Stockholm University

Department of Economics

Course name:	**International Economics**
Course code:	**EC2301**
Type of exam:	**Main**
Examiner:	**Pehr-Johan Norbäck**
Number of credits:	**7,5 credits (hp)**
Date of exam:	**11th of January 2016**
Examination time:	**3 hours (11:00-14:00)**

Write your identification number on each paper and cover sheet (the number stated in the upper right hand corner on your exam cover).

Use one cover sheet per question. Explain notions/concepts and symbols. If you think that a question is vaguely formulated, specify the conditions used for solving it. Only legible exams will be marked. **No aids are allowed.**

The exam consists of 2 parts with a total of 7 questions, 100 points in total. For the grade E 45 points are required, for D 50 points, C 60 points, B 75 points and A 90 points.

Note that **Part I** with **Questions 1 and 2 are credit questions**.

If you have full extra credit (30p) from the assignments, skip Questions 1 and 2. With full credit you will automatically get 30 points for Questions 1 and 2.
Questions 1 and 2 are for students who do not have full credit (less than 30 points in credit).

(Example: if you have, say, a credit of 15 points and get 20 points on Questions 1 and 2, then you get 20 points for Questions 1 and 2 in your exam; if you get 15 points on your answers on Questions 1 and 2 and have a credit of 20 points, then you get 20 points for Questions 1 and 2 in your exam).

Your results will be made available on your "My Studies" account (www.mitt.su.se) on the 1st of February 2016 at the latest.

Good luck!

PART I : For students without full credit from the problem sets:

1. Consider the Ricardian model with two countries (Home and Foreign), two goods (Beans and Steel) and one factor (labor). Assume that there are *two* workers in Home and *four* workers in Foreign. Suppose that each worker in Home can produce *two* tons of Steel or *two* tons of Beans. Suppose that each worker in Foreign can produce *three* tons of Beans or *one* tons of Steel. (16p)

    a. Use the above information to graph the production possibilities frontier (PPF) for Home. *Use a diagram where you put Beans on the x-axis and Steel on the y-axis.* (2p)

    b. What is the no-trade relative price of Beans in Home? Prove your statement from the labor market equilibrium in Home. (4p)

    c. Use the above information to graph the production possibilities frontier (PPF) for Foreign. *Use a diagram where you put Beans on the x-axis and Steel on the y-axis.* (2p)

    d. What is the no trade relative price of Beans in Foreign? (2p)

    e. Which country has absolute advantage in the production of Steel? (2p)

    f. Which country has a comparative advantage in the production of Beans? Explain why. (2p)

    g. Which country has a comparative advantage in the production of Steel? Explain why(2p)

2. Suppose that there is now free trade between Home and Foreign. (14p)

    a. In which good will Home specialize? Explain. (tip: think of arbitrage) (2p)

    b. In which good will Foreign specialize? (2p)

    c. Use the labor market equilibrium to give a formal proof to your answer in Question 2a. (4p)

    d. Now assume that workers (consumers) in Home have preferences $U(Q_{Beans}, Q_{Steel}) = (Q_{Beans})^{2/3}(Q_{Steel})^{1/3}$. Furthermore, assume that workers (consumers) in Foreign have identical preferences, $U(Q^*_{Beans}, Q^*_{Steel}) = (Q^*_{Beans})^{2/3}(Q^*_{Steel})^{1/3}$. Use these consumer preferences and the information on technology and the size of the labor force in two countries from Question 1, to solve for the international relative of price of beans that clears the international market for both goods. (6p)

PART 2: All students!

3. There are two countries (Germany and Polen), two factors of production (labor and capital) and two goods (Cars and Wine). Suppose that when trade is opened up between Germany and Polen, Germany starts to import Wine, which is labor intensive in production. (15p)

    a. If you apply the Heckscher-Ohlin theorem, is Germany capital-abundent or labor abundent. Briefly explain why. (3p)

    b. If you apply the Stolper-Samuelsson theorem, what is the impact on the real wage of labor in Germany? Briefly explain. (3p)

    c. If you apply the Stolper-Samuelsson theorem , what is the impact on the real rate of return to capital in Germany? Briefly explain. (3p)

    d. What group (capital or labor) in Germany would be expected to support policies to limit free trade? (2p)

    e. What happens to the relative wage in Germany, w/R, where w is the wage and R is the rate of return to capital? Why is it important to know the effect on the relative wage , w/R, to explain your results in b. and c. (4p)

4. Consider the Specific-factors model with two countries (Home and Foreign), two goods (Steel and Beef) and three production factors (capital, land and labor). Assume that capital is specific to Steel production and land specific to Beef production. Labor is the mobile factor and used in both car and beef production. (15p)

   a. Draw a graph of (illustrate) the no-trade equilibrium in Home. Mark out the no-trade equilibrium with A (autarchy). *Use a diagram with Steel on the x-axis and Beef on the y-axis.* (3p)

   b. Suppose that Home and Foreign start to trade. Assume that the relative price of Steel increases in Home. Draw **a new** diagram for Home where you show which good Home starts to export and which good Home starts to import. Indicate the size of exports and imports in your diagram. *Draw your diagram with Steel on the x-axis and Beef on the y-axis.* (3p)

   c. Show in your diagram in b. that there are overall gains to trade in Home. (3p)

   d. Let R_T be the return to land. Suppose that the increase in the relative price of Steel was caused by an increase in the price of Steel P_S, while the price of Beef P_B stayed constant. What happens to the real return to land in Home? Explain your result (3p)

   e. What happens to the real wage in Home? Explain your result. (3p)

