

## Macroeconomics, Spring 2011, Final Exam, several versions

**Read these Instructions carefully! You must follow them exactly!**

**I) Answer on your Scantron card, using a #2 pencil.**

Warning: SOME QUESTIONS MUST BE ANSWERED SEVERAL TIMES! Such questions will begin with a phrase such as this:

**(Repeat answer on Scantron lines 37, 38 and 39)**

---Remember to do it!

**II) On your Scantron card you must print three things:**

1) Print your full name clearly;

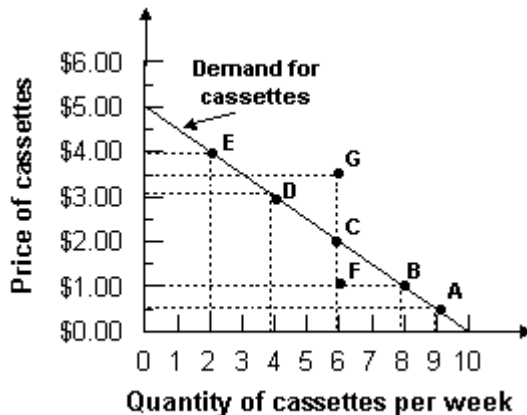
2) Print the day and time of your section (for example TTh 7 AM);

3) Near your name, print your test number from the upper right corner of this test.

(This number tells me which version of the test you have. Without it your test cannot be graded properly and you get no credit for your answers.)

**III) You must turn in this printed exam along with your Scantron card, otherwise your score on this exam is "F".**

### Questions:



1.

Refer to the graph above. Evaluate statements 1 through 4 and then select the answer from A) through E):

- 1) Moving from point E to point F is accompanied by an increase in demand.
- 2) Moving from point E to point F is accompanied by a decrease in demand.
- 3) Moving from point E to point C is accompanied by no change in demand.
- 4) Moving from point E to point C is accompanied by an increase in demand.

- a. Only statements 1 and 4 are true.
- b. Only statement 1 is true.
- c. Only statement 4 is true.
- d. Only statements 2 and 3 are true.
- e. None of these statements are true because all of these moves actually are changes in quantity demanded, not changes in demand..

2. **(Repeat your answer on Scantron line 31.)** Using the table below, calculate GDP for a particular year.

Wages and salaries	\$1,800
Government purchases of goods and services	\$ 500
Exports	\$ 800
Rental income	\$ 300
Consumption spending	\$3,000
Transfer payments	\$ 300
Private investment spending	\$ 600
Profit	\$1,200
Interest income	\$ 800
Purchases of corporate stock	\$ 500

Based on the above information, GDP in this year was

- \$4,100
- \$4,300
- \$4,400
- \$4,600
- \$4,900

- \_\_\_\_\_ 3. By the definition given in lecture, a model is
- an abstract representation of reality.
  - a logical structure and collection of ideas for thinking about a problem or answering a question.
  - never good enough, since it must be accurate, timely and inexpensive and easy to use--an impossibility.
  - best if it is as realistic as possible.
  - no other answer is the best one.
- \_\_\_\_\_ 4. Choose the best answer. The Fundamental Theorem of Welfare Economics (often called the First Welfare Theorem) tells us, roughly,
- that high welfares are important, but are not everything.
  - that the existence of money is crucial if an economy is to achieve high incomes.
  - that you cannot have more of one thing without having less of at least one other thing.
  - that a voluntaristic economic system with many buyers and sellers in all markets will be maximally efficient if certain other conditions hold.
  - that high welfares are very important to the individuals who live in an advance economy.
- \_\_\_\_\_ 5. (**Repeat your answer on Scantron line 32.**) Which of the following statements are true about "the multiplier" and/or "autonomous spending"?
- If the Keynesian model is correct, if the multiplier gets larger GDP will get smaller.
  - If the Keynesian model is correct, if the multiplier gets larger autonomous spending will get smaller.
  - Government spending is part of autonomous spending in a simple Keynesian model, but exports are not.
  - no other answer is true.
  - all other answers are true (except "no other answer is true").

