

Econ305 – Intermediate Macroeconomic Theory and Policy

Midterm Exam

October 15, 2007

The exam consists of 4 sections. The first section consists of 10 fill-in-the-blanks questions. The second section has 4 short-essay questions. The third section has 10 multiple-choice questions. Finally, the last section has a bonus question. **PLEASE ANSWER ALL OF THEM.**

The duration of the exam is 1 hr 15 minutes. **DO NOT OPEN** the exams until you are told to do so and **STOP** writing when you are told that the exam is over. Failure to comply will result in a 10% loss in the grade.

Do not forget to write your name and university ID number on the exam booklet.

NO PROGRAMMABLE OR FINANCIAL CALCULATORS ARE ALLOWED. Only simple calculators can be used.

GOOD LUCK!

Section A: Fill-in-the-blanks (each question is worth 0.5 points)

1. One of the economic statistics used to measure inflation is _____
2. Assume that a rancher sells McDonald's a quarter-pound of meat for \$1 and that McDonald's sells you a hamburger made from that meat for \$2. In this case, the value included in GDP should be _____
3. If disposable income is 4,000, consumption is 3,500, government spending is 1,000, and tax revenues are 800, national saving is equal to _____
4. According to the model developed in Chapter 3, when taxes decrease consumption _____
5. Assume that the consumption function is given by $C = 150 + 0.85(Y - T)$. The marginal propensity to consume is _____
6. If the money supply increases 12 percent, velocity decreases 4 percent, and the price level increases 5 percent, then the change in real GDP must be _____ percent.
7. 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.
8. If the nominal interest rate is 1 percent and the inflation rate is 5 percent, the real interest rate is _____
9. Economists call the changes in the composition of demand among industries and regions _____
10. One of the reasons of structural unemployment is _____

Section B: Essay Questions (each question is worth 5 points)

Note: Please show all your work including the intermediate steps and please try to be neat when writing your answers.

1. Assume that apples cost \$0.50 in 2002 and \$1 in 2007, whereas oranges cost \$1 in 2002 and \$1.50 in 2007. 4 apples were produced in 2002 and 5 in 2007, whereas 3 oranges were produced in 2002 and 5 in 2007.
 - a. What is the formula for the GDP deflator in 2007, using 2002 as the base year?
 - b. Calculate the GDP deflator in 2007, using 2002 as the base year.

2. Use the model developed in Chapter 3, but assume that consumption depends positively on the level of real balances, and real balances depend negatively on the nominal interest rate. What happens to consumption and the level of investment when money growth rate increases? Explain your answer using the equilibrium condition.

3. Suppose velocity is constant, money is growing 5% per year; output is growing 2% per year, and the real interest rate 4 percent.
 - a. What is the nominal interest rate?
 - b. If the Fed increases the money growth rate by 2 percentage points per year, how does the nominal interest rate change?
 - c. Suppose the money growth rate is still 5% per year but the growth rate of Y falls to 1% per year and the Fed wishes to keep the inflation rate constant. What should be the monetary policy in this case?

4. Suppose the rate of job separation is 0.02 and the rate of job finding is 0.08 and the current unemployment rate is 0.10. How will the unemployment rate change in the next period (increase or decrease) and why?

Section C: Multiple Choice Questions (each question is worth 0.5 points)

1. Okun's law is the _____ relationship between GDP and the _____.
 - A) negative; unemployment rate
 - B) negative; inflation rate
 - C) positive; unemployment rate
 - D) positive; inflation rate
2. All of the following are measures of GDP *except* the total:
 - A) expenditures of all businesses in the economy.
 - B) income from all production in the economy.
 - C) expenditures on all final goods produced.
 - D) value of all final production.
3. In the classical model with fixed income, if the demand for goods and services is greater than the supply, the interest rate will:
 - A) increase.
 - B) decrease.
 - C) remain unchanged.
 - D) either increase or decrease, depending on whether consumption is greater or less than investment.
4. According to the model developed in Chapter 3, when government spending increases but taxes are not raised, interest rates:
 - A) increase.
 - B) are unchanged.
 - C) decrease.
 - D) can vary.
5. If the consumption function is given by the equation $C = 500 + 0.5Y$, the production function is $Y = 50K^{0.5}L^{0.5}$, where $K = 100$ and $L = 100$, then C equals:
 - A) 1,000.
 - B) 2,500.
 - C) 3,000.
 - D) 5,000.
6. When the demand for money parameter, k , is large, the velocity of money is _____ and money is changing hands _____.
 - A) large; frequently
 - B) large; infrequently
 - C) small; frequently
 - D) small; infrequently

7. Assume that creditors and debtors have symmetric expectations of inflation. In the case of an unanticipated increase in inflation:
- A) creditors with an unindexed contract are hurt because they get less than they expected in real terms.
 - B) creditors with an indexed contract gain because they get more than they contracted for in nominal terms.
 - C) debtors with an unindexed contract do not gain because they pay exactly what they contracted for in nominal terms.
 - D) debtors with an indexed contract are hurt because they pay more than they contracted for in nominal terms.
8. The costs of reprinting catalogs and price lists because of inflation are called:
- A) menu costs.
 - B) shoe-leather costs.
 - C) variable yardstick costs.
 - D) fixed costs.
9. When insiders have a much greater impact on the wage bargaining process than do outsiders, the negotiated wage is likely to be _____ the equilibrium wage.
- A) much greater than
 - B) much less than
 - C) almost equal to
 - D) about one-half of
10. Which of the following is an example of frictional unemployment?
- A) Dave searches for a new job after voluntarily moving to San Diego.
 - B) Elaine is willing to work for less than the minimum wage, but employers cannot hire her.
 - C) Bill is qualified and would like to be an airline pilot, but airlines do not find it profitable to hire him at the wage established by the airline pilot's union.
 - D) Joan is willing to work at the going wage, but there are no jobs available.

Section D: Bonus Question (5 points)

Use the model developed in Chapter 3, but assume that consumption also depends on the real interest rate. Other things being equal, consumption decreases when the interest rate rises. Graphically illustrate the impact of an increase in investment demand. Be sure to label: the axes, the curves, the initial equilibrium values, the direction curves shift, and the terminal equilibrium values.