Name _____

Sign the pledge:

No Aid; No Violations _____

Mike Lovell

9:00-12:00, December 18, 2006

Science 121

Econ 110-2: Final Examination

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Please Note:

- The exam will end at 12:00 noon! Budget your time carefully
- Save time to read over your answers and make corrections at the end of the test.
- Start your answers in the space provided, but continue if necessary on the back of the page or on a separate sheet of paper. Extra sheets are available in the front of the room.
- Show your calculations in order that you may receive partial credit even if you make a numerical error.
- If you would like me to mail your exam to your home, leave a stamped addressed envelope in the slot for this course in the Economics/Sociology Alcove. Otherwise, your work will be returned to the alphabetical slots in the Alcove to be picked up at the start of classes for the second semester.
- If you want additional feedback on any aspect of your work, please contact me at your convenience for an appointment early in the next semester.

Exam Protocol:

- Please seat apart.
- Stow your electronics, other than your watch. You will not need a calculator.
- Sign the Pledge; observe the Honor Code. Ask the instructor if you have any questions
- Step out of the room if need be, but leave your exam at your desk.
- When you have finished the exam, check it over carefully. Then place your examination on the table in the front of the room and leave quietly.

PART 1: IDENTIFICATION (20 points):

Here are 10 equations followed by a number of key concepts that we have studied during the semester.

Please place in front of each equation the letter corresponding to the most relevant key concept.

Ten equations::

1. __ $C = \alpha + \beta Y_d$

2. __ $\alpha L^{\lambda} K^{1-\lambda}$

3. __ $i^{fed} = \dot{p} + 2\% + 0.5(\dot{p} - 2\%) - 0.5 Y^{gap}$

4. __ w/p

5. __ $\dfrac{dq}{dy}\dfrac{y}{q}$

6. __ $-\dfrac{dq}{dp}\dfrac{p}{q}$

7. __ $w(L) + L\, dw/dL$

8. __ $w(L) < p\, dw/dL$

9. __ $Y = C+I+G+X-M$

10. __ $i - \dot{p}$

Key concepts

a.   Demand equation
b.   Income effect
c.   Marginal labor cost
d.   Labors share
e.   Marginal revenue product of labor
f.   Price elasticity of demand (η)
g.   Okun's Law
h.   Taylor Rule
i.   Cobb-Douglas Production Function
j.   national income accounting identity
k.   consumption function

l.   Marginal revenue
m.   Price discrimination
n.   Price elasticity
o.   Real interest rate
p.   Income elasticity
q.   Real wage
r.   Exploitation (Pigou)

PART 2: Please answer FOUR (only 4) of the following 5 questions in the space provided, continuing on the back of the preceding page (20 points each).

2.1 Suppose that the Central Bank purchases $10 billion worth of government securities on the open market.

    a. How would this transaction affect the reserve position of the commercial banks? Explain

    b. How would the change in reserves of the commercial banks affect their willingness to make loans to the public, assuming that banks always strive to remain loaned up.

    c. Estimate the magnitude of the change in the money supply resulting from the Central Bank's open market operation? Explain

    d. How would you expect the change in the money supply to affect (+ or -) interest rates, investment, output, employment, prices, imports and exports? Explain.

2.2   Mary has utility function $U = X^2Y$
    a.   Does this utility function satisfy the Law of Diminishing Marginal Utility?
          Explain:

    b.   Determine Mary's demand function for Y

2.3 Max had been making $100,000 a years working for Hardnose Software Company, but he quit in January of 2006 to start his own software business. He used his savings to purchase $35,000 worth of equipment. His supplies cost $5,000. He had no employees, but because he worked 12 hour days he managed to sell $130,000 worth of software his first year.

   a. Now it is April of year 2007, and he hires an accountant to figure out his income tax return. How much profit will the accountant say he make in his business in 2006? Show your computations. [Your grade will not depend on detailed knowledge of the tax code]

   b. How much *economic* profit did Max make?

   c. What are the major factors distinguishing accounting from economic profit?

