This is the final (and the only) examination. It will take 60 minutes.

In order to pass successfully the exam, read the following instructions carefully:

- write legibly, unintelligible handwriting will not be corrected and will receive zero points
- make answers short and to the point – irrelevant material may be penalized
- the exam has 4 pages (including one extra page for notes), make sure you have all pages
- negative points are awarded for wrong answers (only) in part I
- if you have a question, you must ask it publicly and I will answer publicly
- any violation of academic honesty will be punished to the fullest extent possible

I. Multiple choice questions (circle the correct answer) – more than one answer can be correct, points are subtracted for incorrect answers (30 points total, -30 points minimum)

1. (6 points) In the two-region geographical economics model the high (iceberg) transportation costs:
   a. lead to spreading of manufacturing activity;
   b. lead to agglomeration of manufacturing activity;
   c. cannot predict the geographical distribution of manufacturing activity;
   d. none of the above is correct.

2. (6 points) Assume a duopoly market in the third country – say a market for wide-band jets such as the one where Boeing and Airbus compete.
   a. Cournot framework is more appropriate to analyze the market;
   b. the export subsidy for Airbus decreases profits of Boeing;
   c. the export subsidy for Airbus decreases profits of Airbus;
   d. simultaneous export subsidy would lead to higher governmental expenditure but higher profits of both firms.

3. (6 points) After the fall of the USSR, conditions in Armenia deteriorated rapidly. About two million people left the country. It is the high-skilled (HS) people that are leaving. There are two factors of production only – HS and low-skilled (LS) labor. Production of M is using HS relatively intensively. Production of F is using LS relatively intensively.
   a. as a result of leaving HS people, the production of F rises and the production of M declines.
   b. as a result of leaving HS people, the production of M rises and the production of M declines.
   c. as a result of leaving HS people, the production of both M and F decline.
   d. none of the above is correct.

4. (6 points) In the core new trade theory (Krugman) model
   a. producers of a variety of M earn positive economic profit because of the monopolistic competition.
   b. producers of a variety of M earn zero economic profit because of the monopolistic competition.
   c. international exchange affects only consumption baskets of consumers but not their real incomes.
   d. none of the above is correct.
5. (6 points) The opening of international trade among former electricity monopolies within the European market
   a. led to relative increase of price of electricity in the market.  
   b. is an example of pro-competitive gains from trade caused by the Bertrand type of the competition among former domestic monopolies.  
   c. led to welfare losses in the countries that only partially opened their markets compared with the former domestic monopoly institutional framework.  
   d. former monopolies are the losers of the liberalization.

II. True, False or Uncertain (with exception of question 5)? Explain in space provided! (30 points total, 0 points minimum)

1. (6 points) Assume that a consumer has the CES utility function and consumes three goods: coffee, tea and milk. If $0 < \rho < 1$ the consumer is indifferent to consuming three units of coffee and three units of a mix of the goods. Prove your answer by a numerical example!

2. (6 points) Number of man-hours needed to produce one unit of a good is given in the table.

<table>
<thead>
<tr>
<th>Good</th>
<th>Indonesia</th>
<th>USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloth</td>
<td>50</td>
<td>3</td>
</tr>
<tr>
<td>Machines</td>
<td>100</td>
<td>5</td>
</tr>
</tbody>
</table>

After the opening of international trade only the USA will gain from trade. Prove your answer using the PPF graph!

3. (6 points) The income elasticity of demand for any variety in Dixit-Stiglitz model of demand is 1. Prove your answer!
Questions 4 and 5 use the same setting. Country A and C both produce fireworks. Demand and supply structure in both economies are given by a Dixit-Stiglitz model with $\varepsilon = 2$ in both economies. There is a love-of-variety effect. Market is much larger in a country C. In both countries $m = 1$ and $f = 2.5$. Labor employment in C is 10 million, however in A it is 10 thousands.

4. **(6 points)** The international trade increases the efficiency of production in both countries.

5. **(6 points)** How many firework varieties will be supplied to A and C markets in an autarky equilibrium. How many firework varieties will be supplied to A and C markets in the free trade equilibrium.

III. Write a detailed answer (40 points total, 0 points minimum)

1) **(20 points)** Quantitative effects of imposing tariff on a small country in a partial equilibrium setting. Let’s assume the world price $p = 2$, domestic production of 8 and total domestic demand of 30. After imposition of a tariff, the domestic price rose to 3. Supply and demand functions are linear. We assume the elasticity of domestic supply equal to 0.5 and the elasticity of domestic demand equal to -0.4.

a) (1 point) What is the size of a tariff?

1

b) (2 points) Compute a production of domestic producers after the imposition of the tariff.

10

c) (2 points) Compute a domestic quantity demanded after the imposition of the tariff.

30

d) (3 points) Compute the revenue of domestic producers before AND after the imposition of the tariff.

16 a 30

e) (3 points) Compute the consumer expenditure before AND after the imposition of the tariff.

60 a 72
f) (2 points) Compute the trade balance before AND after the imposition of the tariff.
-44 a -28

g) (3 points) Compute the consumer and producer surpluses before AND after the imposition of the tariff.
stačí mi ztráta ze consumer surplus: -27 a zisk z producer surplus: 9

h) (4 points) What are the welfare effects of imposition of a tariff?
k tem surpluses z minule otazky je jeste nutne pridat governmental revenue: 14
celkovy efekt tedy: -4

2) (20 points) Quantitative effects of imposing tariff on a large country in a partial equilibrium setting. Let’s assume the world price $p = 40$, domestic production of 800 and total domestic demand of 1400. After imposition of a tariff, the domestic price rose to 57, but the world price went down to 37. Supply and demand functions are linear. We assume the elasticity of domestic supply equal to 0.6 and the elasticity of domestic demand equal to -0.5.

a) (1 point) What is the size of a tariff?
20

b) (2 points) Compute a production of domestic producers after the imposition of the tariff.
1004

c) (2 points) Compute a domestic quantity demanded after the imposition of the tariff.
1102,5

d) (3 points) Compute the revenue of domestic producers before AND after the imposition of the tariff.
32000 a 57228

e) (3 points) Compute the consumer expenditure before AND after the imposition of the tariff.
56000 a 62842,5
f) (2 points) Compute the trade balance before AND after the imposition of the tariff.

-24000 a -36445

g) (3 points) Compute the consumer and producer surpluses before AND after the imposition of the tariff.

Opet, staci mi rozdíly:
consumer surplus: -21271,25
produces surplus: 15334

h) (4 points) What are the welfare effects of imposition of a tariff?
governmental revenue: 1970
net effect: -3967,25