

14.02 Principles of Macroeconomics  
Spring 1997  
Problem Set 4

For questions 1-6: True, False, or Uncertain?  
Please BRIEFLY explain your answer.

1. The higher the flows out of unemployment into employment, the higher the average duration of unemployment.
2. An unemployment rate of 6% implies that 6% of the labor force has been permanently unemployed over the course of the year.
3. The theory of efficiency wages states that high wages are offered to highly skilled workers as a premium for their expertise.
4. Efficiency wages are usually below the reservation wage in Europe because the unemployment rate in Europe is so high.
5. According to theories of efficiency wages, given the rate of unemployment in the United States today, we should expect a steep decline in the average level of wages.
6. Powerful labor unions will decrease the natural rate of unemployment.
7. Answer True, False or Uncertain. Then comment on the following statement, using the wage setting and price setting relationships: *In an economy where all firms are profit maximizers, the natural rate of unemployment will be zero.*
8. Answer True, False or Uncertain. Then comment on the following statement, using the wage setting and price setting relationships: *In an economy undergoing substantial structural change, the natural level of output tends to increase.*
9. Answer True, False or Uncertain. Then comment on the following statement, using the wage setting and price setting relationships: *When wage contracts are not staggered and adjusted infrequently, actual production can not equal the natural level of output at all times.*

10. If  $P^e$  is less than  $P$ , then where is actual output relative to its natural level? According to the model in chapter 15 can this divergence between actual output and its natural level persist forever? Why or why not? Illustrate your response graphically in  $(W, N)$  space using demand and supply curves for labor.