**QUESTIONS TO HAND IN – EXPERIMENT 14**

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**LAB INSTRUCTOR\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_LAB DAY/TIME\_\_\_\_\_\_\_\_\_\_ \_ \_\_**

**1.** The bright fringes we see in the interference pattern are locations where light waves (circle one) **constructively/destructively** interfere.

**2.** The interference equation predicts that the displacement of a fringe on the screen is greater for longer wavelengths. Which color will be displaced more, red or blue?

**3.** If it is true that two light waves are present at the location of a dark fringe but are simply half a wavelength out of phase, where is the energy of the waves?

**4.** A double slit interference pattern uses red light with *l* = 650 nm. The slits are 1 mm apart. What is the angle *q* for the first order bright fringe?

**5.** A grating is to be used to determine the wavelength of red laser light. What information do you need to know and measure to get the result?