UNIVERSITY OF OSLO
DEPARTMENT OF ECONOMICS

Exam: **ECON4415 – International Trade**

Date of exam: Wednesday, December 14, 2016 **Grades are given:** January 4, 2017

Time for exam: 09.00 a.m. – 12.00 noon

The problem set covers 3 pages (incl. cover sheet)

Resources allowed:

- Candidates who have submitted the non-compulsory term paper, will have their answer delivered before the exam as an aid. Otherwise no written or printed resources – or calculator - is allowed (except if you have been granted use of a dictionary from the Faculty of Social Sciences)

The grades given: A-F, with A as the best and E as the weakest passing grade. F is fail.

Problem 1: (30 points)

Donald Trump was elected president of the United States in November. You are appointed member of his council of economic advisor with a special responsibility for trade policy. Trump argued in his campaign that "...Since China joined the WTO, Americans have witnessed the closure of more than 50,000 factories and the loss of tens of millions of jobs. It was not a good deal for America then and it's a bad deal now...." Write a memorandum discussing the arguments for and against the US' trade agreements and communicate your views on whether a reform is needed.

Problem 2: (25 points)

Many countries have experienced substantial labor immigration over the last years.

a) Based on trade theory, what do we expect the short-run impact of labor immigration on factor prices, industrial structures and welfare to be? Explain and illustrate the effects graphically.

c) What does trade theory predict to be the long run effects of labour immigration? Explain using analytics as well as graphical illustration. Do the long run effects differ from the short run effects? Explain why.

Problem 3: (20 points)

Consider a given country with a set of industries characterized by imperfect competition, increasing returns to scale and firms with heterogeneous productivity. The country introduces a major trade policy reform and goes from autarky to a situation with positive, but not prohibitively high, trade costs.

a) What are the possible sources of gains from trade the country may benefit from? State all of them, explain them and illustrate graphically if possible.

b) Discuss under what circumstances reallocation of resources matters for the extent to which a country will face gains from trade.

Problem 4: (25 points)

Consider a world with two <u>symmetric</u> countries, <u>Home</u> and <u>Foreign</u>. <u>Foreign</u> is denoted by an asteriks. The countries are symmetric along all dimensions regarding labour force and technology. There are potentially two industries, A and B, in each country. Consumers demand A or B goods. Countries differ regarding the share of the population that demand A and B goods respectively. Both industries are characterized by monopolistic competition and produce goods subject to increasing returns to scale. There is international trade, but trade is costly. Trade incurs transport cost of the iceberg type, so that only a fraction g, with $0 < g < 1$ of the shipped good arrives, with $1 - g$ .lost in transit. Hence, the ratio of demand for an imported product relative to the demand for a domestically produced product is the same in both countries:

$$\sigma = \sigma^* = g^{\frac{\theta}{1-\theta}} < 1$$

Product market equilibrium in industry A in the two countries can be described as

$$npx = \frac{n}{n + \sigma n^*} wL + \frac{\sigma n}{\sigma n + n^*} w^* L^* \tag{1}$$

$$n^* p^* x^* = \frac{\sigma n^*}{n + \sigma n^*} wL + \frac{n^*}{\sigma n + n^*} w^* L^* \tag{2}$$

where n is number of firms, w is the wage, and L and L^* the size of the market for A goods in the two economies respectively. We note that the analogous relationships hold for the other industry.

a) Assume incomplete specialization in both countries, i.e. $n > 0, n^* > 0$. Derive the relationship between the patterns of specialization and the size of the market.

b) Show analytically the impact of specialization patterns of an increase in the relative size of the market for A goods in Home.

c) State what the Home market effect is and using analytics show the link between the Home market effect and the balance of trade for A goods.