

**ECON 102/100**

March 23, 2004

Section	Day	Time	Location	GSI
101	F	2:30-4	B239 EH	Jan
102	W	11:30-1	373 Lorch	Justin
103	W	1-2:30	B239 EH	Naomi
104	W	4-5:30	B239 EH	Mato
105	W	2:30-4	B239 EH	Mato
106	W	4-5:30	1068 EH	Naomi
107	F	1-2:30	1372 EH	Nalin
108	W	8:30-10	330 DENN	Justin
109	F	11:30-1	205 DENN	Nalin

- 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, and showing up in the correct exam room are 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.

Name: (PRINT) \_\_\_\_\_

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

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

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

Pick the best answer among the given choices.

1. Which of the following is **not** an effect of the rate of inflation being **low**, as opposed to high?
  - a. Owners of capital benefit from paying lower capital gains taxes.
  - b. Workers feel abused when their wages do not rise as fast as they feel they deserve.
  - c. Consumers spend more time and effort managing their wealth, trying to keep it in forms that earn interest.**
  - d. Unemployment is increased because firms find it harder to reduce real wages when market conditions require it.
  - e. For any given real rate of interest, the nominal interest rate is lower.
  
2. During the 1990s, US imports grew faster than US exports. How, according to either of the articles that you read about this from the web, was this related to employment in the US?
  - a. Increased imports created jobs because it requires workers to bring goods into the country.
  - b. Increased employment caused imports to rise because shortages forced firms to go abroad for inputs.
  - c. Exports of goods required export of jobs, and caused recession in the US economy.
  - d. The booming US economy raised employment and income, causing high levels of investment and imports.**
  - e. High demand for labor raised US wages, causing employers to move jobs overseas.
  
3. Which of the following is **not** one of the reasons suggested for the recent decline in US tax revenues?
  - a. The tax cuts enacted by Congress at the request of the Bush administration.
  - b. The rise in costs of health care, which causes a larger fraction of labor compensation to be untaxed.
  - c. Shifts by wealthy people of their assets into forms that take advantage of recent tax cuts on dividends and capital gains.
  - d. Globalization, which has permitted companies to move more income offshore.
  - e. The value of national output, on which taxes are collected, has been falling.**

4. The Organization of Petroleum Exporting Countries (OPEC) was recently reported to be considering
- Increasing its output of oil because the price of oil has increased recently.**
  - Decreasing its output of oil because the price of oil has increased recently.
  - Increasing its output of oil because the price of oil has decreased recently.
  - Decreasing its output of oil because the price of oil has decreased recently.
  - Leaving its output of oil unchanged because the price of oil is within its target range.

	<u>Quantity-1970</u>	<u>Price-1969</u>	<u>Price-1970</u>	<u>Price-1971</u>
Love Beads	4	1.4	1.5	1.6
the Grateful Dead Concert Ticket	2	1	0.75	0.5

5. The base year is 1970. The quantities in the consumption basket are those listed for 1970, and all goods listed above are consumption goods. Which of the following is **false**?
- The economy was experiencing deflation.
  - The percentage decrease in the price of the Grateful Dead concert ticket was greater than the increase in the price of Love Beads.
  - The CPI in 1969 was 101.3
  - Inflation from 1970 to 1971 was negative 1.3 percent.
  - Inflation from 1969 to 1971 was negative 12.5 percent**
6. Which of the following could cause a leftward shift in the supply of loanable funds curve?
- A decrease in the real interest rate.
  - A decrease in consumer confidence about the future.
  - A decrease in taxes with no change in government expenditures.**
  - An decrease in taxes with an identical decrease in government expenditures.
  - None of the above.

