging : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Image : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Diverging : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Image : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**3. Define the term magnification.**

Magnification –

**4. The area where light rays come together and is focused is called the :**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

**5. What are the two lenses used in a compound light microscope?**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**6.** **Match the eye parts with the correct definitions.**

1. \_\_\_\_\_ - Pupil A. Focuses light onto sensor cells at the back of the eye.

2. \_\_\_\_\_ - Retina B. Opening that allows light to pass through the eye.

3. \_\_\_\_\_ - Cornea C. Expands & contracts to control amount of light entering the eye.

4. \_\_\_\_\_ - Iris D. Transparent outer coating of the eye.

5. \_\_\_\_\_ - Lens E. Inner lining composed of rods and cones.

**7. The following retinal cells are sensitive to which types of light?**

Rods = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cones = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**III. Dispersion & Prisms**

**1. Define the term prism.**

Prism –

**2. Which type of wavelengths are refracted more?**

Circle One : Longer Wavelengths Shorter Wavelengths

**3. Which color of light is bent the most and least by a prism?**

Bent Most = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Bent Least = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**4. Define the term dispersion.**

Dispersion –

**5. How do raindrops disperse light like prisms?**

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**6. How do rainbows form?**

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