Name: _____ Final Exam Econ 219 Spring 2005

This is a closed book exam. You are required to abide all the rules of the Student Conduct Code of the University of Connecticut.

You can skip one multiple choice question. Indicate clearly which one

1. According to the real business cycle theory, a temporary increase in the current interest rate will make people want to work:
   A) more.
   B) less.
   C) the same amount.
   D) not at all.

2. In the Baumol-Tobin model, the benefit of holding money is:
   A) the interest forgone.
   B) convenience.
   C) the lower risk and higher return compared to other assets.
   D) the interest elasticity of money demand.

3. According to the sticky-wage model, when the price level is less than the expected price level, workers get a _____ real wage than expected, and _____ workers are hired than expected.
   A) lower; more
   B) lower; fewer
   C) higher; more
   D) higher; fewer

4. In a small open economy with a floating exchange rate, if the government imposes an import quota, then in the new short-run equilibrium the IS^* curve shifts to the right, raising the exchange rate:
   A) but not raising net exports or income.
   B) and net exports but not income.
   C) and income but not net exports.
   D) net exports and income.

5. In the *IS-LM* model when *M* remains constant but *P* rises, in short-run equilibrium, in the usual case, the interest rate _____ and output _____.
   A) rises; falls
   B) rises; rises
   C) falls; rises
   D) falls; falls

6. According to the theory of liquidity preference, holding the supply of real money balances constant, an increase in income will _____ the demand for real money balances and will _____ the interest rate.
   A) increase; increase
   B) increase; decrease
   C) decrease; decrease
   D) decrease; increase

7. In a Solow model with technological change, if population grows at a 2 percent rate and the efficiency of labor grows at a 3 percent rate, then in the steady state total output grows at a _____ percent rate.
   A) 0
   B) 2
   C) 3
   D) 5

8. If *Y* is output, *K* is capital, *u* is the fraction of the labor force in universities, *L* is labor, and *E* is the stock of knowledge, and the production $Y = F(K,(1- u) EL)$ exhibits constant returns to scale, then output (*Y*) will double if:
   A) *K* is doubled.
   B) *K* and *u* are doubled.
   C) *K* and *E* are doubled.
   D) *L* is doubled.

9. A supply shock does *not* occur when:
   A) a drought destroys crops.
   B) unions push wages up.
   C) the Fed increases the money supply.
   D) an oil cartel increases world oil prices.

10. If prices are fully flexible, the output of the economy fluctuates because of shocks to the economy, and the Federal Reserve holds the money supply constant, then the price level will:
    A) remain constant.
    B) rise when output rises, because the demand for money will rise when output rises.
    C) fall when output rises, because the demand for money will rise when output rises.
    D) fluctuate, but it will be uncorrelated with output fluctuations.

11. In the Solow growth model, technological change is _____, whereas in endogenous growth theories, technological change is _____.
    A) assumed; explained
    B) explained; assumed
    C) persistent; constant
    D) constant; persistent

12. In the Solow growth model of Chapter 7, where s is the saving rate, y is output per worker, and i is investment per worker, consumption per worker (c) equals:
    A) sy
    B) $(1 - s)y$
    C) $(1 + s)y$
    D) $(1 - s)y - i$

13. If s is the rate of job separation, f is the rate of job finding, and both rates are constant, then the unemployment rate is approximately:
    A) $f/(f + s)$.
    B) $(f + s)/f$.
    C) $s/(s + f)$.
    D) $(s + f)/s$.

14. Advocates of real business cycle theory assume that short-run fluctuations in output and employment are caused by fluctuations in:
    A) aggregate demand.
    B) technology.
    C) government spending.
    D) the money supply.

Use paper provided to answer the following questions. Keep your answers short and precise. Do not asnwer what you have not been asked.

You can skip 2 (two) of the following questions. Indicate clearly which ones.

15. Suppose a government is able to impose controls that limit the number of children people can have. Use the Solow growth model of Chapter 8 to graphically illustrate the impact of the slower rate of population growth on the steady-state capital-labor ratio and the steady-state level of output per worker.
    Be sure to label the: a. axes; b. curves; c. initial steady-state levels; d. terminal steady-state levels; and e. the direction curves shift.

16. Use the IS - LM model to analyze the effects of the following shock to the *US* economy:

    @. 0A huge oil field is discovered under the Uconn campus bringing the gasoline prices to $1 per galon.

    @. 0In a move to strengthen transatlantic relationship US and EU decide to fix exchange rate between euro and the US dollar. The next day deceiful europeans impose trade bariers for the US goods.

    Analyze each of the shocks separately. Show what happens to the endogenous variables in the short run **and** in the long run. (What are the endogenous variables in each case?)

