

Homework 2

Spring 2011 ECO 410
Macroeconomic Theory

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Due 2/17/2010, in class

(A) Multiple Choice Questions: (3 points per multiple choice problem) 25 questions

1. The quantity theory of money assumes that:
 - A) income is constant.
 - B) velocity is constant.
 - C) prices are constant.
 - D) the money supply is constant.

2. The recent hyper-inflation in Zimbabwe is caused by:
 - A) corruption of the government officials.
 - B) its central bank keep printing money.
 - C) the Bush foreign policy.
 - D) the current democratic election in Zimbabwe was not a fair election.

3. The weak version of purchasing power parity (PPP) states:
 - A) Real exchange rate fluctuates from time to time.
 - B) A big Mac costs \$3.54 in the US, it must cost the 354 Yen in Japan, if the nominal exchange rate is 1 dollar = 100 Yen.
 - C) Real exchange rate is 1.
 - D) Although nominal exchange rate fluctuates, real exchange rate is roughly constant.

4. The hyperinflation experienced by interwar Germany illustrates how fiscal policy can be connected to monetary policy when government expenditures are financed by:
 - A) new taxes.
 - B) borrowing in the open market.
 - C) printing large quantities of money.
 - D) selling gold.

5. A higher government spending may increase the interest rate so that:
 - A) money supply in the economy will be higher.
 - B) the unemployment rate in the economy will be lower.
 - C) total output will be higher .
 - D) private investment in the economy will be lower.

6. To increase the money supply, the Federal Reserve:
 - A) buys government bonds.
 - B) sells government bonds.
 - C) buys corporate stocks.
 - D) sells corporate stocks.

7. The real return on holding money is:
- A) the real interest rate.
 - B) minus the real interest rate.
 - C) the inflation rate.
 - D) minus the inflation rate.
8. A positive relationship between real interest rates and government debt is most obvious in (see Chapter 3)
- A) US in 200-2007.
 - B) About 1730- 1800 in UK.
 - C) Interwar Germany 1922-1924.
 - D) US in 2008.
9. If the transactions velocity of money remains constant while the quantity of money doubles, the:
- A) price of the average transaction must double.
 - B) number of transactions must remain constant.
 - C) price of the average transaction multiplied by the number of transactions must remain constant.
 - D) price of the average transaction multiplied by the number of transactions must double.
10. If domestic saving exceeds domestic investment, then net exports are _____ and net capital outflows are _____.
- A) positive; positive
 - B) positive; negative
 - C) negative; negative
 - D) negative; positive
11. If a dollar bought 1,000 won ten years ago, and 1,500 won now, and inflation for the period is 25% in the US and 100% in Korea, then:
- A) The purchasing-power parity theory is correct.
 - B) Traveling in Korea today costs about the same as it did ten years ago
 - C) Traveling in Korea is cheaper now than it was ten years ago.
 - D) Traveling in Korea is more expensive now than it was ten years ago.
12. If there are 100 transactions in a year and the average value of each transaction is \$10, then if there is \$200 of money in the economy, transactions velocity is _____ times per year.
- A) 0.2
 - B) 2
 - C) 5
 - D) 10

13. Frictional unemployment *cannot* explain the following facts *except*:
- A) why Europe has a higher unemployment rate than the US.
 - B) why some industries pay more than other industries.
 - C) why unemployment benefits increase unemployment rate.
 - D) why blacks have higher unemployment rate than whites.
14. If the fraction of employed workers who lose their jobs each month (the rate of job separation) is 0.01 and the fraction of the unemployed who find a job each month is 0.09 (the rate of job findings), then the natural rate of unemployment is:
- A) 1 percent.
 - B) 9 percent.
 - C) 10 percent.
 - D) about 11 percent.
15. In a small open economy, if domestic saving exceeds domestic investment, then the extra saving will be used to:
- A) Make loans to the government
 - B) Make loans to the foreigners.
 - C) Repay the national debt.
 - D) Repay loans to the Federal Reserve.
16. A country with trade deficit is more likely to have:
- A) Budget deficit.
 - B) More price-conscious consumers.
 - C) Lower tariffs.
 - D) Less efficient industries.
17. *All* of the following are reasons for frictional unemployment *except*:
- A) workers have different preferences and abilities.
 - B) The minimum wage law.
 - C) the flow of information is imperfect.
 - D) geographic mobility takes time.
18. The demographic explanation for the changes in the U.S. natural rate of unemployment over the past 50 years rests on the idea that:
- A) younger workers have higher rates of unemployment.
 - B) younger workers have lower rates of unemployment.
 - C) baby-boom workers were more productive than other workers because they had greater access to technology.
 - D) baby-boom workers had higher than usual rates of job finding.
19. A tax-cut may increase total tax revenue because:
- A) people consume more goods.
 - B) people now have more money to invest.
 - C) people work more since their after-tax wages are higher.
 - D) people work less because their after-tax income has increased.