7. Which of the following statements is **true**?
- a. Structural unemployment can be a consequence of workers leaving existing jobs to find ones they like better.
  - b. Efficiency wages do not cause unemployment.
  - c. The natural rate of unemployment includes cyclical unemployment.
  - d. Discouraged workers are able and willing to work, yet they are not part of the labor force.**
  - e. Most spells of unemployment are long, but most unemployment observed at any given time is short term.
8. Your father is going through a mid-life crisis and wants to buy a fast sports car. You are concerned about the impact of his decision on U.S. GDP. If he buys a Maserati (made in Italy) instead of a Chevy Camaro (made in the U.S.), then which of the following statements is **true**?
- a. You are concerned for no reason, because the actions of one person (your father) do not impact GDP.
  - b. Italy's exports and GDP increase; US imports increase, but US GDP falls.
  - c. Italy's net exports increase and consumption decreases; US net exports decrease and consumption increases.
  - d. Italy's investment decreases and its GDP remains unchanged; US investment and net exports increase.
  - e. None of the above.**
9. A risk-averse individual should
- a. always prefer a sure payment of \$100 over a gamble in which she can win \$110 with 90% probability and \$10 with 10% probability.**
  - b. always invest in bonds rather than stocks.
  - c. always prefer a less risky stock over a more risky stock.
  - d. always prefer an investment with lower return and less risk to one with a higher return and more risk
  - e. always be insured.

10. Suppose we have the following data for four countries giving their levels and growth rates of GDP per capita. All of the following are false **except**:

	GDP per capita in 2004	Annual growth rate of GDP per capita
Lucastan	\$6,000	0.90%
People's Republic of Nash	\$3,000	0.50%
United States of Friedman	\$5,000	1.00%
Democratic Socialist Republic of Arrow	\$2,500	2.50%

- a. The Democratic Socialist Republic of Arrow will never catch up to Lucastan.
- b. The People's Republic of Nash will catch up to Lucastan in approximately 175 years.
- c. The GDP per capita of the United States of Friedman will be approximately \$7,500 in 70 years.
- d. People's Republic of Nash has a low growth rate due to diminishing returns to scale.
- e. The Democratic Socialist Republic of Arrow will catch up to the United States of Friedman in approximately 47 years.**
11. Suppose the required reserve ratio is 10%, and the commercial banking system has \$5 million of deposits and holds no excess reserves. If the required reserve ratio is reduced to 8% and banks still do not want to hold any excess reserves and nonbanks hold no cash, then banks will initially make new loans of \_\_\_\_\_, which will lead to an eventual increase in the money supply by \_\_\_\_\_.
- a. \$100,000; \$100,000
- b. \$100,000; \$1 million
- c. \$100,000; \$1.25 million**
- d. \$400,000; \$400,000
- e. \$400,000; \$4 million
12. Which of the following statements is true?
- a. The Federal Reserve has precise control over the US money supply.
- b. Credit limits on credit cards are considered to be part of the money supply.
- c. Goods that are not specifically intended to be used as money can never be used as money.
- d. Stocks and bonds are more liquid than savings accounts.
- e. The discount rate is the interest rate that the Federal Reserve charges on its loans to banks.**

13. Hyperinflation is usually caused by...
- a. banks making an excessive amount of loans.
  - b. supply shortages that drive up the costs of business inputs.
  - c. excessive government spending and printing money.**
  - d. insatiable consumer demand for more goods.
  - e. speculative bubbles in asset markets.
14. If we assume that the velocity of money is fixed, then according to the quantity theory an increase in the money supply must cause a proportionate increase in...
- a. nominal GDP.**
  - b. real GDP.
  - c. real investment.
  - d. the real interest rate.
  - e. none of the above.
15. Due to more stringent requirements and controls upon entering the U.S. foreigners become more apprehensive about traveling to the U.S. as tourists. According to the long run open economy model, the real exchange rate will \_\_\_\_\_ and the U.S. trade deficit will \_\_\_\_\_ .
- a. fall; remain the same**
  - b. fall; fall
  - c. rise or fall; fall
  - d. rise; remain the same
  - e. rise; rise
16. Japan reduces its budget deficit by reigning in its spending. According to the long run open economy model, the quantity of U.S. domestic investment will \_\_\_\_\_ and the quantity of U.S. national saving will \_\_\_\_\_ .
- a. fall; rise
  - b. fall; fall
  - c. fall; remain unchanged
  - d. rise; fall**
  - e. rise; rise