2.4   Consider the following IS-LM Graph:
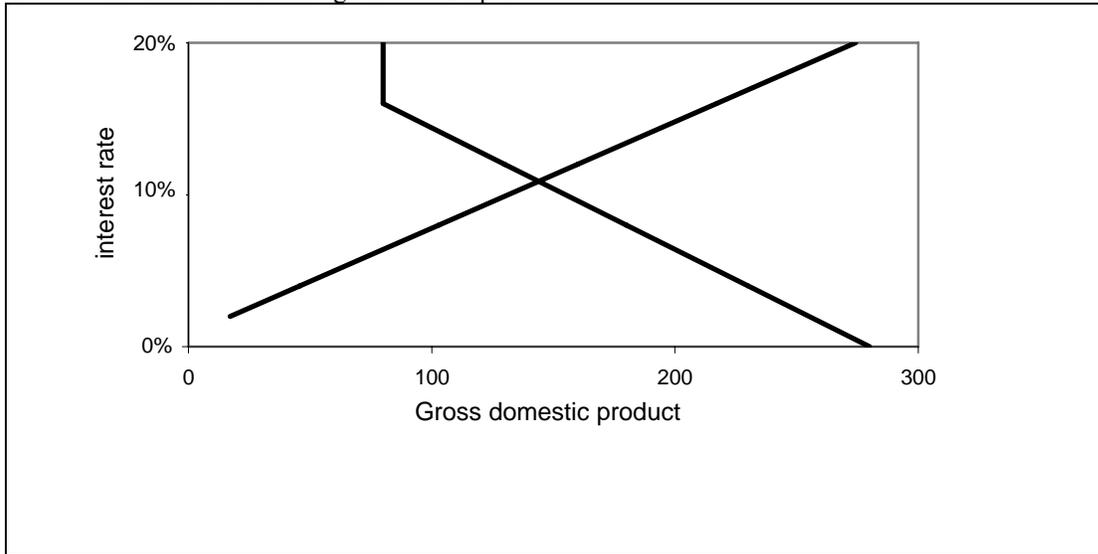
a.   Label the IS curve and the LM curve. The equilibrium rate of interest is _____. The equilibrium level of GDP is _____.

b.   Suppose that the Central Bank increases the money supply by 25% through open market operations.   Indicate how this might affect the position of the curves. The new equilibrium level of GDP would be _____ and the interest rate _____, assuming that there is plenty of excess capacity in the economy.

c.   Suppose instead that in fact the economy was already operating at full employment. How would the increase in the nominal money supply affect the economy in the long run. Explain carefully.

2.5   The graph shows the Net-Reproduction Function for the fish in Lost Lake.
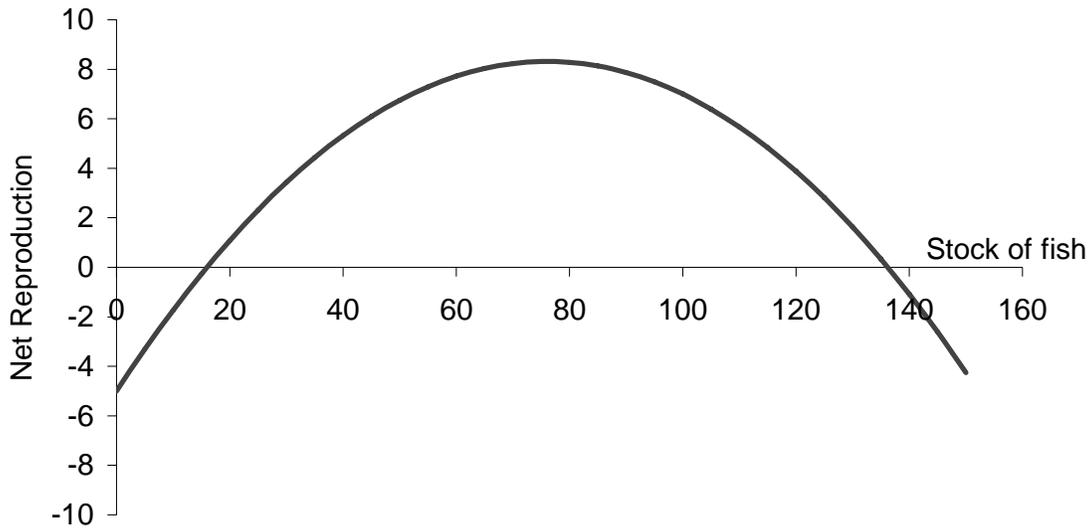
a.   In the absence of fisherman, the equilibrium stock of fish will be _____ (State of Nature).

b.   Lost Lake is found. If fishermen take 4 fish from the lake every year, the equilibrium stock of fish will be _____.

c.   The Maximum Sustainable Catch that can be removed from the lake is _____.

d.   If fisherman were to persist in taking 10 fish from the lake every year, what would happen to the stock of fish?

f.   Senator Foghorn suggests that the government should privatizing the lake by selling it to the highest bidder in order to prevent the outcome you predicted in d.   Would this be an appropriate strategy? What other types of government policy intervention might be considered? What would you recommend?

Honors Option: (Do not attempt to answer this question until you have checked over your answers to the standard questions – credit will not be given for a partial answer to the Honors Option.)

Never-Never Land has the following production function: $Q = (1.01)^t L^{1/2} K^{1/3}$.
The savings rate is 10%. The labor force grows at 6% per annum. Determine the equilibrium growth rate of output, assuming that labor is always fully employed. Will equilibrium output per worker increase? Explain

ENJOY YOUR VACATION
~ You earned it!