

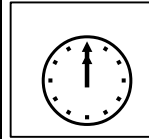
Name _____
Sign the pledge:
No Aid; No Violations _____

Mike Lovell
9:00-12:00, December 15, 1997
Room PAC 107

Econ 105: Final Examination

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.
- **Help!** I will not remain in the classroom during the examination, but I will drop in occasionally to answer any questions you may have. If you have a serious problem, you may find me in my office, room 308 PAC, x2355



- I. [60points] Five familiar graphs are plotted on the next page.
1. Use the symbols to the left of each concept listed below to label appropriately the curves on each graph.
- | | |
|--------------------------|----------------------------------|
| D ~ Demand Curve | CC ~ Contract curve |
| S ~ Supply curve | CSE ~ Curve of absolute equality |
| L ~ Lorenz curve | IS ~ IS curve |
| ATC ~ Average total cost | LM ~ LM curve |
2. Consider the demand and supply curve graph for Widgets in Never-Never Land.
- The equilibrium price will be \$ _____ and the equilibrium quantity _____.
 - The elasticity of demand at the above price is _____ (explain).
 - Suppose that a Trade Treaty opens up Never-Never Land for the tariff free import of Widgets. The world price of the commodity is \$3.00 per pound, including transportation costs. As a result, the new equilibrium price will be \$_____; imports will be _____; domestic production will be _____; consumer surplus will be _____.
 - Suppose the government provides a \$1.00 per pound subsidy to domestic producers. As a result, the price of the commodity will be \$_____, domestic production will be _____, and imports will be _____. The subsidy will cost the government _____.

3. Consider the box diagram.
- Point I on the graph denotes an inefficient allocation of resources; indicate all points on the contract curve that make *both* individuals better off than they are at I.
 - Define an efficient (“Pareto Optimum”) allocation of resources.
4. Consider the graph of the monopoly
- Add the marginal revenue and marginal cost curves to the graph
 - A profit maximizing monopoly would sell _____ units of output at a price of _____.
5. Consider the graph of the Lorenz Curve.
- Sketch a second Lorenz curve on the graph indicating unambiguously a greater degree of inequality than the Lorenz curve that is already there.
 - Explain what the Gini coefficient measures and how it is calculated.
6. Consider the IS-LM Apparatus:
- Place an LM in front of each of the following equations that is used in constructing the LM curve; place an IS in front of those that are used in constructing the IS curve:

_____ $Y = C + I + G + X - M$ _____ $I(r)$ _____ $M_d(Y,r)$	_____ $C = c_0 + c_1 Y_d$ _____ $Y_d = d_0 + d_1 Y$ _____ $M_d = M_s^n/p$
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 - Place a circle around each of the variables listed in question 6a above that is treated as *exogenous* in constructing the IS-LM model.
 - Place a plus (+) in front of each of the following variables that would increase and a minus (-) in front of each variable that would decrease as a result of an increase in the money supply:
 _____ interest rates; _____ investment spending; _____ GDP; _____ consumption.
 - Place a plus (+) in front of each of the following variables that would increase and a minus (-) sign in front of each variable that would decrease as a result of an increase in government spending:
 _____ interest rates; _____ investment spending; _____ GDP; _____ consumption.
 - Show on the graph how the LM curve will shift if the Federal Reserve sells government securities on the open market. Explain.

II. (20 points) Answer either question 1 OR question 2 below (not both):

1. A utility maximizing consumer with income of $M = \$10$ and utility function $U(X,Y) = X^{1/2} + Y$ purchases the two goods at price $p_x = \$1$ and $p_y = \$1$.
 - a. How much of X and how much of Y will he purchase? How much utility will he enjoy?
 - b. Now derive the consumer's demand function for good X; i.e., find the function $X(p_x, p_y, M)$.

OR

2. A profit maximizing business has production function $Q(L,K) = L^{1/2} + K$. The owner hires labor (L) at a wage of \$5.00 per hour and she rents machines (K) at \$10 per hour.
 - a. Find the least cost of producing 100 units of output.
 - b. Derive the short run cost function $C(q)$ for this firm when $K = 10$.

III (20 points) Answer either question 1 OR question 2 below (not both):

1. The table on the next page presents data about the experience of the American economy during World War II.

Write a brief essay (no more than two pages) explaining the most intriguing economic aspects of America's mobilization for World War II. What happened and why?

OR

2. The graph on the next page shows the dramatic decline in the value of the Indonesian Rupiah

What groups gain and what groups lose as a result of the decline in the value of the Rupiah?

- a. What measures can a government take in order to strengthen the value of its currency?
- b. What measures might the central bank take to strengthen the value of the currency? What would be the likely effects of the measures you described in b and c on interest rates, the level of investment, economic growth, living standards, and unemployment? Explain.

THE ECONOMICS OF WORLD WAR II

	1939	1941	1944	1945	1946	1947	Growth/ annum 1939 to 1945
GDP(real, 1987 dollars)	840.7	1,070.6	1,670.0	1,602.6	1,272.1	1,252.8	11.4%
GDP(nominal)	90.8	125.0	211.0	213.1	211.9	234.3	15.3%
Govt spending (G)	13.5	24.8	96.9	83.3	29.2	26.2	29.7%
Defense Spending	1.3	13.8	87.5	73.7	16.4	10.0	96.0%
Government Transfers	2.5	2.6		5.6	10.8	11.2	14.4%
Government Deficit	-2.2	-3.8		-39.5	5.4	14.4	
G/GDP	14.9%	19.8%	45.9%	39.1%	13.8%	11.2%	
Implicit Price Deflator(1972=100)	10.8%	11.7%		13.3%	16.7%	18.7%	3.5%
Consumer Price Index	41.6	44.1		53.9	58.5	66.9	4.4%
Money Supply							
M1	34.2	46.5		99.2	106.5	111.8	19.5%
M2	49.3	62.5		126.6	138.7	146.0	14.4%
currency'	6.0	8.4		25.3	26.5	26.6	27.0%
Government Debt	42.6	56.3		252.5	229.5	221.7	34.5%
Debt/GNP	46.9%	45.0%		118.5%	108.3%	94.6%	
Velocity							
v1 = Y/M1	2.7	2.7		2.1	2.0	2.1	
v2 = Y/M2	1.8	2.0		1.7	1.5	1.6	
Interest Rates (%)							
T-bills	0.023%	0.014%		0.375%	0.375%	0.375%	
3 to 5 year issues	0.59%	0.50%		1.18%	1.16%	1.32%	
Unemployment Rate (%)	17.2	9.9	1.2	1.9	3.9	3.9	