PROBLEM SET 5

A complete solution to problem 2 will be posted on the webpage for the course.
Problem 1 will be discussed in tutorials in week 7.

Problem 1 (Blanchard, chp. 8)

This exercise focuses on the mutation of the Phillips curve. Suppose that the Phillips curve is given by

$$\pi_t = \pi_t^e + 0.1 - 2u_t$$

(a) What is the natural rate of unemployment?

Assume that inflation expectations are formed according to

$$\pi_t^e = \theta \pi_{t-1}$$

and suppose that $\theta = 0$ initially. Suppose that the rate of unemployment is initially equal to the natural rate. In year t the authorities decide to bring the unemployment rate down to 3% and hold it there forever.

(b) Determine the rate of inflation in years t, t+1, t+2, and t+5.

(c) Do you believe the answer given in (b)? Why or why not?

Now suppose that in year t+5, θ increases from 0 to 1. Suppose that the government is still determined to keep u at 3% forever.

(d) Why might θ increase in this way?

(e) What will the inflation rate be in years t+5, t+6, and t+7?

(f) Do you believe the answer given in (e)? Why or why not?

Problem 2 (Blanchard, chp. 7)

This exercise focuses on key results from the analysis of monetary policy and fiscal policy in the medium run.

(a) In what sense is money neutral? Why is monetary policy useful if money is neutral?

(b) Fiscal policy, like monetary policy, cannot change the natural level of output. Why then is monetary policy considered neutral but fiscal policy is not?

(c) Discuss the following statement: "Since neither fiscal nor monetary policy can affect the natural level of output, it follows that, in the medium run, the natural level of output is independent of all government policies."