FORM A

Name ____________________________

1:10 -- 2:10
Circle one

Department of Economics
Ohio Wesleyan University
Delaware, Ohio

Economics 110
Principles of Economics
Fall, 2007
Robert J. Gitter

Final Exam

This examination is 100 points and will count 20% of your final grade. Please read the exam over before starting. You will have 2 hours to complete the exam. Please note the point values for each question. No books, notes, or any source of outside help is permitted. You are to answer all questions.

PLEASE LABEL ALL CURVES AND THE AXES ON ALL GRAPHS.
(14 points) a. In the space to the right please draw the Long Run Aggregate Supply Curve, the Short Run Aggregate Supply and the Short Run Aggregate Demand Curve. Label them LRAS, SRAS and SRAD.

b. Please label the axes.

c. In the space to the right please draw the Long Run Phillips Curve and the Short Run Phillips Curve. Label the axes.

d. Should the Short Run Phillips Curve touch the vertical axes? Explain why in terms of economic events.

No. There is always some unemployment in the real world.

e. Suppose the Fed took action to reduce interest rates. Which curve or curves in the Top diagram would shift in the short run? Explain why the curve (or curves) would shift.

SRAD ↑. The action by the Fed would reduce interest rates. The result is an increase in both consumption and investment, parts of SRAD.

f. Show the shift you discussed in the TOP diagram. Label the new curve or curves with a 2, e.g., SPAM2.

SRAD ↑

2

g. In the second diagram, show what happens with the Short Run Phillips Curve. Label it with a 2

Unem ↓ but Infl ↑

h. In the second diagram show what happens in the long run. Label it with a 3.

We will return to LR Phillips curve at higher rate of inflation than initial level.
2. (12 points) The T-Account for Manufacturers Bank is given below.

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserves $30,000</td>
<td>Loans $70,000</td>
</tr>
</tbody>
</table>

a. If the Reserve Requirement was 10%, what would be the required level of reserves?

$10,000 = 0.10 \times 100,000$

b. If the Fed lowered the Reserve Requirement, would Manufacturers Bank make more loans? Explain why or why not.

No. They already have vast excess reserves.

c. Suppose that Lorraine has $20,000 deposited in this bank. Her money is part of the $100,000 in deposits. If the government sold Lorraine a $20,000 bond, and she took money out of the bank to pay for it, would this affect the amount of loans made by the bank? Explain why or why not.

No, they could just take it out of their excess reserves.

d. Let us assume that the Marginal Propensity to Consume was .75. What would be the numerical value of the multiplier? (The spending multiplier, not the money multiplier.)

\[
\frac{1}{1-MPC} = \frac{1}{1-0.75} = \frac{1}{0.25} = 4
\]

e. If the government took the $20,000 and spent it, would we get the full multiplier effect? Explain why or why not.

Yes. Banks have the excess reserves.

f. What would be the final change in GDP from this $20,000 increase in spending?

4 \times 20,000 = 80,000
3. (2 points) The text and lectures have stated several costs of inflation. Cite one such cost and explain it.

- menu cost (sometimes costs money to change prices - print new menus)
- "shoeleather costs" - hold less money, so more trips to the bank
- relative price variability - not all prices change at same rate, so distortions in relative prices
- inflation - induced tax distortions. All of a gain or interest
- confusion - if a surprise, then people get causal

4. (6 points) Suppose the market for pineapples in the United States is given in the graph to the right.

a. What is the equilibrium price?

$5

b. Show the level of consumer surplus by the letter “A” in the graph.

$c 2$

c. What if the world price was $2. If the United States were to allow imports, what would be the price of pineapples in the United States?

d. Show the net change in surplus by the letter “B” if the United States were to allow imports of pineapples.

5. (4 points) a. Anytime the government spends money, it has basically three ways of obtaining the money. State them.

- print
- tax
- borrow (sell bonds)

b. Which of the three is the most inflationary?
6. (4 points) The supply and demand for salmon from Alaska is given in the graph to the right. Show the Impact of an increase in the price of Atlantic salmon, caught in Chile, on the market for Alaskan salmon. Shift any relevant curves and fill in the blanks below. With up, down, right, left of no change.

Price $P$ Quantity $Q$
Demand $D$ Supply $S$

7. (5 points) The demand for tchotchkes is given below.

