

Exam II, Form 1

UM ID # \_\_\_\_\_

Section # \_\_\_\_\_

Econ 102/100

**Second Midterm Exam**

March 15, 2007

<b>Section</b>	<b>Day</b>	<b>Time</b>	<b>Location</b>	<b>GSI</b>
101	Friday	2:30-4	142 Lorch	JB
102	Friday	11:30-1	269 Dennison	Sue
103	Friday	1-2:30	430 Dennison	Angus
104	Friday	10- 11:30	B239 EH	Sue
105	Friday	2:30-4	B239 EH	Angus
106	Friday	10- 11:30	B247 EH	Omar
107	Friday	1-2:30	315 Dennison	JB
108	Friday	11:30-1	455 Dennison	Omar
109	Friday	11:30-1	130 Dennison	Brian

**Instructions**

- Do NOT open this exam booklet until instructed to do so!
- Please take a moment to complete the identification information on the scantron. Indicate your NAME, discussion SECTION number, FORM number, and UM ID number. **THIS IS WORTH TWO POINTS ON THE EXAM!**
- The exam has 100 points and is designed to take about 60 minutes to complete. However, you'll have approximately 80 minutes. Check that you have all 10 pages of the exam.
- Read the questions and these instructions carefully!
- Use the space provided in this booklet and the back of the pages to work out the answers to the multiple choice problems. Use the space provided on the actual page for the short answer questions.
- You can use only NON-graphing calculators.
- For multiple choice questions, you get 3 points for a correct answer, 0 points for a blank, and 0 points for a wrong answer. There are NO penalties for guessing.
- Sign the honor code below!

Honor Code: I did not use any unauthorized aid on this exam.

Signature: \_\_\_\_\_

**Part I: Multiple Choice:** (26 questions, 3 pts each = 78 pts)

Pick the best answer among the given choices.

- 1) On March 7, 2007, the United States nominal exchange rate between U.S. dollars and Euros was 0.762€/\$. Which of the following interpretations of this fact is CORRECT?
  - a) The Mankiw textbook must be more expensive in terms of U.S. dollars in Europe than in the U.S.
  - b) With 1 Euro you can purchase 0.762 U.S. dollars.
  - c) The Mankiw textbook must be less expensive in terms of U.S. dollars in Europe than in the U.S.
  - d) With 1 U.S. dollar you can purchase 0.762 Euros.**
  - e) The theory of PPP says this nominal exchange rate must move towards 1 in the long run.
  
- 2) Angus is planning a vacation to the city of Sao Paulo in Brazil to work on his suntan. He checks the WSJ and finds that you can buy 2.2 Brazilian Reals with a U.S. dollar. He also finds that in Sao Paulo he can buy a tube of suntan lotion for 4 Reals, while in Ann Arbor the suntan lotion costs \$2.40 per tube. Which of the following statements is CORRECT?
  - a) Angus can't figure out where it is cheaper to buy the suntan lotion with this information.
  - b) A tube of suntan lotion is cheaper in Sao Paulo than in Ann Arbor.**
  - c) A tube of suntan lotion is cheaper in Ann Arbor than in Sao Paulo.
  - d) It does not matter where Angus buys the suntan lotion, because PPP holds in this case.
  - e) If one dollar could purchase at least 3 Reals, then at the same prices the suntan lotion would be cheaper in Sao Paulo.
  
- 3) The U.S. is currently experiencing a large trade deficit. President Bush is considering a new policy that would greatly restrict the imports of foreign goods by the use of import quotas. According to Mankiw's Open Economy Model, which of these predictions of the consequence of the policy is CORRECT?
  - a) Because imports will fall, Net Exports will increase, and therefore NCO must increase as well.
  - b) U.S. exports will increase because there will be less competition from imported goods.
  - c) Even though imports will fall, NCO will not increase because the policy does not change the incentives for capital to flow into and out of the U.S.**
  - d) This policy will make the U.S. better off because reducing imports will reduce the trade deficit.
  - e) None of the above.
  