$$Y = \left( \frac{1}{1-c(1-t)+w} \right) (a + I_g + G - cT_f + X)$$

- \_\_\_\_\_ 6. **(Repeat your answer on Scantron line 33.)** In the above equation for the Keynesian multiplier model, \_\_\_\_\_ is the marginal propensity to consume, \_\_\_\_\_ is the tax rate, \_\_\_\_\_ is exports and \_\_\_\_\_ is the multiplier.
- none of the other answers is correct.
  - $c; t; X; \text{ and } 1/(1-c)$ .
  - $c; t; w; \text{ and } (I_g + G)$ .
  - $1/(1-c); w; a; \text{ and } (G+X)$ .
  - $a; t; X; \text{ and } (a+I_g + G + X)$ .
- \_\_\_\_\_ 7. **(Repeat your answer on Scantron line 34.)** If "the multiplier" is 2, and "autonomous expenditures" decline by \$100 billion, and assumptions of the Keynesian multiplier model are valid, then economic activity (GDP) will:
- increase by \$50 billion.
  - increase by \$200 billion.
  - decrease by \$50 billion.
  - decrease by \$200 billion.
  - no other answer is correct.
- \_\_\_\_\_ 8. Considering "unemployment",
- all of these statements are true, except the answer beginning with the word "none".
  - an individual is defined as "unemployed" if the person is not currently employed and also searched for work during the past four weeks. Also included are those on temporary lay-off.
  - cyclical unemployment is the only type which macroeconomics can help to explain.
  - "full employment" occurs when cyclical unemployment is zero, even if structural, seasonal and frictional unemployment are substantial.
  - none of the other statements are true.
- \_\_\_\_\_ 9. **(Repeat your answer on Scantron line 35.)** Consider the following statements about inflation, expected inflation and interest rates.
- If actual inflation turns out lower than was expected at the time the loan was made, the lender loses and the borrower benefits.
  - if the expected inflation rate for the coming year rises from 3 percent to 6 percent, but the Fed prevents nominal interest rates from rising, then the real interest rate must have risen.
  - if the real interest rate is 10% for a 4 year auto loan, and expected inflation for the next four years is 5% per year, then auto loans will have an interest rate of 15%.
  - the real interest rate plus the nominal interest rate equals the expected rate of inflation.
  - none of the other answers is correct.
- \_\_\_\_\_ 10. **(Repeat your answer on Scantron line 36.)** In lecture you were given a model to account for the difference in prices of the different goods. Which of the following most accurately describes it?
- Prices are determined by the forces of supply and demand. If the price is too high there is excess supply, and competition among the sellers drives the price down, if the price is too low there is excess demand and competition among the buyers drives the price up, so the price settles in between.
  - If there are taxes, then prices must equal the sum of all the taxes at the various stages of the production of the good.
  - The Law of One Price tells us that thanks to the buyers wanting the lowest price and the sellers wanting the highest price, each good will have just one price in its market.
  - The price of a good must be sufficient to attract all resources needed for its production plus additional amounts to cover the costs of taxes or possible monopolistic behavior at various stages of production.
  - No other answer is good enough.