<table>
<thead>
<tr>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10</td>
</tr>
<tr>
<td>$12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
</tr>
<tr>
<td>48</td>
</tr>
</tbody>
</table>

a. Calculate the elasticity of demand for tchotchkes.

\[
\text{Elasticity} = \frac{\frac{\Delta Q}{Q_0}}{\frac{\Delta P}{P_0}} = \frac{\frac{42}{200}}{\frac{2}{10}} = \frac{42}{400} = 0.23
\]

b Is the demand for tchotchkes elastic, inelastic or unitary?

inelastic (less than one)

c. In class we discussed several factors that tend to make the demand for a good inelastic. Cite two.

- small share of budget
- few substitutes
- short time not necessary

8. (3 points) Give an example of something that is an economic cost, but not an accounting cost.

giving up a job to start a business and not earning your usual foregone salary (economic cost) as an accounting cost.

opening a restaurant in a building you own and not earning the foregone rent (economic cost) as an accounting cost.
9. (5 points) Suppose that the information for a perfectly competitive firm is given below. You may assume the price of the product they sell is $5.

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Fixed Cost</th>
<th>Variable Cost</th>
<th>Marginal Cost</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>$3</td>
<td>$0</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>$3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>$4</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>$5</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>

a. Fill in all the blanks.

b. What quantity should the firm produce? Why is that the best quantity?

3

10. (3 points)
a. There are three basic types of unemployment. Which one or ones do NOT exist when we are at the rate of Natural Unemployment?

(Frictional & Structural do exist)

Cyclical

b. State a type of unemployment that DOES exist when we are at the natural rate of unemployment and give an example of someone who would be unemployed for this reason.

Frictional - Someone who has moved to a new city and has not yet found a job.

Structural - Jobs are in Ohio, but person lives a long way away in West Virginia.
11. (5 points) Suppose we look at the nation of Mendocino. What they produced in 2005 and 2006 as well as the prices are given below.

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantity CDs</th>
<th>Price CDs</th>
<th>Quantity Incense</th>
<th>Price Incense</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>20</td>
<td>$10</td>
<td>100</td>
<td>$1</td>
</tr>
<tr>
<td>2006</td>
<td>22</td>
<td>$12</td>
<td>110</td>
<td>$1</td>
</tr>
</tbody>
</table>

\[
\text{Nominal GDP}_{2005} = (20 \times 10) + (100 \times 1) = 300
\]

\[
\text{Real GDP}_{2005} = (20 \times 10) + (100 \times 1) = 300
\]

\[
\text{Nominal GDP}_{2006} = (22 \times 12) + (110 \times 1) = 374
\]

d. Calculate Real GDP for 2006.
\[
\text{Real GDP}_{2006} = (22 \times 10) + (110 \times 1) = 330
\]

e. Calculate the Implicit Price Deflator for 2006.
\[
\text{Price Deflator}_{2006} = \frac{\text{Nominal GDP}_{2006}}{\text{Real GDP}_{2006}} \times 100
\]
\[
\frac{374}{330} \times 100 = 1.13 \times 100
\]
Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

12. The opportunity cost of an item is
   a. the number of hours needed to earn money to buy the item.
   b. what you give up to get that item.
   c. usually less than the dollar value of the item.
   d. the dollar value of the item.

13. Refer to Figure 2-6. What is the opportunity cost to society of the movement from point A to point C?
   a. 50 baseballs
   b. 100 baseballs
   c. 100 bananas
   d. 300 bananas

14. Refer to Table 3-3. Montana has a comparative advantage in
   a. baskets and Missouri has a comparative advantage in birdhouses.
   b. birdhouses and Missouri has a comparative advantage in baskets.
   c. neither good and Missouri has a comparative advantage in both goods.
   d. both goods and Missouri has a comparative advantage in neither good.

15. Refer to Table 3-3. If Montana and Missouri trade based on the principle of comparative advantage,
    Montana will export
   a. baskets and Missouri will export birdhouses.
   b. birdhouses and Missouri will export baskets.
   c. neither good and Missouri will export baskets.
   d. both goods and Missouri will export neither good.
16. A binding price floor in a market is set
   a. above equilibrium price and causes a shortage.
   b. above equilibrium price and causes a surplus.
   c. below equilibrium price and causes a surplus.
   d. below equilibrium price and causes a shortage.

