Econ 102 ANSWERS at the end Lecture 100
Exam II Form 1

**ECON 102/100**

March 18, 2003

| Section | Day | Time | Location | GSI |
|---|---|---|---|---|
| 101 | F | 10-11:30 | 1060 EH | Irina Grafova |
| 102 | TH | 11:30-1 | B239 EH | Ivan Kandilov |
| 104 | TH | 1-2:30 | 351 DENN | Jon Millar |
| 105 | TH | 2:30-4 | 173 LORCH | Jan Sokolowsky |
| 106 | TH | 4-5:30 | 142 LORCH | Jan Sokolowsky |
| 107 | F | 2:30-4 | 142 LORCH | Jon Millar |
| 109 | F | 11:30-1 | B239 EH | Irina Grafova |

- 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 point 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.

Name: (PRINT) ______________________________

UM ID #: ______________________________

Signature: ______________________________

Section #: __________

**Multiple Choice: (26 questions, 3 pts each = 78 pts)**
Pick the best answer among the given choices.

1. Your grandmother wants to help you out, and she offers to give you either \$700 today or \$735 one year from now. The real interest rate is 5%, the economy is experiencing deflation, and you want to base your decision on present values using the nominal interest rate. Which do you choose?
   a) Neither; with deflation you are better off getting nothing.
   b) You are indifferent between the options.
   c) You prefer to receive \$700 right away.
   d) You prefer to receive \$735 one year from now.
   e) The above information is insufficient to make a sound choice.

2. Suppose the velocity of money does not change over time. The Federal Reserve is following a policy of increasing the money stock by 7% each year. Output grows at a rate of 2.4%. If the real interest rate is 3%, then the nominal interest rate
   a) is equal to 6.4%.
   b) is equal to 1.6%.
   c) is equal to 7.6%.
   d) is equal to exactly 10%.
   e) cannot be determined from the given information.

3. Classical Dichotomy refers to
   a) monetary non-neutrality.
   b) the opposing forces of demand and supply.
   c) the differences between Republicans' and Democrats' economic views.
   d) the struggle for power between the Federal Reserve Bank and the national government.
   e) the theoretical separation of nominal and real variables.

4. Which of the following is **NOT** a cost of expected inflation?
   a) arbitrary redistribution of wealth
   b) shoeleather cost
   c) menu cost
   d) relative price variability
   e) inflation-induced tax distortions

5. If the velocity of money increases, then
   a) the price level decreases all else constant.
   b) the value of money decreases all else constant.
   c) the demand for money increases all else constant.
   d) the supply of money shifts back all else constant.
   e) nominal GDP falls relative to the money stock.

6. European investors purchase US corporate bonds using euros. These euros are sold further on foreign exchange market to a US firm that uses them to purchase French wine. Which of the following is TRUE for the US net exports (NX) and for the net foreign portfolio investment (FPI) and net foreign direct investment (FDI) that together add to net foreign investment (NFI)?

a) FPI↓ and NX↓
b) FDI↓ and NX↓
c) FPI↑ and NX↓
d) FPI ↓ and NX does not change
e) FDI↑ and NX↑

7. If the US real exchange rate appreciates due to a change in the supply of US dollars in the foreign exchange market, US exports ________

a) and imports both increase
b) and imports both decrease
c) increase and imports decrease
d) increase and imports stay the same
e) decrease and imports increase

8. According to Purchasing Power Parity theory, which of the following is TRUE?

a) the real interest rate must be equal to one
b) a dollar must be able to purchase the same quantity of goods in all countries
c) a dollar must be able to purchase the same quantity of foreign currency in all foreign countries
d) all of a), b), and c)
e) none of the above

9. Which of the following is TRUE according to the data below?

| Country | Price of a Big Mac | Exchange rate |
|---|---|---|
| South Korea | 3000 won | 1218 won/$ |
| Spain | 375 pesetas | 155 pesetas/$ |
| Mexico | 19.9 peso | 9.53 peso/$ |
| Netherlands | 2.16 euros | 0.916 euros/$ |
| US | 2.43 US dollars | |

a) The Netherlands offers the cheapest Big Mac.
b) South Korea offers the most expensive Big Mac.
c) Mexico offers the cheapest Big Mac.
d) Mexico offers the most expensive Big Mac.
e) None of above.