- \_\_\_\_\_ 11. **(Repeat your answer on Scantron line 37.)** If, in the Aggregate Demand/Aggregate Supply model (as presented in the text and lecture) the two curves intersect to the right of Full Employment Output,
- 1) There is a "deflationary gap".
  - 2) Wages will begin to rise, shifting the AS curve upward, and Prices also will then begin to rise.
- a. Only statement 1 is correct.
  - b. Only statement 2 is correct.
  - c. Both statements 1 and 2 are correct.
  - d. Neither statement 1 nor 2 is correct.
- \_\_\_\_\_ 12. **(Repeat your answer on Scantron line 38.)** Which of the following is an example of Monetary Policy?
- a. The federal government cuts taxes.
  - b. The U.S. Treasury Department issues bonds to finance debt.
  - c. The Federal Reserve buys bonds in the open market.
  - d. Defense spending is cut to balance the budget.
- \_\_\_\_\_ 13. **(Repeat your answer on Scantron line 39.)** What would be the appropriate Monetary Policy to fight inflation?
- a. The Federal Reserve could sell bonds.
  - b. The Federal Reserve could decrease the discount rate.
  - c. The Federal Reserve could lower the reserve ratio.
  - d. The Federal Reserve could increase taxes.
- \_\_\_\_\_ 14. **(Repeat your answer on Scantron line 40.)** Evaluate the following statements, then choose the best answer. Starting in a "full employment equilibrium" and using the circular flow model, if the Fed **sells** T-bills, then
- 1) the money supply will increase.
  - 2) interest rates will increase.
  - 3) the economy will go into a recession and/or prices will fall.
- a. Only statements 1 and 2 are correct.
  - b. Only statement 3 is correct.
  - c. Only statement 1 is correct.
  - d. Only statements 2 and 3 are correct.
  - e. Only statement 2 is correct.
- \_\_\_\_\_ 15. Choose the *best* answer if several are correct. When you produce corn, it is costly to produce small quantities,
- a. but marginal costs decline at first as output rises, due to the benefits of specialization and the division of labor.
  - b. but marginal costs rise further due to the principle of diminishing returns to scale and increasing marginal opportunity costs.
  - c. but eventually, as output continues to increase, marginal cost begins to rise.
  - d. Both A and C are correct.
- \_\_\_\_\_ 16. **(Repeat your answer on Scantron line 41.)** Based on the circular flow model as presented in recent lectures, and beginning in a unemployment equilibrium with 4% cyclical unemployment, if the money supply is increased by 10%:
- a. no other answer is correct.
  - b. it may take a year or two, but employment will increase by about 4% and prices will increase by about 6%.
  - c. the classical model applies in this situation, so employment is not likely to be affected.
  - d. it may take a year or two, but prices will increase by 10%.
  - e. both C and D are correct.
- \_\_\_\_\_ 17. Choose the best answer. According to lecture, inflation, even if fully anticipated by everyone,
- a. is harmful because it is more difficult for people to make rational economic decisions when prices are changing over time
  - b. is harmful primarily because it causes sellers' costs to increase

- c. is harmful primarily because it causes nominal wages to fall
- d. is harmful primarily because it causes consumers' purchasing power to decline
- e. is not harmful, since fully anticipated inflation does not redistribute purchasing power in haphazard ways

- \_\_\_\_\_ 18. Since 1960, the two worst years of inflation have seen prices rise
- a. less than 3% both years.
  - b. between 3 and 5% both years.
  - c. between 5 and 7% both years.
  - d. between 7 and 10% both years.
  - e. more than 10% in both years.

Recall:

$$FR = IR * (FN/IN)*(II/FI)$$

- \_\_\_\_\_ 19. **(Repeat your answer on Scantron line 42.)** Suppose your real wage is \$20 per hour this year (based on somebody's index) and you wonder what it was 10 years ago based on the same real wage index. The nominal wage this year is \$10, the price index this year 200, the nominal wage 10 years ago was \$5/ hour and the price index was 150. 10 years ago the real wage was:
- a. higher than \$20
  - b. 7.34
  - c. \$10
  - d. \$13.34
  - e. \$15
- \_\_\_\_\_ 20. **(Repeat your answer on Scantron line 43.)** Evaluate the following statements, then choose the best answer.
- 1) The 1981-82 recession was triggered by a change in Federal Reserve policy leading to a decline in spending on new homes, auto and net investment.
  - 2) The 2001 recession was triggered by large increases in oil prices leading to reduced spending on energy using products.
  - 3) The 1974 recession was triggered by a sharp rise in oil prices leading to a reduced spending on cars and energy using products.
- a. All three statements are correct.
  - b. None of the three statements are correct.
  - c. Only statements 1 and 3 are correct.
  - d. Only statements 1 and 2 are correct.
  - e. Only statements 2 and 3 are correct.
- \_\_\_\_\_ 21. **(Repeat your answer on Scantron line 44.)** As discussed in lecture, if steel manufacturers now have come to expect that the price of steel will rise in the next six months, this will
- a. not change the supply of steel, since it only causes a change in quantity supplied
  - b. lead to a decreased supply of steel and an increased production of steel
  - c. lead to a increased supply of steel and a decreased production of steel
  - d. lead to a decreased supply of steel and no change in steel production
  - e. none of the other answers is correct
- \_\_\_\_\_ 22. **(Repeat your answer on Scantron line 45.)** Based on lecture, consider the following statements about what normally might happen when there is an increase in expected future prices, i.e., beliefs about the future have changed. Then select the best answer.
- 1) If the expected future price of a good rises, demand will rise.
  - 2) If the expected future price of a good rises, then production will rise.
  - 3) If the expected future price of a good rises, then supply will fall.
  - 4) If the expected future price of a good rises, then inventories will rise.
  - 5) Today's price is expected to rise also.

