Name:

School:

# Test for the International Economics Olympiad

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*Instructions for students*

*This test has four sections. Every question in the first section has only one correct answer, for which you will receive five points. No points are deducted for incorrect answers. You have 45 minutes of testing time.*

# Section I (25 points)

1) David Ricardo became famous especially for his claim that

a) trade between two countries is feasible even in a situation where one country is better at producing everything and the other is worse at everything

b) deflation is caused by sun spots

c) inflation is caused by budget deficits

d) wage rate is determined by marginal product of labour, but interest rate is determined by the central bank policy

e) the Earth is the centre of the Universe

2) Mr. Smith rented out his flat for $15,000 a year. Now he decided to work in this flat as a hair-dresser. His revenue is $30,000 a year and his costs of cosmetics, energies and water are $20,000 a year. Mr. Smith is pleased with the result, but his neighbour corrects him: “Don’t be so pleased with yourself, you are actually running an ...”:

a) accounting loss of $10,000

b) economic profit of zero

c) economic loss of $5,000

d) economic loss of $15,000

e) accounting loss of $5,000

3) An economy exhibits a 6% unemployment rate. Most of it is involuntary unemployment. Some government advisors recommend halving the minimum wage in order to encourage the willingness of companies to hire new workers. Economists correctly point out that:

a) lower wages will encourage the unemployed to seek a new job, which will further stimulate a fall in unemployment.

b) lower wages will encourage the unemployed to seek a new job, which will further stimulate a rise in unemployment.

c) lower wages will discourage the unemployed from seeking a new job, which will further stimulate a fall in unemployment.

d) lower wages will discourage the unemployed from seeking a new job, which will further stimulate a rise in involuntary unemployment

e) lower wages will discourage the unemployed from seeking a new job, however this will not outweigh the stimuli on the side of the employers and involuntary unemployment will fall.

4) Rise in interest rates in the Eurozone will result in:

a) inflow of capital into Eurozone, weakening of the Euro, increased net exports from the Eurozone

b) inflow of capital into Eurozone, strengthening of the Euro, increased net exports from the Eurozone

c) inflow of capital into Eurozone, strengthening of the Euro, decreased net exports from the Eurozone

d) outflow of capital from Eurozone, weakening of the Euro, increased net exports from the Eurozone

e) outflow of capital from EU, strengthening of the Euro, increased net exports from the Eurozone

5) Which of the following countries has the highest ratio of public debt to GDP?