Figure 15-6

7 Refer to Figure 15-6. To maximize its profit, a monopolist would choose which of the following outcomes?
   a. 100 units of output and a price of $10 per unit
   b. 100 units of output and a price of $20 per unit
   c. 150 units of output and a price of $15 per unit
   d. 200 units of output and a price of $20 per unit

18. Monopolistic competition differs from perfect competition because in monopolistically competitive markets
   a. there are barriers to entry.
   b. all firms can eventually earn economic profits.
   c. each of the sellers offers a somewhat different product.
   d. strategic interactions between firms is vitally important.

Table 18-2
Consider the following daily production data for Davis Golf Balls, Inc. Davis Golf Balls, Inc. sells golf balls for 50 cents each and pays the workers a wage of $30 a day.

<table>
<thead>
<tr>
<th>Labor (number of workers)</th>
<th>Quantity (golf balls per day)</th>
<th>Marginal Product of Labor (golf balls per day)</th>
<th>Value of the Marginal Product of Labor</th>
<th>Wage (per day)</th>
<th>Marginal Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>$30</td>
<td>$30</td>
</tr>
<tr>
<td>1</td>
<td>100</td>
<td>150</td>
<td>50</td>
<td>$30</td>
<td>$20</td>
</tr>
<tr>
<td>2</td>
<td>250</td>
<td>150</td>
<td>75</td>
<td>$30</td>
<td>$75</td>
</tr>
</tbody>
</table>

19. Refer to Table 18-2. What is the value of the marginal product of the second worker?
   a. $50
   b. $62.50
   c. $75
   d. $150
20. Ralph pays someone to mow his lawn, while Mike mows his own lawn. Regarding these two practices, which of the following statements is correct?

- Only Ralph’s payments are included in GDP.
- Ralph’s payments as well as the estimated value of Mike’s mowing services are included in GDP.
- Neither Ralph’s payments nor the estimated value of Mike’s mowing services is included in GDP.
- Ralph’s payments are definitely included in GDP, while the estimated value of Mike’s mowing services is included in GDP only if Mike voluntarily provides his estimate of that value to the government.

21. The price index was 128.96 in 2006 and, between 2005 and 2006, the inflation rate was 24 percent. The price index in 2005 was

- 30.95.
- 104.00.
- 104.96.
- 106.67.

22. Human capital is the

- knowledge and skills that workers acquire through education, training, and experience.
- stock of equipment and structures that is used to produce goods and services.
- total number of hours worked in an economy.
- same thing as technological knowledge.

23. Jack is a full-time unpaid homemaker not currently searching for other work. Jill is a full-time student who is not looking for a job. Who does the BLS count in the labor force?

- only Jack
- only Jill
- both Jack and Jill
- neither Jack nor Jill

24. When the Federal Reserve conducts open-market operations to increase the money supply, it

- redeems Federal Reserve notes.
- buys government bonds from the public.
- raises the discount rate.
- decreases its lending to member banks.

25. If expected inflation is constant and the nominal interest rate increased 3 percentage points, the real interest rate would

- increase 3 percentage points.
- increase, but by less than 3 percentage points.
- decrease, but by less than 3 percentage points.
- decrease by 3 percentage points.

26. For a number of years Canada and many European countries have had higher average unemployment rates than the United States. This suggests that these countries

- have higher average inflation rates than the United States.
- have long-run Phillips curves to the right of the United States’.
- may have less generous unemployment compensation or lower minimum wages.
- All of the above are consistent with the evidence on unemployment rates.
An important factor in the decline of the U.S. textile industry over the past 100 or so years is
a. foreign competitors that could produce quality textile goods at low cost.
b. lower prices of goods that are substitutes for clothing.
c. a decrease in Americans’ demand for clothing, due to increased incomes and the fact that
clothing is an inferior good.
d. the fact that the minimum wage in the U.S. has failed to keep pace with the cost of living.

In the early 1980s, U.S. economic policy was directed toward reducing inflation. What would you have expected to observe during this short period of time?

a. Inflation fell and unemployment fell.
b. Inflation and unemployment were both unaffected.
c. Inflation fell and unemployment increased.
d. Inflation fell and unemployment was unchanged.

Extra Credit (2 points if answered correctly and no more than one absence in this portion of the course.)

What is meant by the term adaptive expectations?

People base their expectations of future inflation based on what they have recently seen (as as infl.)