17. Assume that a country's per-worker production is $y = k^{1/2}$, where y is output per worker and k is capital per worker. Assume also that 10 percent of capital depreciates per year (= 0.10).
    a. If the saving rate (s) is 0.4, what are capital per worker, production per worker, and consumption per worker in the steady state? (*Hint:* Use $sy = \delta k$ and $y = k^{1/2}$ to get an equation in s, δ, k, and $k^{1/2}$, and then solve for k.)
    b. Solve for steady-state capital per worker, production per worker, and consumption per worker with $s = 0.6$.
    c. Solve for steady-state capital per worker, production per worker, and consumption per worker with $s = 0.8$.
    d. Is it possible to save too much? Why?

18. Assume that an economy is initially at the natural rate of unemployment.
    a. Use a Phillips curve diagram to illustrate graphically how the inflation rate and unemployment rate change both in the short run and in the long run to an unexpected expansionary monetary policy.
    b. Use a Phillips curve diagram to illustrate graphically how the inflation rate and unemployment rate change both in the short run and in the long run to the announcement of a credible plan of expansionary monetary policy when people have rational expectations.

19. Suppose that the International Monetary Fund (IMF) is concerned about currency depreciation in a small open economy.
    a. What type of fiscal policy should the IMF propose to the government of the small open economy to generate a currency appreciation?
    b. Illustrate graphically the impact of the IMF proposal on the exchange rate of the small open economy.
    c. What will happen to the trade balance of the small open economy, assuming that it started from a position of balanced trade?

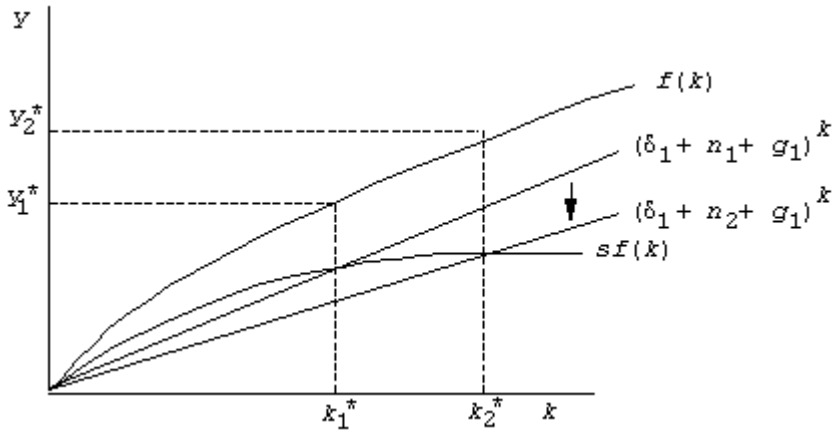
20. a. You are the chief economic adviser in a small open economy with a floating-exchange-rate system. Your boss, the president of the country, wishes to increase the level of output in the short run in order to win reelection. Do you recommend using expansionary or contractionary, monetary or fiscal policy?
    b. Use the Mundell-Fleming model to illustrate graphically your proposed policy. Be sure to label: i. the axes; ii. the curves; iii. the initial equilibrium levels; iv. the direction the curves shift; and v. the new short-run equilibrium.

21. Consider two economies: one operates according to the sticky-wage model and one operates under the sticky-price model. Aggregate demand unexpectedly increases in both countries, leading to expansion and an unexpected increase in price level and the demand for output.
    a. Use a graph of the labor market in each country to illustrate the impact of the expansion on the level of employment and the real wage.
    b. In which country is the real wage procyclical? In which country is the real wage countercyclical?

22. How economics explains the fact that some countries are poor and some countries are rich? Is there any hope for the poor countries? Will they ever enjoy the same standard of life as currently rich countries? Explain thoroughly referring to appropriate graphs and models.

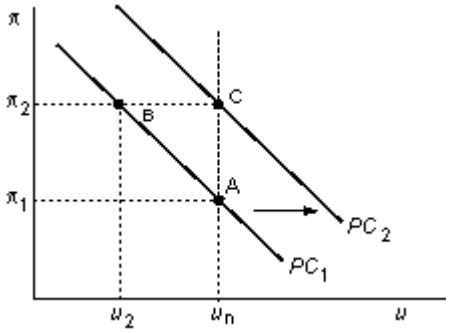
23. The government of a small open economy is considering adopting a fixed exchange rate regime. How this will affect policy (monetary, fiscal and trade) effectiveness? (Hint: What can you say about monetary policy effectiveness under the fixed exchange rate?) Use appropriate graphs to support your arguments.

Answer Key

1. A
2. B
3. D
4. A
5. A
6. A
7. D
8. C
9. C
10. C
11. A
12. B
13. C
14. B
15. 

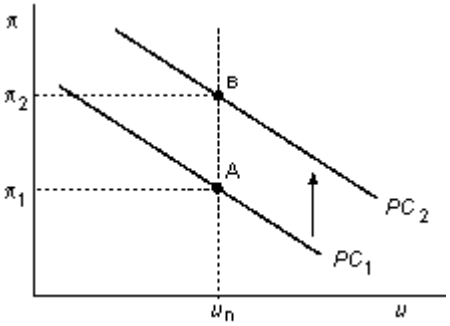
16.