- 4) Recall the model of the supply and demand for loanable funds. Which statement about the model is INCORRECT?
  - a) The supply of loanable funds comes from public and private saving.
  - b) The demand for loanable funds comes from both households and firms that want to borrow money for investments.
  - c) At a higher real interest rate, a greater quantity of loanable funds is supplied.
  - d) If the interest rate falls, the demand curve for loanable funds will shift to the right.**
  - e) If the tax rate on interest income were increased, the supply curve of loanable funds would shift to the left.

- 5) Suppose there are two different bonds that have an equal present value at 5% interest rate and the same maturity date in 10 years. Most of the payments from Bond 1 are received within the first 5 years while most of the payments from Bond 2 are received during the second 5 years. If the interest rate increases, which of the following is true?
- The present values of the two bonds do not change.
  - The present values of the two bonds change, but the present values remain equal.
  - Bond 1 has a higher present value than Bond 2 at the higher interest rate.**
  - Bond 2 has a higher present value than Bond 1 at the higher interest rate.
  - The present values of both bonds increase.
- 6) What does diversification of risk in the textbook refer to?
- The reduction of both firm-specific risk and market risk by investing in a smaller number of stocks.
  - The reduction of firm-specific risk but not market risk by investing in a smaller number of stocks.
  - The reduction of market risk but not firm-specific risk by investing in a smaller number of stocks.
  - The reduction of both firm-specific risk and market risk by investing in a larger number of stocks.
  - The reduction of firm-specific risk but not market risk by investing in a larger number of stocks.**
- 7) What is the difference between the Federal Funds rate and the discount rate?
- The Federal Funds rate is charged by the Fed on what it lends; the discount rate is paid by the Fed on what it borrows.
  - The Federal Funds is short term and the discount rate is long term.
  - They refer to two different interest rates. The Federal Funds rate is controlled directly by the Fed, but the Fed only sets a target to influence the discount rate.
  - They refer to two different interest rates. The discount rate is controlled directly by the Fed, but the Fed only sets a target to influence the Federal Funds rate.**
  - There is no difference; they are two names for the same thing.
- 8) Suppose that the minimum required reserve ratio is 0.20. Then if the Fed purchases \$10 million worth of US government bonds, which of the following is true?
- Money supply increases by at least \$50 million.
  - Money supply decreases by at least \$50 million.
  - Money supply increases by at most \$50 million.**
  - Money supply decreases by at most \$50 million.
  - Money supply is unchanged, because the Fed is part of the US government.

- 9) Suppose the amount of currency in the Lorchland economy is \$100. Also, assume that the banks only hold the minimum amount of required reserves, which is 10% of deposits, and that Lorchland households put all of their currency into their bank accounts. Which of the following is true?
- Money supply is \$1000 and the amount of reserves is \$1000.
  - Money supply is \$1000 and the amount of reserves is \$900.
  - Money supply is \$1000 and the amount of loans is \$1000.
  - Money supply is \$1000 and the amount of loans is \$900.**
  - None of the above.
- 10) Which of the following is NOT a function of money?
- Medium of exchange.
  - Unit of account.
  - Liquidity.**
  - Store of value.
  - They are all functions of money.
- 11) A political crisis results in "capital flight" out of Vanatu, meaning that foreign investors sell their Vanatu assets and buy assets in their home countries. Which of the following will happen to Vanatu?
- Domestic investment increases.
  - The real interest rate increases.**
  - The real exchange rate appreciates.
  - Net exports decrease and NCO increases
  - None of the above
- 12) Suppose the French government imposes an import quota on films, limiting US exports of films to France. Which of the following will happen to the U.S.?
- The real exchange rate appreciates and net exports increase.
  - The amount of US net exports remains the same.**
  - The real interest rate goes down and domestic investment goes up.
  - National savings decreases.
  - The quota on French films breaks the  $NX=NCO$  identity.
- 13) After a fall in stock prices on the NASDAQ, European investors buy US stocks from Americans using Euros and these euros are deposited in euro-denominated bank accounts in Germany. Which of the following is a CORRECT result of these transactions?
- Investment in the US increases
  - Real GDP in the US increases
  - NX of the US increases
  - NCO of the US increases
  - None of the above**
- 14) About how fast would US per capita GDP have to grow, per year, in order for it to double in 50 years?
- 1.4%**
  - 2%
  - 2.8%
  - 10%
  - 14%