10. Why might the US long-run aggregate supply curve shift?

a) increase in immigration
b) increase in the economy's capital stock
c) a discovery of a vast, new oil field in Alaska
d) all of (a), (b), and (c).
e) none of the above, since the long-run aggregate supply curve is vertical

11. During the stock market crash of October 1987, the Fed

a) nearly created a financial panic by not acting as a lender of last resort.
b) nearly created a financial panic by raising the discount rate.
c) prevented a financial panic by raising reserve requirements.
d) prevented a financial panic by providing liquidity to the financial system.
e) prevented a financial panic by lowering reserve requirements.

12. If the reserve ratio is 25%, and banks do not hold excess reserves, then when the Fed sells $40 million of bonds to the public, bank reserves _______ by $40 million and the money supply eventually ____________ .

a) increase; increases by $70 million
b) increase; increases by $160 million
c) decrease; decreases by $70 million
d) decrease; decreases by $160 million
e) None of the above.

13. Although we usually assume for simplicity that banks hold no excess reserves, in fact, during recessions, banks typically choose to hold more excess reserves relative to their deposits. For a given amount of reserves in the economy, this action

a) increases the money multiplier and increases the money supply.
b) decreases the money multiplier and decreases the money supply.
c) does not change the money multiplier, but increases the money supply.
d) does not change the money multiplier, but decreases the money supply.
e) does not change the money multiplier, and does not change the money supply.

14. If the government budget went from a deficit to a surplus, then according to the loanable funds model, government

a) debt would rise, the supply of loanable funds would shift right, and interest rates would rise.
b) debt would rise, the supply of loanable funds would shift right, and interest rates would fall.
c) debt would fall, the supply of loanable funds would shift left, and interest rates would rise.
d) debt would fall, the supply of loanable funds would shift right, and interest rates would fall.
e) None of the above.

15. Which of the following events would NOT decrease the size of the US labor force?

a) The participation rate in the US declines.
b) Jan, who is classified as unemployed, decides to quit actively looking for employment.
c) Alan, who is initially classified as unemployed, decides to take a job at McDonald's.
d) Irina quits her job in order to retire.
e) None of the above; that is, all of the events above will decrease the size of the labor force.

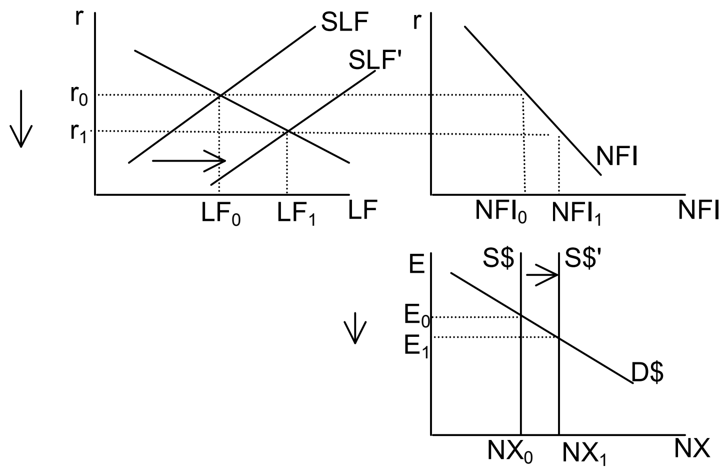
16. Which of the following statements is FALSE?

a) Minimum wage laws are a better explanation for structural employment among teenagers than among college graduates.
b) Labor unions tend to raise the natural rate of unemployment, because they raise the wage of labor above the level at which labor supply would equal labor demand.
c) To some extent, firms may be able to increase profits by paying a wage above the market-clearing level, because workers work harder.
d) Discouraged workers are counted as part of the labor force.
e) Unemployment insurance has a tendency to increase the amount of frictional unemployment in the economy.

17. Suppose that consumers in China develop a taste for American blue jeans, desiring to import more of them than before at any given real exchange rate. This change will affect the equilibrium levels of which of the following variables in the US?

a) The real exchange rate.
b) NX.
c) r.
d) NFI.
e) All of the above.