20. If an iPhone of the same specifications costs \$300 British Pounds in UK while it costs 400 US\$ in the US. What is the exchange rate between dollar and pound, according to the iPhone price?
- A) 1.33 Pound/\$
 - B) 0.75 Pound/\$
 - C) 1.0 Pound/\$
 - D) Neither of those.
21. When Henry Ford paid his workers \$5 per day when the prevailing wage was between \$2 and \$3 a day:
- A) it greatly increased his company's costs.
 - B) workers reduced their work efforts because they felt they had it made.
 - C) Ford proved the efficiency-wage theory was wrong.
 - D) it raised the efficiency of his workers.
22. Entry into and exit from the labor force are important to the determination of the unemployment rate because:
- A) more than one-half of the unemployed have only recently entered the labor force.
 - B) most of the unemployed are young workers still looking for their first job.
 - C) discouraged workers are counted as part of the labor force.
 - D) almost one-half of all spells of unemployment end in the unemployed person's withdrawal from the labor market.
23. For the dollars in California and in Texas:
- A) It is a fixed exchange rate of one.
 - B) It is a floating exchange rate because prices in California and in Texas are changing.
 - C) No exchange rate exists because they are two states within a country.
 - D) The real exchange rate is one between these two states.
24. When the real wage is above the level that equilibrates supply and demand:
- A) the quantity of labor supplied exceeds the quantity demanded.
 - B) the quantity of labor demanded exceeds the quantity supplied.
 - C) there is no unemployment.
 - D) the labor market clears.
25. Unions contribute to structural unemployment when collective bargaining results in wages:
- A) Above the equilibrium level.
 - B) Below the minimum wage.
 - C) Below the equilibrium level.
 - D) Above the level of unemployment compensation.

(B) Essay Questions

1. (10 points) Mankiw textbook, Chapter 5, #2 on page 151.

Consider an economy described by the following equations:

$$Y=C+I+G+NX,$$

$$\begin{aligned}
Y &= 5000, \\
G &= 1000, \\
T &= 1000, \\
C &= 250 + 0.75(Y - T), \\
I &= 1000 - 50r, \\
NX &= 500 - 500\epsilon, \\
r &= r^* = 5;
\end{aligned}$$

- In this economy, solve for national saving, investment, the trade balance, and the equilibrium exchange rate.
- Suppose now that G rises to 1,250. Solve for national saving, investment, the trade balance, and the equilibrium exchange rate. Explain what you find.
- Now suppose that the world interest rate rises from 5 to 10. (G is again 1000.) Solve for national saving, investment, the trade balance, and the equilibrium exchange rate. Explain what you find.

2. (15 points) Mankiw textbook, pages 188, #5

Consider an economy with the following Cobb-Douglas production function:

$$Y = K^{1/3}L^{2/3}$$

The economy has 1,000 units of capital and a labor force of 1,000 workers.

- Derive the equation describing labor demand in this economy as a function of the real wage and the capital stock. (Hint: Review Chapter 3.)
- If the real wage can adjust to equilibrate labor supply and labor demand, what is the real wage? In this equilibrium, what are employment, output, and the total amount earned by workers?
- Now suppose that congress, concerned about the welfare of the working class, passed a law requiring firms to pay workers a real wage of 1 unit of output. How does this wage compare to the equilibrium wage?
- Congress cannot dictate how many workers firms hire at the mandated wage. Given this fact, what are the effects of this law? Specifically, what happens to employment, output, and the total amount earned by workers?
- Will Congress succeed in its goal of helping the working class? Explain.
- Do you think that this analysis provides a good way of thinking about a minimum wage law? Why or why not?