- 15) In lecture, we discussed the relationship between NX and NCO, arguing that it must be true, as an identity, that  $NX=NCO$ . Which of the following statements about this identity is CORRECT?
- a) Because  $NX=exports-imports$ , according to the identity, foreign investment in the US increases if US imports increase.
  - b) If Brian buys a Japanese car (a Honda), and if Honda uses the dollars to buy US assets, then US NCO will decrease.**
  - c) If foreigners decide to buy fewer US exports, the NCO curve should shift to the left.
  - d) Imposing a higher import tariff on Japanese cars will break the  $NX=NCO$  identity.
  - e) If an American spends \$10,000 buying British bonds, that same \$10,000 will be spent on additional US exports.
- 16) Which of the following events would shift the money demand curve?
- a) An increase in the minimum reserve ratio.
  - b) The selling of government bonds by the Fed.
  - c) Holding the velocity of money constant.
  - d) An improvement in production technology.**
  - e) None of the above
- 17) Which of the following is generally NOT considered a cost of inflation?
- a) The cost to businesses of adjusting prices more frequently.
  - b) The cost to individuals associated with reduced holding of money.
  - c) The cost associated with changes in tax liability.
  - d) The misallocation of resources.
  - e) The higher cost of living.**
- 18) Which of the following statements best describes a version of the Efficiency Wages theory?
- a) Wages are kept higher than market forces would dictate because employers want to induce high effort from the workers.**
  - b) The efficiency wage is the lowest wage that an employer can offer workers, for a given unemployment rate, and still make positive profits.
  - c) When turnover rates are high, employers can pay workers low wages.
  - d) Wages are said to be efficient because they allocate resources across economic agents in a welfare maximizing manner.
  - e) The unemployment rate is greater than zero because wages are kept higher than market forces would dictate in order to provide workers with more stable employment.
- 19) Congress is considering raising the minimum wage to a level above what some workers are paid. JB is called to testify at a congressional hearing as to the likely effects of this policy. At the last minute he calls in sick and asks you to replace him. How will the equilibrium unemployment rate and wage level change as a result of raising the minimum wage?
- a) The wage level will increase and the unemployment rate will decrease.
  - b) The wage level will increase and the unemployment rate will increase.**
  - c) The effect on both the wage level and the unemployment rate is uncertain.
  - d) The change will mostly affect highly educated workers.
  - e) The unemployment rate must decrease, but the wage effect is uncertain.

20) Using the information from the following table, compute the labor force participation rate, the unemployment rate and the number of discouraged workers.

Numbered unemployed	5,050,000
Adult population able to work	32,500,000
Population	43,750,000
Number employed	21,400,000
Adult Population able and wanting to work	29,600,000
Non-Adult Population	7,050,000

- a) Labor force participation rate is 67%, the unemployment rate is 19% and the number of discouraged workers is 3150.
- b) Labor force participation rate is 89%, the unemployment rate is 16% and the number of discouraged workers is 3150.
- c) **Labor force participation rate is 72%, the unemployment rate is 19% and the number of discouraged workers is 3150.**
- d) Labor force participation rate is 89%, the unemployment rate is 16% and the number of discouraged workers is 8050.
- e) Labor force participation rate is 72%, the unemployment rate is 12% and the number of discouraged workers is 8050.

21) Suppose that the unemployment rate is constant over time at  $u=6\%$ . Every week, 50 in every 10,000 employed workers quit their jobs and another 70 in every 10,000 are fired. Assuming the labor force is constant over time, what percentage of unemployed workers become re-employed each week ( $f$ )?

- a) **18.8%**
- b) 1.9%
- c) 12.6%
- d) 0.3%
- e) 5.4%

22) Using data from the following table, what is the percentage change of the GDP deflator between 2000 and 2003?

Year	Nominal GDP (in billions of current dollars)	Real GDP (in billions of 2001 dollars)
2000	7,454	6,835
2001	8,322	8,322
2002	8,756	7,367
2003	9,031	8,648

- a) **-4.2%**
- b) 4.2 %
- c) 26.5%
- d) 12.4%
- e) -8.6%

23) If the prices of existing houses stop rising, after rising steadily for many years, this will cause

- a) Consumption to increase as families spend more on home improvements in order to restore their value.
- b) Savings to increase as families switch their wealth from houses to financial assets like stocks and bonds.
- c) **Consumption to decrease as homeowners are less able to borrow more against the value of their houses.**
- d) Savings to decrease as workers need to save less in order to afford a home.
- e) No effect on saving or consumption, since these depend only on the real interest rate.