- 6) Today's market quantity may rise, fall, or remain unchanged.
- Only statements 1, 2 and 4 are correct.
  - Only statements 1, 3 and 4 are correct.
  - Only statements 1 through 4 are correct.
  - Only statements 1 through 5 are correct.
  - All six of the statements are correct.

23. **(Repeat your answer on Scantron line 46.)** Question on economic growth. Evaluate the following statements, then select the best answer.

- The US 200-year growth rate (of income per capita) has averaged only somewhere between one and two percent per year.
  - Today's fastest growing countries are growing so fast primarily because their superior educational systems result in a fast flow of new inventions, which they adopt sooner than slow growing countries such as the US.
  - The poorest countries of today seem to remain poor not so much because of low growth rates during peaceful years but because of the destruction caused by periods of violence.
- statements 1 and 3 are correct.
  - all three statements are correct.
  - only statement 2 is correct.
  - only statement 3 is correct.
  - only statements 1 and 2 are correct.

24. Question on economic growth. Based on lecture, which of the following probably contains the **least important** obstacles to economic growth and development:

- poor systems for the enforcement of property rights.
- concentration of power over economic resources in the hands of individuals with no incentive to innovate.
- poor public health programs for the elderly and the very young, resulting in high death rates for these groups.
- lack of education, including an understanding of business and entrepreneurship.
- lack of infrastructure, including roads, telephones.

25. **(Repeat your answer on Scantron line 47.)** If the economy initially was in a full employment equilibrium with zero money growth each year and stable prices, and now the FED starts buying Treasury bills so the monetary base increases by 7% each year, year after year, the following would happen.

- Interest rates would fall and remain low, meanwhile prices would start to rise.
- The economy would slide into a recession and prices would begin to fall as interest rates rose.
- Wages would start to fall.
- Interest rates would fall at first, and prices would start to rise, but interest rates eventually would rise higher than they were initially.
- Both A and C.

26. **(Repeat your answer on Scantron line 48.)** Here are several statements about government debt and deficit spending.

- Government should not borrow for current expenditures such as paper or electricity for government buildings, but can borrow for spending which will have lasting benefits, such as spending to educate a child, construct a national park or build a building. If the building will be useful for 50 years it is ok to borrow using a 50 year bond.
- If the police buy bullets to be stored just in case they are needed, it is ok to borrow the money to buy them since inventory is part of the capital stock, but if the bullets are being purchased to be used up for border patrol and target practise, then they should be paid for by taxes.
- If the government wants to increase spending to stimulate the economy, since this will require increased borrowing it is better to spend the extra on new roads or new national parks rather than projects with little long term benefit.

Which of the following is the most complete and best answer?

- a. Only statement 1 is correct.
- b. Only statement 2 is correct.
- c. Only statements 1 and 3 are correct.
- d. Only statements 1 and 2 are correct.
- e. All three statements are correct.

## Equation for the Money Supply

$$M_S = (C_T + T_f + L_f) \frac{\left(1 + \frac{1}{r_{cd}}\right)}{\left(1 + \frac{x_d}{r_{cd}} + \frac{x_t}{r_{ct}}\right)}$$

27. **(Repeat your answer on Scantron line 49.)** In the money supply equation just above, assume that  $C_T = 50$ ;

$T_f = 130$ ,  $L_f = 20$ ;  $r_d = .4$  and  $r_t = .1$ ,  $s_d = .3$  and  $s_t = .6$ ;  $r_{cd} = 1$  and  $r_{ct} = 1$ . Then

- a. the “money multiplier” is 1.34
- b. the “money multiplier” is 1.00
- c. the “money multiplier” is some other number than given in a) or b) above
- d. if  $C_T$  increases to 75, the money supply will grow by more than 25
- e. both c) and d) are correct

28. **(Repeat your answer on Scantron line 50.)** Based on lecture, we would say the following about the causes of recessions and booms of the economy

1. Recessions are caused by economic shocks.
2. Financial crises, rises in the price of oil and declines in defense spending have triggered most of the recessions since 1960.
3. The recent recession which began in 2001 was triggered by a slowdown in the technology sector made worse by the destruction of the World Trade Center, and were not triggered by a large increase in interest rates.

