

**PROBLEM SET 6**

**DUE AT THE BEGINNING OF LECTURE ON THURSDAY, MAY 2<sup>ND</sup>**

You may work together on the problems, but your answers must be ***in your own words*** and ***handwritten***. You also must ***list the other students with whom you worked***.

For all questions be sure to explain your answers and to use graphs whenever appropriate.

- 1.** Suppose that the economy begins at potential output. Now, there is a permanent cut in government purchases.
  - a.** Use the Keynesian Cross diagram to show the effect, if any, of the cut in government purchases on output in the short run.
  - b.** Explain how the economy returns to potential output. Be sure to describe what happens to inflation and the real interest rate as the economy returns to potential. (For simplicity, throughout this problem you should assume that potential output is constant, rather than growing over time.)
  - c.** What effect, if any, will the permanent cut in government purchases have on the long-run real interest rate and normal investment?
- 2.** What would you expect each of the following developments to do to the price of dollars in euros?
  - a.** American investors lose confidence in European assets and decide to buy fewer European stocks and bonds.
  - b.** The United States places tariffs on a number of goods from the European Union (while the EU does not change its trade policy).
  - c.** Inflation is higher in the United States than in Europe.
- 3.** Suppose that the economy begins in long-run equilibrium: output is at potential and inflation is at the Federal Reserve's target. Now, suppose the Federal Reserve decides to raise its target rate of inflation.
  - a.** How will this change be reflected in the Federal Reserve's reaction function?
  - b.** What does this change in the reaction function imply that the Fed will do to the real and nominal interest rates in the short run? Will this involve the Fed buying or selling government bonds?
  - c.** What is the mechanism by which the change in the Fed's reaction function will eventually bring about the higher rate of inflation?
  - d.** How, if at all, will the change you described in part (a) affect the real interest rate in the long run?