24) The news reported that the US trade deficit grew to a record high in 2006. Compared to 2005

- a) US exports decreased and US imports increased.
- b) US exports increased and US imports decreased.
- c) US exports and imports both decreased, but exports decreased by more.
- d) **US exports and imports both increased, but imports increased by more.**
- e) Data on exports and imports for 2006 are not yet available. The trade deficit was inferred from data on net international capital flows.

- 25) The Wall Street Journal reported that growth in US labor productivity had increased the “compensation” of workers more than it had increased their wages. What’s the difference?
- a) Wages include taxes, while compensation does not, so the increase in compensation reflects recent tax cuts.
  - b) Compensation includes employer-provided health insurance benefits, the costs of which have grown faster than wages.**
  - c) Wages are payments only for an 8-hour day, while compensation includes overtime, which has been growing.
  - d) Wages are the incomes of blue-collar workers only, while compensation includes the salaries of white-collar workers and managers.
  - e) The two terms are intended to measure the same thing, but while wages are measured by the Bureau of Labor Statistics, compensation is measured by the Department of Commerce, and the two agencies get different answers.
- 26) The assigned article by David Francis discussed the relationship between unemployment insurance (UI) and unemployment. The article argues that
- a) UI reduces long-term unemployment by making it easier for the unemployed to find jobs.
  - b) UI reduces short-term unemployment by discouraging employers from firing workers.
  - c) UI has no noticeable effect on unemployment because the programs are too small to matter for most workers and firms.
  - d) UI increases measured unemployment by inducing employed workers to claim that they are unemployed.
  - e) UI increases actual unemployment by inducing workers to work only long enough to establish eligibility for benefits, then stay out of work until the benefits run out.**



## Short Answer questions

1. The quantity equation of money is  $MV=PY$ , where  $M$  is the quantity of money and  $P$  is the price level.

a) Define the two remaining terms,  $V$  and  $Y$ .

$V$ : The velocity of money, meaning the number of times in a year that a unit of currency is used to purchase a newly produced good or service.

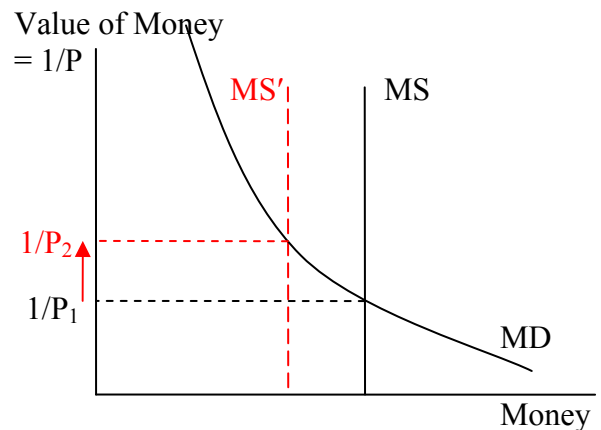
$Y$ : The level of real output (real GDP)

b) Use the principle of monetary neutrality to answer this question: What is the effect of  $M$  on  $Y$ ?

*Monetary neutrality says that in the long run, changes in the money supply cannot change real variables, including real output  $Y$ .*

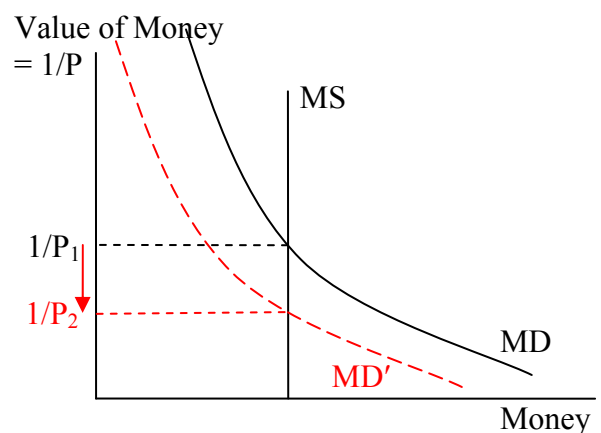
c) Assume that  $V$  remains constant. If the Fed decreases the money supply, what happens to the value of money? Use the appropriate graph to illustrate your answer.