a) Greece

b) Italy

c) Germany

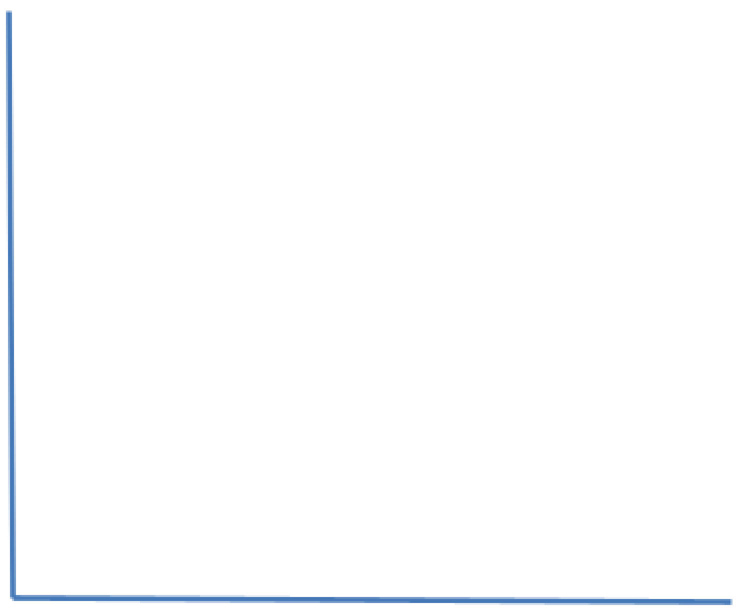
d) France

e) Lithuania

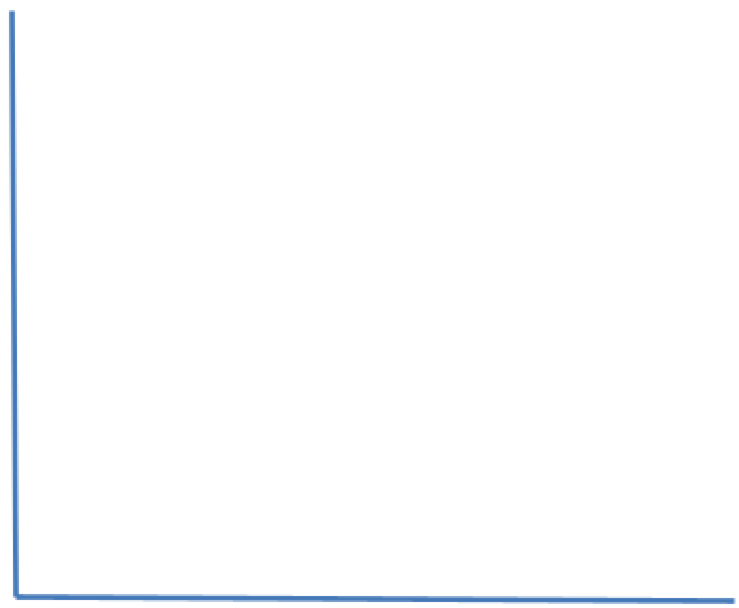
## Section II (25 points)

Consider an economy with a decreasing short-run Phillips curve. Assume that the actual inflation rate is 2% and the expected inflation rate is also 2%. The natural rate of unemployment is 5%.

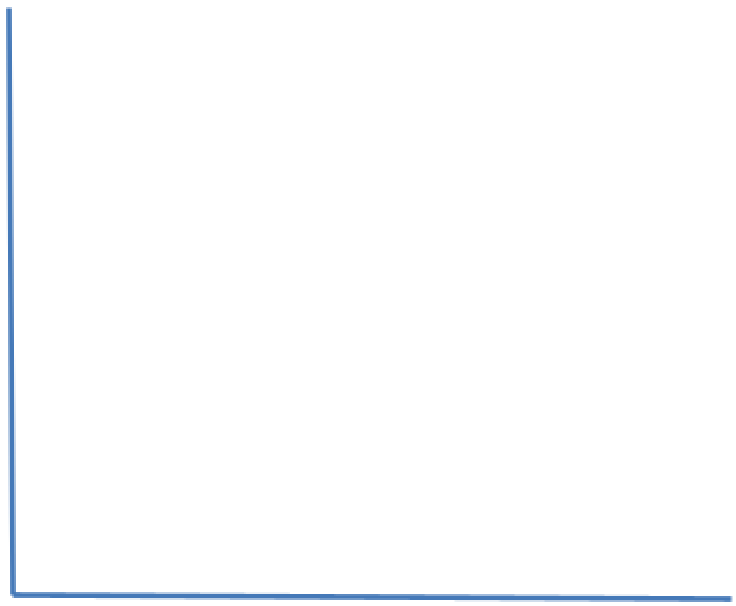
a) Assuming no supply shocks, sketch the situation of this economy in the figure below by point A. Use the model of the Phillips curve.



b) Suppose that unexpected monetary expansion decreases the actual unemployment rate to 3%. Sketch point B in the graph below, using the Phillips curve. Does the inflation rate fall or rise and why?



c) Suppose that the government tries to permanently reduce the unemployment rate below the natural level, i.e., to keep it at a 3% level rather than a 5% level. Sketch long-run consequences of this monetary policy in the graph of the Phillips curve below and comment on the observed dynamics of the economy.



## Section III (25 points)

Suppose that imports of crude oil to Europe are reduced. What will be the impact on the price of petrol (gasoline) at the petrol stations in Europe and why? What will be the impact on the quantity demanded and the quantity supplied? Use the ideas of the model of supply and demand.

Suppose that the government fixes the price that prevailed before the reduction of imports. What will be the impact of this regulation on the competitive market? What will be the effect on the quantity demanded and the quantity supplied?

Assume that this regulation is prolonged over a longer period of time? Is supply and demand more or less elastic in the long run compared to the short run? Compare the short-run and the long-run impact of this regulation on the market.

Consider that the market is no longer competitive and there is only one single firm, a monopoly. When the government sets a fixed price for the monopoly, can the outcome differ from the competitive market? Explain your answer in detail.

## Section IV (25 points)

Mrs. Novak considers buying a used car for 20,000 euro this year (2022), which will generate expected profits of 12,000 euro in 2023 and 12,000 euro in 2024. In 2025, the car is expected to break down. These profits can be invested on the stock exchange market for a 10% annual rate of return.

Her alternative option is to buy stocks on the market for 20,000 euro in 2022 with an annual 10% rate of return.

Is it profitable for her to buy this car?

Calculate the price of the car when Mrs. Novak is perfectly indifferent between buying this car and purchasing stocks on the market.