國立臺灣師範大學 112 學年度碩士班招生考試試題

1. Please describe the isothermal process in thermodynamics. (10-points)

2. Please describe the Kepler's three laws. (15-points)

3. Please explain the working principle of the Michelson Interferometer. (10-points)

4. How the energy stored in an inductor? (10-points)

5. For the damped oscillator in the figure, m = 250 g, k = 85 N/m, and b = 70 g/s. What is the period of the motion? (15-points)
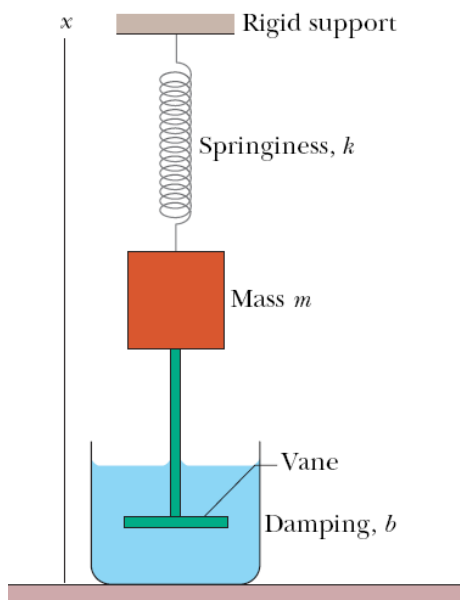
6. Please describe the Stern–Gerlach experiment and its meaning. (10-points)

7. Please describe the Photoelectric Effect. What is the meaning of the work function of a metal? (10-points)

8. Maxwell's Equations are composed of four equations with each one describes one phenomenon respectively. Please write down the equations and explain their meanings. (20-points)