17. The prime minister of Tuvalu is considering the following policies to increase net exports in the long run:
- I. Export subsidies
  - II. Import quotas
  - III. Decrease in government expenditures
- According to the open economy model, which of these policies will accomplish the goal?
- a. only I
  - b. only II
  - c. **only III**
  - d. I and II
  - e. I, II and III
18. According to the long run open economy model, which of the following is **false**?
- a. **A decrease in the money supply decreases the nominal exchange rate.**
  - b. A tax cut causes the real interest rate to rise.
  - c. Restricting trade will leave net exports unchanged.
  - d. Political instability causes a country's currency to depreciate.
  - e. Capital flight leads to an increase in the real interest rate.
19. Suppose that the exchange rate is 10 Moroccan dirhams per U.S. dollar. Also suppose that you can buy a crate of oranges for 300 dirhams in the Moroccan capital of Rabat and can buy a similar crate of oranges in Miami for \$35 dollars. Assuming that there are no transport costs, the real exchange rate based on oranges is \_\_\_\_\_ .
- a. greater than one and arbitrageurs could profit by buying oranges in the United States and selling them in Morocco.
  - b. **greater than one and arbitrageurs could profit by buying oranges in Morocco and selling them in the United States.**
  - c. less than one and arbitrageurs could profit by buying oranges in the United States and selling them in Morocco.
  - d. less than one and arbitrageurs could profit by buying oranges in the Morocco and selling them in the United States.
  - e. equal to one and arbitrageurs cannot profit from shipping oranges between the two countries.

Country	Currency	Currency per U.S. dollar	U.S. Price Index	Country Price Index
Brazil	Real	4	200	204
Japan	Yen	125	200	250
Mexico	Peso	10	200	2,000
Canada	Dollar	1.25	200	160
Switzerland	Franc	1.2	200	200

20. The following question is based on the table above, in which the “price indexes” measure the price of a common basket of goods in each country. For which country in the table does purchasing-power-parity hold?
- Brazil
  - Japan
  - Mexico**
  - Canada
  - Switzerland
21. Suppose a U.S. resident buys a Jaguar car from Great Britain and the British exporter uses the U.S. dollar revenue to buy stock in the American corporation General Electric from a Japanese shareholder, who then deposits it into a dollar denominated bank account in Japan. Which of the following statements is true from the perspective of the United States?
- $NX \downarrow$ ,  $FDI \downarrow$
  - $imports \downarrow$ ,  $NFI \downarrow$
  - $NX \downarrow$ ,  $FPI \downarrow$**
  - $NX \uparrow$ ,  $NFI \downarrow$
  - $NX \downarrow$ ,  $NFI$  unchanged
22. Consider the following data related to the GDP of the country Macromedia:
- GDP=5,000
  - Consumption= 3,000
  - Government purchases= 500
  - Macromedia’s investment abroad =700
  - Exports =1,500
  - Domestic Investment = 1,000
  - Private Savings = 300
- Which of the following is **not** true?
- Imports = 1000
  - Net exports = 500
  - The world’s investment in Macromedia = 200
  - Net tax revenues = 1,700
  - National Savings = 2,000**



23. Consider an economy which is in long run equilibrium with all nominal and real variables constant over time. Then, unexpectedly, the central bank decides to increase the required reserve ratio. Once the new long run equilibrium is reached, which variables will be **lower** in the new long run equilibrium compared to the initial equilibrium?
- I. The money supply.
  - II. The price level.
  - III. The real interest rate
  - IV. The inflation rate
  - V. The nominal exchange rate (the foreign-currency price of domestic currency)
- a. I only
  - b. I, II only**
  - c. II, V only
  - d. I, II, V only
  - e. None of these variables is lower in the new equilibrium than initially.
24. In the model of aggregate demand and aggregate supply an increase in consumer optimism will
- I. shift aggregate demand to the right
  - II. cause a short run increase in unemployment
  - III. cause a short run increase in prices
  - IV. cause a long run increase in output
- a. I and II only
  - b. I and III only**
  - c. I, II and III only
  - d. II, III and IV only
  - e. I, II, III and IV
25. According to The Nalin Report on Matostan's economy, 3400 people are employed. 600 people are unemployed and looking for a job. The cyclical rate of unemployment is currently at 2.5 percentage points. Then it must be true that the natural rate of unemployment is \_\_\_\_\_ **15%** and, in the long run, the **rate of job finding** is approximately \_\_\_\_\_ than the **rate of job separation**.
- a. greater than; 4.7 times larger
  - b. greater than; 4.7 times smaller
  - c. equal to; 5.7 times smaller
  - d. less than; 7.0 times larger**
  - e. less than; 7.0 times smaller

