Student ID.....

EE312 Macroeconomics, 2/2017 (Sec. 046402 - Sicha)

Problem Sets 5

Please submit at the BE office, 5th floor department of Economics building.
Deadline of submission : March 7, 2018, before 15.00 hrs. Late submission will not be accepted.
If the space provided is not enough, please attach a separate sheet.

1. The expectations-augmented Phillips curve for an economy is given by $\pi_t = \pi_t^e + 0.12 - 3u_t$. Suppose that in the year 2000 the unemployment rate in this economy is at its natural level and inflation is 0%. $\pi_{2000}^e = 0\%$.

   (a) Calculate the natural rate of unemployment.

   .....
   .....
   .....
   .....
   .....

   (b) Use the natural rate of unemployment you calculate in question (a). In 2001, suppose the government is able to reduce the unemployment rate to 3% in each of the following five years (2001 - 2005). During this period people do not expect inflation to change, i.e. expected inflation remains at 0% throughout the five years. What is inflation in the years 2001 to 2005?

   .....
   .....
   .....
   .....
   .....
   .....
   .....
   .....

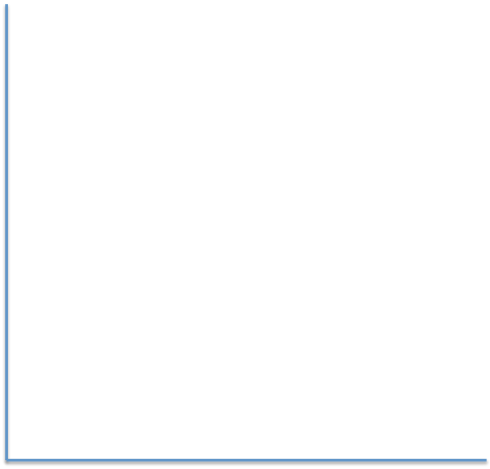
   (c) Use the natural rate of unemployment you calculate in question (a). In 2001, suppose the government is able to reduce the unemployment rate to 3% in each of the following five years (2001 - 2005). Assume, contrary to (b), that people expect inflation to be the same as inflation in the previous year during these five years, $\pi_t^e = \theta\pi_{t-1}$. Assume that $\theta = 1$.

      i. What is inflation in the years 2001 to 2005? Explain the difference from (b). Comment on the role of adaptive expectation.

      ii. Will the expected inflation rate ever match the actual inflation rate in this case?

   .....
   .....
   .....
   .....
   .....
   .....
   .....
   .....
   .....
   .....
   .....

2. Let $\pi_t = \pi_t^e + 0.12 - 3u_t = 0.00 + 3(0.04 - u_t)$. $\pi_t^e = 0.00$ and $u* = 0.04$. Suppose the natural rate of unemployment is unchanged, the expected inflation rate rises from 0% to 0.02 and 0.04. What will happen to Phillips curve? Graphically illustrate.



.....
.....
.....
.....
.....
.....
.....
.....
.....
.....