

PHYS221
Prelab- Experiment # 8
Conservation of Energy & Momentum

1. What is the objective of this experiment? 1 pt.

2. Define Momentum. 1 pt.

3. Define mechanical energy. 1pt.

4. Explain what Eq. 8-3 means and define the terms. 2 pts.

5. You shoot a ball of mass 50g into a pendulum arm of mass 200g, whose center of mass rises 15 cm. Calculate the initial velocity of ball. Hint: Use Eq. 8-3 to find the velocity of the ball-arm system after the collision and then use Eq. 8-2 to find the initial velocity of the ball before the perfectly inelastic collision. Show all work. 3 pts.

6. Summarize the procedure. 2 pts