*With  $V$  constant, a shift left in  $MS$  results in a movement up along the money demand curve, increasing  $(1/P)$  which is the value of money.*



d) Use the money demand-money supply model to show how a change in money demand can cause inflation. What might cause money demand to change in this fashion?

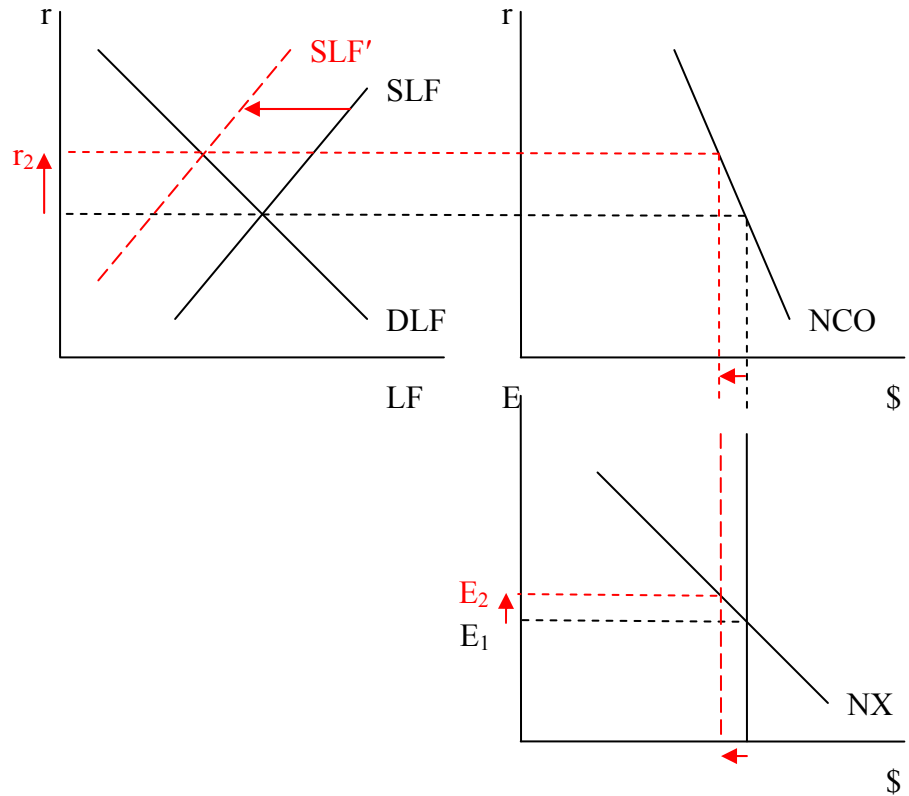
*If the money demand curve shifts to the left, the value of money ( $1/P$ ) falls, meaning the price level has risen and we have inflation. From the quantity equation,  $M=PY/V$ , so if real output falls then money demand will shift back. An increase in velocity would also shift back money demand.*



2. Recently, the US Congress has considered raising taxes to fully finance new government expenditures. Members of Congress have also expressed concern about the size of the US trade deficit. Use the **graphs** of the open economy model to answer the following questions. Label your diagrams clearly.

- a) What is the effect of the tax and spend policy on the real interest rate  $r$ , the real exchange rate  $E$ , and the amount of net capital outflows  $NCO$ ?

*Private savings falls, public savings is constant so national savings falls. We get that  $r$  increases,  $NCO$  falls, and  $E$  increases.*



- b) Use your results from a) to figure out whether raising taxes for new government spending will **increase or decrease** the trade deficit. Show clearly how you get your answer.

*NCO fell and the real exchange rate went up. To maintain the  $NX = NCO$  identity, NX must have decreased as well, as we see on the graph. So the trade deficit has increased (gotten more negative).*