18. Consider the sequence of events depicted in the diagram below.




Which of the following could NOT potentially cause these events to occur?

a) Government reduces purchases.
b) Foreigners increase purchases of our exports, for given prices and exchange rate.
c) Households reduce consumption, for given levels of income and the interest rate.
d) Government increases taxes on income.
e) None of the above; that is, all of the above are plausible explanations for the diagram.

19. Which of the following statements about Mankiw's open economy model is FALSE?

a) If a country experiences "capital flight" its real interest rate tends to rise.
b) Net foreign investment (NFI) is unaffected by the level of the real exchange rate.
c) A decrease in government spending on goods and services (G) tends to increase both the government budget surplus (T-G) and the trade surplus (NX).
d) A change in trade policy doesn't affect a country's balance of trade.
e) None of the above; that is, a), b), c), and d) are all TRUE.

20. According to the theory of Ricardian equivalence,

a) An increase in the price level has the same effect on the money supply as an equal percentage increase in real GDP.
b) An increase in the government budget deficit causes an equal increase in private saving.
c) Exports are increased by a fall in the relative cost of a country's goods.
d) A decrease in the tax rate causes a fall in the real interest rate.
e) If taxes are cut, but transfer payments are cut by the same amount, the economy will be unaffected.

21. According to the assigned article by Griswold on "America's Record Trade Deficit…," which of the following have contributed to the current large trade deficit of the United States?

a) a low level of national saving in the U.S.
b) unfair trade practices abroad.
c) declining industrial competitiveness in the U.S.
d) all of the above.
e) none of the above.

22. The Aggregate Demand curve differs from the demand curve of microeconomics because

a) the AD curve slopes down
b) the AD curve slopes up
c) the AD curve is not primarily about substitution between one good and others
d) the AD curve does not take into account improvements in the quality of goods
e) equilibrium is found at the bottom of the AD curve, not at its intersection with a supply curve

23. You've been asked to measure Gross Domestic Product. You've learned that the sum of consumption, domestic investment, government purchases, and exports is $24 trillion. You then learn that imports are $2 trillion. To get GDP, you should

a) add $2 trillion to $24 trillion because imports are purchased by consumers, firms, and government.
b) add $2 trillion to $24 trillion because imports are used as inputs in the production of other goods.
c) subtract $2 trillion from $24 trillion because imports are purchased by consumers, firms, and government.
d) subtract $2 trillion from $24 trillion because imports cost domestic jobs.
e) ignore the import data, because imports are not produced at home.

24. Suppose that the US Consumer Price Index is based on a basket of goods that includes imported clothing, the price of which is constant in foreign currency. Assuming that the prices of domestically produced goods do not change, use Mankiw's Open Economy Model to determine the effect of a capital outflow (US residents deciding to hold more foreign bonds for any given interest rate) on the CPI. The US CPI will

a) rise because the dollar will appreciate.
b) fall because the dollar will appreciate.
c) rise because the dollar will depreciate.
d) fall because the dollar will depreciate.
e) remain unchanged because the exchange rate does not change.

25. If every year, real GDP grows at 3% a year and the money stock grows at 7% a year, and if velocity of money is constant, about how long will it take for the price level to double?

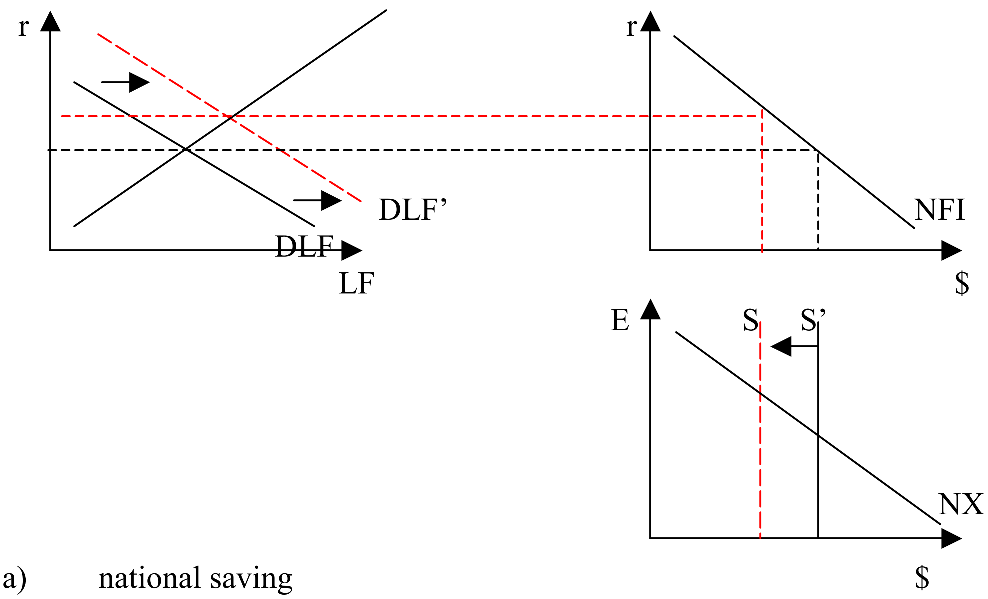
a) 23 years.
b) 18 years.
c) 10 years.
d) 7 years.
e) It will never double.

