

Principles of Economics

Winter Semester 2011 / 2012

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You are allowed to use a non-programmable calculator (in accordance with the instructions given by the examination office) and a translating dictionary from your native language to English (without any notes written into it). All of the twelve (12) examination questions must be answered. This examination consists of three (3) pages and must be completed within 120 minutes.

Question 1

Industrial Organization studies the behavior of firms and the structure of markets.

(a) Explain the difference between Monopolistic Competition and Monopoly.

(b) Effective Barriers to Entry can limit the number of producers in a particular market. Give three examples of such barriers.

Question 2

The Average and Marginal Cost Curves are U-Shaped.

(a) Explain the relationship between the ATC curve and the MC.

(b) Why are these cost curves U-Shaped?

Question 3

The Market Equilibrium for some product x occurs at the price, P_x , where the quantity demanded, Q_x^d , equals the quantity supplied, Q_x^s .

(a) Assuming the supply curve remains constant, if an increase in demand occurs in this market, what will happen to the equilibrium price and quantity?

(b) What is a "Comparative Statics" analysis?

Question 4

The data in the table below is given in billions of U.S. dollars, RGDP chained 2005.

Year	NGDP	RGDP
2006	13,377.2	12,958.5
2007	14,028.7	13,206.4
2008	14,291.5	13,161.9
2009	13,939.0	12,703.1

Using the data in the table above, calculate the following:

(a) What is the change in the Price Level in 2008?

(b) What is output growth in 2008?

Question 5

Invented in 1986, the Economist's Big Mac Index is based on the theory of purchasing-power parity.

The Economist Big Mac Index 2011

	Big Mac prices		PPP of		Actual dollar		valuation against	
	in local	in	PPP of	exchange rate	Under (-)/over (+)	the dollar, %		
	currency	the dollar	the dollar					
United States†	\$4.07	\$4.07	-	-	-	-	-	-
Argentina	Peso 20.0	\$4.84	4.92	4.13	19			
Australia	A\$ 4.56	\$4.94	1.12	0.92	22			
Brazil	Real 9.50	\$6.16	2.34	1.54	52			
Britain	£2.39	\$3.89	1.70	1.63	- 4			
Canada	C\$ 4.73	\$5.00	1.16	0.95	23			
Chile	Peso 1,850	\$4.00	455	463	- 2			

- (a) In Chile a Big Mac costs Peso 1,850, which would seem a bit cheaper to an American tourist. Explain this statement in terms of the actual and PPP exchange rates.
- (b) Explain the concept of the real exchange rate. What is the relationship between the real exchange rate and the PPP exchange rate?

Question 6

One of America's greatest mathematical economists, Professor Irving Fisher, developed what later became known as the "Fisher Equation."

(a) The Fisher Equation shows that the nominal interest rate is made up of two components. What are these two components and what does the Fisher Equation tell us about nominal interest rates?

(b) Explain in detail why the nominal interest rate measures the monetary cost per unit of holding money per unit of time.

Question 7

In most countries the Central Bank conducts Monetary Policy.

(a) Explain how open market operations are conducted by a central bank and how this affects the money supply.

(b) If a country is experiencing a rather severe increase in inflation, how can monetary policy be used to combat this problem?

Question 8

In macroeconomics multipliers can be used to explain the impact of fiscal policy.

(a) Calculate the expenditure and tax multipliers when the MPC = 0.85.

(b) Derive the Balanced Budget Multiplier and explain why it is equal to 1.0?

Question 9

Of all the concepts in Macroeconomics the single most important measure of economic performance is Gross Domestic Product (GDP).

(a) What is the difference between GDP and GNP?

(b) What is the difference between GNP and NNP?

Question 10

Consider a producer with a Cobb-Douglas production function that produces and sells Q^x units of product x per time period:

$$Q^x = \tau L^{0.55} K^{0.55} \text{ with } \tau = 1.1$$

(a) Explain the "Law of Diminishing Returns" in terms of the input Labor.

(b) Explain "Returns to Scale" using the production function above as an example.

Question 11

In the foreign exchange market in Paris U.S. dollars are selling for € 0.78095 / US\$ and in New York the exchange rate is US\$ 1.2793 / €.

(a) If you are a foreign exchange trader in London with € 25 million, could you make an arbitrage profit today? If it is possible for you to make some money, show exactly how you would do it and what would be the resulting profit (loss).

(b) Explain how traders exploiting foreign exchange opportunities bring the foreign exchange markets around the world into equilibrium?

Question 12

Economic growth is one of the central questions of economics because increases in GDP per person is generally taken as an increase in the standard of living of its inhabitants.

(a) The Solow growth model predicts: In the long run the economy enters an equilibrium steady state in which the capital stock fails to grow. Explain this statement.

(b) Professor Paul Romer developed the "new" growth theory. How does it differ from the original Solow growth model?

This is the End of the Examination.
GOOD LUCK!