

Examination: 11049

Principles of Economics

Summer Semester 2010

Dr. John E. Brennan

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** examination questions must be answered. This examination consists of **four** (4) pages and must be completed within 120 minutes.

Question 1

Answer the following questions.

- (a) Explain the difference between Monopolistic Competition and Oligopoly.
- (b) Explain the concept of "Strategic Interaction" in Oligopoly.

Question 2

In most countries the Central Bank conducts Monetary Policy.

- (a) What is the Federal Funds rate and how is it used in the conduct of monetary policy?
- (b) Assume that a country is experiencing a rather severe increase in inflation. Explain how monetary policy could be used to combat this problem.

Question 3

Two of the most useful tools in microeconomics are the two laws mentioned below.

- (a) State the "Law of Demand".
- (b) Define the concept known as the "Law of Diminishing Returns" and give an example.

Question 4

One of the central questions of economic theory is how to increase GDP per person because this measure is generally taken as an indicator for the standard of living.

- (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) Many economists today are questioning whether GDP per person is in fact an adequate measure of the wellbeing of the citizens in a society. Explain why this might be the case.

Please turn to Page 2

Question 5

Market equilibrium occurs at the equilibrium price where the quantity demanded equals the quantity supplied.

- (a) When there is a decrease in the supply curve and the demand in a market remains constant, what happens to the equilibrium price and quantity?
- (b) What policy measures could the government take to combat this situation?

Question 6

Year	Nominal GDP (\$, billion)	Real chained GDP (2005)
2005	12,638.4	12,638.4
2006	13,398.9	12,976.2
2007	14,077.6	13,254.1
2008	14,441.4	13,312.2

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

- (a) Use the Implicit GDP Deflator method to measure price inflation in 2008.
- (b) The real output growth in 2008.

Question 7

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 8

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

	Big Mac prices		Implied PPP* of the dollar	Actual dollar exchange rate May 22nd	Under (-)/ over (+) valuation against the dollar, %
	in local currency	in dollars			
United States†	\$3.10	3.10	-	-	-
Argentina	Peso 7.00	2.29	2.26	3.06	-26
Australia	A\$3.25	2.44	1.05	1.33	-21
Brazil	Real 6.40	2.78	2.06	2.30	-10
Britain	£1.94	3.65	1.60†	1.88†	+18
Canada	C\$3.52	3.14	1.14	1.12	+1
Chile	Peso 1,560	2.94	503	530	-5
China	Yuan 10.5	1.31	3.39	8.03	-58
Czech Republic	Koruna 59.05	2.67	19.0	22.1	-14

- (a) In Chile the Big Mac costs Peso 1,560, which would seem cheap to tourists from America. Explain this statement in terms of the actual and PPP exchange rates.
- (b) Explain the concept of the real exchange rate. How is this concept related to the "law of One Price" and what is the relationship between the real exchange rate and the PPP exchange rate.

Question 9

Consider all the following cost curves: ATC, AVC, and MC.

- (a) Explain the relationship between the ATC, AVC curves and the MC curve.
- (b) Why do these cost curves have the usual U-Curve shape?

Question 10

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 NNP and how is it calculated?

Please turn to Page 4

Question 11

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

$$Q_x^s = \tau L^{0.45} K^{0.65} \text{ with constant } \tau = 1.1$$

- (a) Explain the diminishing returns to the input Labor in the production function above.
- (b) Explain “Returns to Scale” using the production function above.

Question 12

Assume that in the foreign exchange market in Paris US dollars are selling for € 0.78095 / \$ and in Chicago the exchange rate is US \$ 1.2793 / €.

- (a) If you are a foreign exchange trader in Frankfurt / Main with € 25 million, could you make an arbitrage profit today? Show exactly how you would do it and what would be the resulting profit or loss from the trade.
- (b) Explain the difference between arbitrage and speculation.

This is the End of the Examination.

GOOD LUCK!