17. a. $k = 16$; $y = 4$; Consumption per worker is 2.4.
    b. $k = 36$; $y = 6$; Consumption per worker is 2.4.
    c. $k = 64$; $y = 8$; Consumption per worker is 1.6.
    d. Yes. If the capital stock gets so big that the extra output produced by more capital is less than the extra saving needed to maintain it, extra capital reduces consumption per worker. The saving rate exceeds the Golden Rule rate.
18. a.



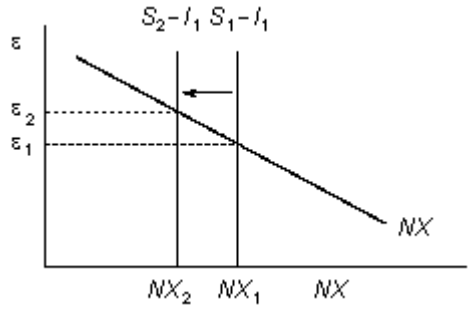
In the short run the inflation rate increases to π_2 and the unemployment falls to u_2. However, in the long run, the Phillips curve shifts upward to the right. The unemployment rate returns to the natural rate, but with a higher rate of inflation than what it was initially. There is a short run tradeoff between inflation and unemployment.

b.



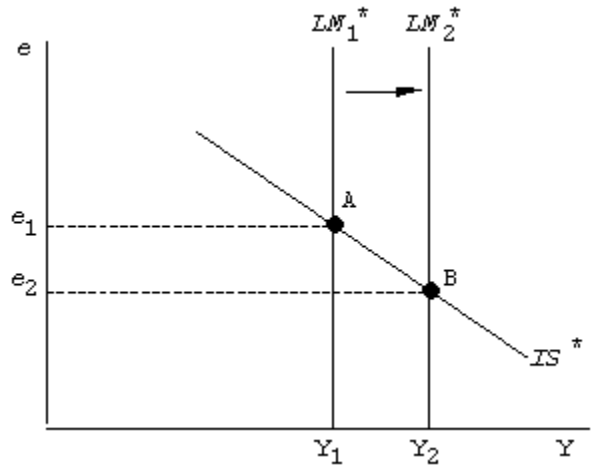
Since expectations are formed rationally and the policy is credible, the Phillips curve will immediately shift upward to the right. In both the short run and the long run, the inflation rate increases to π_2 , but the unemployment rate remains at u_n. There is no short-run tradeoff between inflation and unemployment in the short run or in the long run.

19. a. The IMF must propose expansionary fiscal policy, i.e., increasing government spending and/or cutting taxes. This will decrease saving in the small open economy.
b. The decrease in domestic saving will reduce the supply of currency to the foreign exchange market, resulting in currency appreciation.

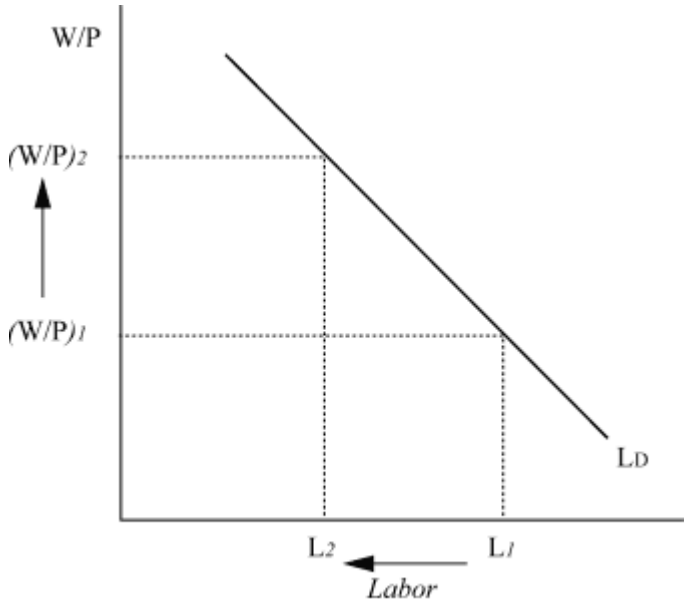


c. The trade balance of the small open economy will move into deficit.

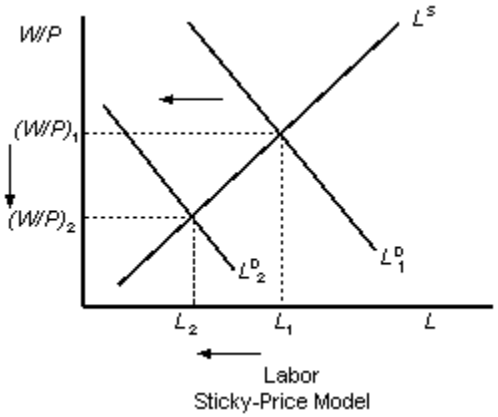
20. a. expansionary monetary policy
b.



21. a.



Sticky-Wage Model



Sticky-Price Model

b. The real wage is procyclical (declines) in the country that follows the sticky-price model. The real wage is countercyclical (increases) in the country that follows the sticky-wage model.

22.

23.