

Name: \_\_\_\_\_ Lab Section: \_\_\_\_\_ Date: \_\_\_\_\_

### Prelab: Magnetic Force on a Charge Carrying Wire

**Instructions:** Prepare for this lab activity by answering the questions below. Note that this is a **PreLab**. It must be turned in at the start of the lab period. Time cannot be given in lab to perform PreLab activities. After the start of lab activities, PreLabs cannot be accepted. Explain your answers. Points will be taken off if your work is not neat and well organized.

1. (5 points) What physical phenomenon does the relationship  $F = ILB\sin \theta$  describe?
2. (10 points) A current carrying wire is in a magnetic field as in the figure below. The magnet is placed on a balance. Given this setup, does the scale read more or less weight? Explain using the right hand rule and Newton's Third Law. (Note: the apparatus below represents a magnet sitting on the mass pan of a balance.)