26. The long-run aggregate supply curve is vertical, because
- a. the natural rate of unemployment does not vary over the business cycle.
  - b. a rising price level raises marginal cost along with price of output.**
  - c. net foreign investment does not depend on the real exchange rate.
  - d. the central bank controls the money supply.
  - e. perfectly competitive firms increase output when price rises.

**Short Answer: (20pts)**

Write a solution to each of the following problems.

1.

Let's go back to the Island of Yap to a time when everybody was still rolling along their stone wheels. After a stormy night, Pacificus comes up with the idea to set up a commercial bank. He wishes to keep 12.5% of all deposits in his safe as reserves. All the assumptions we have made in class, on homeworks, and in sections for the model of fractional reserve banking apply.

Pacificus' mother-in-law, Omi-Na, is the last islander not to have deposited her stone wheels, and she holds out long enough that the system is in long-run equilibrium without her deposit. Eventually though, pressure from Jusgar Tinosi, the bank's security officer, convinces Omi-Na to deposit her entire life saving of 75 fei and, like everyone else in Yap, never again to hold stone wheels.

- a) By how much do the amounts of i) reserves, ii) loans, iii) deposits, and iv) money supply eventually increase as a result of Omi-Na making this deposit?

*The change in the total amount of deposits is equal to the money multiplier times the amount of the initial new deposit, that is  $(1/0.125) * 75 = 600$  fei. Reserves increase by 75 fei, loans go up by 525 fei.*

*The change in money supply equals to the change in currency plus the change in deposits. Currency decreases by 75 fei, deposits increase by 600 fei. Hence, money supply increases by 525 fei.*

After a year or so, the line for loans is still endless, and nobody has withdrawn or deposited any money for many months. Pacificus figures that he can reduce his reserve-deposit ratio to 5%. Just before this decision, he has 8,000 fei in deposits.

- b) After lending out all of the excess reserves, by how much do of i) reserves, ii) loans, iii) deposits, and iv) money supply eventually change?

*Before putting the lower reserve-deposit ratio into effect, Pacificus has  $0.125 * 8,000 = 1,000$  fei in reserves. Wanting to only keep 5% of all deposits as reserves, i.e.  $0.05 * 8,000 = 400$  fei, he has 600 fei excess reserves.*