26. Suppose that the invention of the Internet makes it possible for firms seeking employees, and workers seeking jobs, to find each other more rapidly. Holding constant the size of the labor force, which of the following would we NOT expect to happen in the long run as a result?

a) The natural rate of unemployment falls.
b) The amount of frictional unemployment falls.
c) The Long Run Aggregate Supply curve shifts to the right.
d) The natural rate of output increases.
e) The Supply of Loanable Funds shifts to the left.

**Short Answer: (20pts Total)**
Write a solution to each of the following problems.

1. (10 points) Suppose that Congress passes an investment tax credit, which subsidizes domestic investment. (Assume that it adjusts some other taxes so as to keep its total taxes collected constant.) Using a set of the appropriate diagrams, clearly show and indicate what will be the long-run effects of this policy on the different variables below. Remember to clearly label the axes and use arrows to show the relevant shifts, if any. Answers that are not justified by a diagram will NOT be given credit.




a) national saving

increases

b) domestic investment

increases

c) net foreign investment

decreases

d) the real interest rate

increases

e) the trade balance

decreases

2. Suppose that this year's money supply is \$500, nominal GDP is \$10,000, real GDP is \$5,000, and the exchange rate is 8.00 pesos/\$.

a) (2 points) What is the price level and the velocity of money?

Use the quantity theory equation, $M*V=P*Y$, to obtain:

$V=P*Y/M=10000/500=20$

$P=M*V/Y=500*20/5000=10000/5000=2$.

b) (4 points) Suppose that velocity is constant and the economy's output of goods and services rises by 5 percent each year. What money supply should the Fed set next year if it wants inflation of 3 percent?

Use the quantity theory equation to obtain that

(% change in M) + (% change in V) = (inflation rate) + (% change in Y)

Since V is constant, it follows that (% change in V) is zero, and the inflation rate equals (% change in M) – (% change in Y). Solving for (% change in M), it equals the inflation rate + (% change in Y) = 3% + 5% = 8%. Hence, the Fed should set the money supply for next year to be 8% higher than \$500, or (1.08)*500 = \$540.

c) (4 points) If the rate of inflation abroad (where the currency is the peso) is 7 percent, and if the theory of Purchasing Power Parity were to hold for these two years, what would next year's exchange rate be?

Now, because PPP holds, we have E=1, or $e*(P_{US}/P_{abroad})=1$, hence $e = P_{abroad} / P_{US}$. Hence (% change in e) = (% change in $P_{abroad}$) – (% change in $P_{US}$) = 7% – 3% = 4%. Thus, next year, e=(1.04)*8=8.32 pesos.

(Alternatively, $E=e*P_{US}/P_{abroad}=1$, so $P_{abroad}=e*P_{US}=8*2=16$. Next year $P_{US}=1.03*2=2.06$, and next year $P_{abroad}=1.07*16=17.12$. So next year's exchange rate is $e=P_{abroad}/P_{US}=17.12/2.06=8.31$. This differs slightly from the first answer because the percentage changes used there are an approximation.)

ANSWERS TO PART I:

1.D
2.C
3.E
4.A
5.B
6.A
7.E
8.B
9.B or C (both are correct)
10.D
11.D
12.D
13.B
14.D
15.C
16.D
17.A
18.B
19.E
20.B
21.A
22.C
23.C
24.C
25.B
26.E