5. Shorter questions (21p):

   a) In the provisions of the GATT/WTO-agreement, explain briefly what is meant by:

      (i)   The "Most-favored-nation-clause" (MFN), (2p)
   (ii) The Safeguard provision (or the escape-clause).(2p)

   b) You have become a (well-paid) consultant to the EU on trade policy. The EU is an importer of Steel and an exporter of Cars. Suppose that you are choosing between advocating an import tariff on steel and an export subsidy on cars. If you assume perfect competition on each of these markets, which of the trade policies – the import tariff on steel or the export subsidy on cars – can *potentially* increase welfare (total surplus) in the EU? The EU is considered to be a large "country" in both these markets. Motivate briefly. (5p)

   c) Explain briefly how foreign outsourcing may have contributed to an increasing skilled wage premium over time. (6p)

   d) Consider the Monopolistic Competition model with one good (Cars) and two countries (Home and Foreign). State four assumptions behind this model. Why has this model been important in explaining the European integration process? (6p)

6. Consider the market for Wheat. In Figure 1 the locus D indicates the aggregate demand curve and the locus S indicates aggregate supply in Home. Suppose Home is *small in the world market* and that the world market price is fixed at 50 Euros per ton. There is initially free trade. *Then, assume that the Home applies an import tariff of 20 Euros per ton.* Calculate the following measures: (11p)

   a. The change in consumer surplus in the Home from applying the tariff (2p)
   b. The change in producer surplus in the Home from applying the tariff (2p)
   c. The change in government revenues in the Home from applying the tariff (2p)
   d. The change in overall welfare (total surplus) in Home from applying the tariff (2p)
   e. *Should Home apply the tariff?* Motivate by referring to the economic effects of the tariff in you obtain in 6d. (3p)

Figure 1
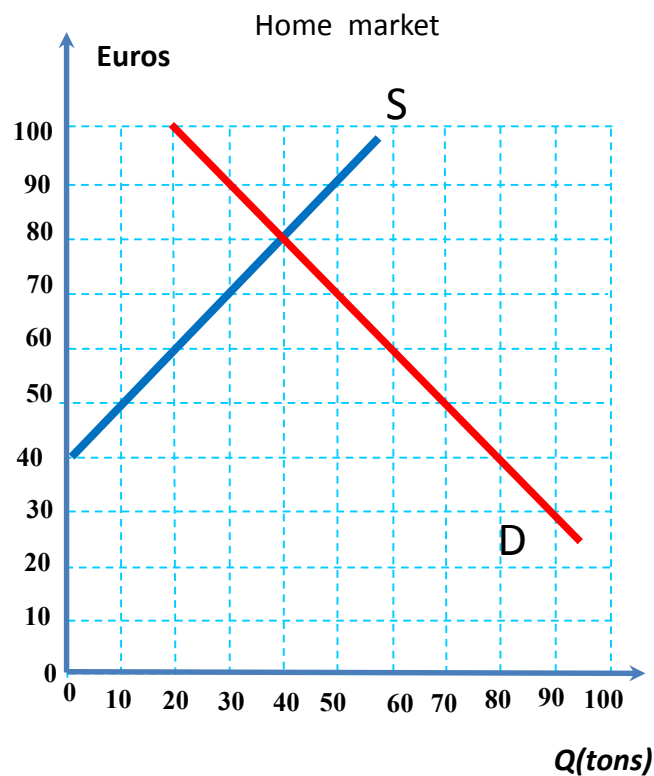
Home market

7. Consider again the market for Wheat, but now assume that *Home is large in the world market for wheat*. In Figure 2(i) the locus D again indicates the aggregate demand curve and the locus S indicates aggregate supply in Home. In Figure 2(iii) the locus D* indicates the aggregate demand curve and the locus S* indicates aggregate supply in Foreign. Figure 2(ii) shows the world market (import demand and export supply curves not drawn). Use Figure 2 in order to answer the following questions. (8p)

   a. Calculate the change in Homes overall welfare when going from free trade to a tariff of 20 Euros/ton on imports. *TIP! Start by deriving the import demand and export supply curves and draw them in Figure 2(ii).* (3p)
   b. *Should Home apply the tariff*? Motivate by referring to the economic effects of the tariff you obtain in 7a. (3p)
   c. Compare your *recommendation* in Question 7b with your *recommendation* in Question 6e. Do they differ? Explain. (2p)

Figure 2

(i) Home market

(ii) World market

(iii) Foreign market