

Examination: 5017

Principles of Economics II

Summer Semester 2005

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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 **ten** (10) exam questions must be answered (the estimated time to spend on each question is provided). This examination consists of **three** (3) pages and must be completed within 120 minutes.

Question 1 (15 Minutes)

Expenditure category	Relative importance (%)	Percentage change (December 1999 to December 2000)
All Items (1967 = 100)	100	?
Food and Beverages	16.30	2.8
Housing	39.64	4.3
Apparel	4.68	- 1.8
Transportation	17.45	4.1
Medical care	5.77	4.2
Recreation	6.01	1.7
Education and Communication	5.42	1.3
Other	4.73	4.2

The table above has actual data on the consumer price index for December 2000. The value of the CPI in December 1999 was 168.3.

- What is the CPI in December 2000?
- What is the rate of inflation in 2000?

Question 2 (15 Minutes)

Consider the topic of Economic Growth:

- Explain the difference between "Business Cycle expansion" and "Economic Growth."
- Discuss the differences in the public policy measures that a government might undertake in both instances.
- Describe the Solow Model and explain why technology plays such a central role in it.
- Outline the contribution made by Paul Romer and explain how the "New Growth Theory" differs from the Solow Model.

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Question 3 (15 Minutes)

Year	Nominal GDP (\$, billion)	Real chained GDP (2000)	CPI 1982-1984 = 100	Unemployment Rate
1990	5,803.1	7,112.5	130.7	5.6
1991	5,995.9	7,100.5	136.2	6.9
1992	6,337.7	7,336.6	140.3	7.5
1993	6,657.4	7,532.7	144.5	6.9

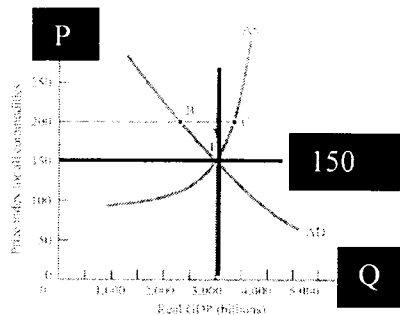
Using the data in the table above, calculate the following:

- The consumer price inflation rate in 1993.
- The output growth in 1992.
- Inflation as measured by the GDP Deflator in 1991.

Question 4 (10 Minutes)

In most countries the Central Bank conducts Monetary Policy.

- Explain how open market operations are conducted by a central bank and how this affects the money supply.
- If a country is experiencing a rather severe increase in inflation, explain the “practical” aspects to consider when suggesting the use of fiscal policy. Can monetary policy be used to combat this problem? How would each of these two macroeconomic policy instruments be applied?

Question 5 (15 Minutes)

The economy depicted in the picture to the left is presently at an equilibrium where the output level is at potential GDP = 3000 and the price level is $P = 150$. Answer the following questions in a comparative statics manner. Describe the new equilibrium for the economy and the impact on inflation and unemployment. Answer each question starting from the initial position.

- The government initiates fiscal policy by raising taxes.
- The central bank initiates monetary policy by using open market operations. The central bank buys bonds.
- There is a dramatic and sudden increase in the world crude oil price.
- War begins and there is a large and sudden increase in government spending.

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Question 6 (10 Minutes)

Assume that in the foreign exchange market in Germany US\$ are selling for € 0.817 / \$ and in New York the exchange rate is US \$ 1.221 / €.

- If you were a foreign exchange trader in Zurich with € 12 million, could you make an arbitrage profit today? If it is possible for you to make some money, show exactly how it you would do it.
- Explain how traders exploiting foreign exchange arbitrage opportunities bring the foreign exchange markets around the world into equilibrium?

Question 7 (10 Minutes)

Consider a closed economy that has no government, no consumption of fixed capital, no statistical discrepancy, and $GDP = GNP = 2349$. Furthermore, $rent = 82$, $interest = 497$, and $wages = 954$.

- If nine-tenths (9/10) of output is consumed, what is the level of savings and investment at equilibrium?
- What is the level of aggregate profits in this economy?

Question 8 (10 Minutes)

Answer all of the following short-answer questions:

- Define and explain the difference between the Federal Funds Rate and the Discount Rate?
- The Expenditure Multiplier plus the Tax Multiplier equals the Balanced Budget Multiplier. Show mathematically the value of the Balanced Budget Multiplier.
- In the 1950's Professor Modigliani formulated the Life-Cycle Hypothesis of consumption behavior. Explain the main elements of his theory.

Question 9 (10 Minutes)

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

- 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?
- Explain why the nominal interest rate measures the monetary cost per unit of holding money per unit of time.

Question 10 (10 Minutes)

The effect of changes in government spending on equilibrium GDP can be calculated by using the expenditure multiplier.

- How does the open economy multiplier differ from the closed economy multiplier?
- What does the concept of "leakage" mean in terms of multiplier analysis?

This is the End of the Examination