- a. all three statements are correct.
- b. Only statements 1 and 2 are correct.
- c. Only statements 1 and 3 are correct.
- d. Only statements 2 and 3 are correct.
- e. Only statement 1 is correct.

Keynesian Model:

$$Y = \left(\frac{1}{1 - c(1 - t) + zw}\right)(a + I_g + G - cT_p + X)$$

- \_\_\_ 29. In Keynesian multiplier equation just above, if  $c = .8$ ,  $t = .25$  and  $w = .1$ , then if "autonomous spending" increases by \$100 billion, nominal GDP:
- will increase by \$50 billion
  - will increase by \$100 billion
  - will increase by \$200 billion
  - will not increase.
  - none of the other answers are correct.

## Equation for the Money Supply

$$M_s = (C_T + T_f + L_f) \frac{\left(1 + \frac{1}{r_{cd}}\right)}{\left(1 + \frac{s_d}{r_{cd}} + \frac{s_t}{r_{ct}}\right)}$$

- \_\_\_ 30. In the money supply equation just above, assume that  $C_T = 50$ ;  $T_f = 130$ ,  $L_f = 20$ ;  $r_d$ ,  $r_t$ ,  $s_d$  and  $s_t = 1$ ;  $r_{cd} = .5$  and  $r_{ct} = .5$ . Then the "money multiplier" is:
- 120
  - 5
  - .6
  - 200
  - A, B and D combined



**Macroeconomics, Spring 2011, Final Exam, several versions**  
**Answer Section**

**MULTIPLE CHOICE**

1. ANS: D                    PTS: 1
2. ANS: A                    PTS: 1                    NAT: Financial theories, analysis, reporting, and markets  
LOC: Unemployment and inflation
3. ANS: B                    PTS: 1
4. ANS: D                    PTS: 1
5. ANS: D                    PTS: 1
6. ANS: A                    PTS: 1
7. ANS: D                    PTS: 1
8. ANS: A                    PTS: 1
9. ANS: C                    PTS: 1
10. ANS: D                    PTS: 1
11. ANS: B                    PTS: 1
12. ANS: C                    PTS: 1
13. ANS: A                    PTS: 1
14. ANS: D                    PTS: 1
15. ANS: D                    PTS: 1
16. ANS: B                    PTS: 1
17. ANS: A                    PTS: 1
18. ANS: E                    PTS: 1
19. ANS: D                    PTS: 1
20. ANS: C                    PTS: 1
21. ANS: B                    PTS: 1                    REF: Impact of changes in expectations
22. ANS: E                    PTS: 1
23. ANS: A                    PTS: 1
24. ANS: C                    PTS: 1
25. ANS: D                    PTS: 1
26. ANS: E                    PTS: 1
27. ANS: B                    PTS: 1
28. ANS: A                    PTS: 1
29. ANS: C  
Refer To: Keynesian Multiplier Equation

Reference: The Money Supply Equation, with Time Dep

PTS: 1

30. ANS: C  
Refer To: The Money Supply Equation, with Time Dep

Reference: Table 3 for comparative advantage

**Current prices in two countries, Rahrah and Goofonia**

(The money of Goofonia is called the goofus, and the money of Rahrah is called the rah. Prices in each country are expressed in its local currency.)

	<b>Good 1</b>	<b>Gd 2</b>	<b>Gd 3</b>	<b>Gd 4</b>
<b>Rahrah prices (in rahs)</b>	<b>40</b>	<b>20</b>	<b>4</b>	<b>2</b>
<b>Goofonia prices (in goofuses)</b>	<b>40</b>	<b>20</b>	<b>4</b>	<b>6</b>

PTS: 1