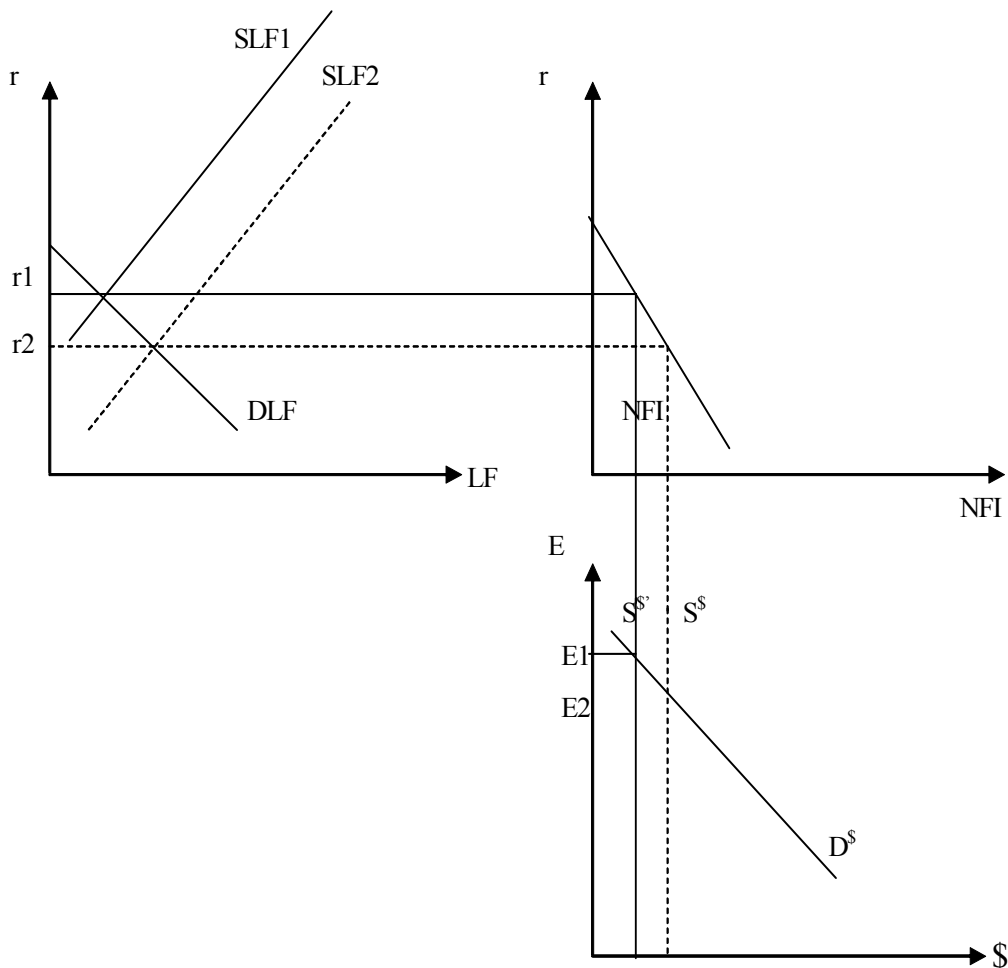
*Through fractional reserve banking, loans and deposits increase by  $(1/0.05) * 600 = 12,000$  fei. All of the currency ends up in reserves again, that is, Pacificus' safe holds 1,000 at the end of this process (supporting 20,000 fei in demand deposits).*

*The amount of reserves remains unchanged, but deposits increase by 12,000 fei. Therefore, money supply increases by 12,000 fei.*

2.

- a) An article in *The New York Times* (Apr. 14, 1995) regarding a decline in the value of the dollar reported that “the president was clearly determined to signal that the United States remains solidly on a course of deficit reduction, which should make the dollar more attractive to investors.” Would deficit reduction in fact raise the value of the dollar? Illustrate your answer in a well-labeled diagram and explain.

***A reduction in the government deficit raises public saving. This causes the SLF to shift to the right, which decreases the interest rate, increases the amount of NFI, which shifts the supply of dollars to the foreign exchange to the right. As a result, the real exchange rate depreciates. Since price levels remain constant, the nominal exchange rate must also fall. That is, in terms of foreign goods and currency, the dollar’s purchasing power is decreasing.***



- b) In 1998 the Russian government defaulted on its debt payments, leading investors worldwide to increase their preference for U.S. government bonds, which are considered very safe. What effect do you think this flight to safety had on the U.S. economy? Be sure to note the impacts on
- i. national saving,
  - ii. domestic investment,
  - iii. net foreign investment,
  - iv. the interest rate,
  - v. the exchange rate, and
  - vi. the trade balance.

*This will reduce net foreign investment at each level of the interest rate, since potential domestic investors will want to keep their funds in the U.S. and foreign investors would like to bring theirs to the U.S. That shifts both the NFI curve and the DLF curves to the left. Thus the real interest rate falls. The effect on NFI, and also on the real exchange rate, seems to be ambiguous, since the NFI curve shifts left but then we move down along it. In fact, however, since  $S=I+NFI$ , or  $NFI=S-I$  and  $S$  falls while  $I$  rises, we can be sure that  $NFI$  falls, or that the movement along the curve does not offset the shift in this case. Thus national saving, net foreign investment, the trade balance, the real interest rate all decrease; domestic investment and the real exchange rate increase.*

