This examination comprises three questions. All of them are to be answered. The available amount of time is two hours. The maximum score is 120 points. Those in the German diploma programmes are allowed to answer the questions in German.

Question 1:

Consider a partial equilibrium analysis for the cloth market of the large countries *China* and *USA*. Suppose that the "world" is formed by these two countries. In autarky, China's cloth price is higher than the cloth price in the USA.

a) (*11 points*) In the usual three part diagram (cloth market of China on the left hand side) demonstrate how the world's free trade price P_W is determined. Also indicate the volume of trade as well as the autarky prices in China and the USA (P_A and P_A^*).

b) (*15 points*) After China joined the WTO, China's exports of cloth delivered to the USA sharply increased. As a consequence, in 2004 the USA threatened to impose an import quota with the license fees accruing to the US government. Using a new diagram, illustrate the welfare effects in the USA (a large country!) associated with such an import quota. Indicate also the license fee q, the prices P_q and P_q^*, and the resulting volume of trade. Explain, why the import quota causes a positive terms of trade effect.

c) (*9 points*) Using another diagram, illustrate the US import quota's welfare effects arising in China.

d) (*15 points*) In order to avert this US import quota, China agreed to impose an export tax of z \$ on its cloth exports, beginning in January 2005. By looking at Chinese cloth producers, what can be said about the difference between the prices Chinese consumers (P_z) and US american consumers (P_z^*) have to pay for cloth after the export tax has been imposed. Using a new diagram, illustrate the welfare effects that the export tax causes for China (also a large country!). Indicate also the tax z, the prices P_z and P_z^*, and the resulting volume of trade. Explain, why the export tax causes a positive terms of trade effect.

Question 2:

Consider the usual Heckscher-Ohlin-model with two countries (*China* and *USA*), two goods (Q_S=*simple good*, Q_H=*high tech good*), and two factors of production (L=*labour*, K=*capital*). Both countries have the same linearly homogeneous production functions $Q_S(L_S, K_S)$ and $Q_H(L_H, K_H)$. P_S is the price of the *simple good* and P_H is the price of the *high tech good*. The factor price of *labour* is the wage w and the factor price of *capital* is r.

a) (*4 points*) Suppose that China is abundantly endowed with labour and that the production of the simple good is labour intensive. Translate these two statements into a formal representation, where L and K represent the factor endowment in the USA and L^* and K^* represent the factor endowment in China.

b) (*8 points*) Based on the information given in question 2a, draw the familiar Heckscher-Ohlin-diagram that depicts for the USA the relationship between P_H/P_S and the factor price ratio and the factor input ratios (Hint: Think carefully about whether w/r or r/w should be used, and also about whether L_S/K_S and L_H/K_H is appropriate or rather K_S/L_S and K_H/L_H). Explain verbally to which extent the corresponding diagram of China would differ.   **please turn over**

c) (*7 points*) The total resources in the USA are $L = L_S + L_H$ and $K = K_S + K_H$. Using a suitable diagram (of the Edgeworth box type), demonstrate how for a given price ratio P_H/P_S the precise allocation of the US total resources between the two industries can be graphically derived.

d) (*11 points*) Using your diagrams of question 2b and 2c, show how a rise in P_H/P_S would change the allocation of resources in the USA. What would be the effect on the relative supply of the two goods (Q_H/Q_S)? In a new diagram, draw the relative supply curve of the USA (RS) and indicate also the relative supply curve that would exist for China (RS^*).

Question 3: Shorties

a) (*14 points*) Consider the Ricardian model with two goods: *cloth* (Q_C) and *roboter* (Q_R). Suppose that *Home* has $L = 800$ units of labour available and that its labour unit requirements are $a_{LC} = 4$ and $a_{LR} = 2$. *Foreign* has $L^* = 400$ units of labour available and its labour unit requirements are $a_{LC}^* = 3$ and $a_{LR}^* = 1$. What can be said about the comparative advantages in this example? In a diagram, show how the resulting world relative supply curve (RS_{World}) would look like (approximately). Add to your diagram a world relative demand curve (RD_{World}) such that only *Home* would gain from trade. What would be the gains from trade, if Home's labour unit requirement for cloth were $a_{LC} = 6$ (instead of $a_{LC} = 4$)?

b) (*6 points*) It is sometimes argued that in the presence of imperfect competition an advanced nation could increase its welfare by enacting strategic trade policy. Based on a simple numerical example, illustrate how a subsidy may increase the welfare of an advanced nation.

c) (*6 points*) A country that joins a custom union may witness *trade creation* or *trade diversion*. Using a simple numerical example, explain the difference between the two effects and why one effect is preferred to the other.

d) (*5 points*) Based on a simple intertemporal trade model with two countries (*Home* and *Foreign*) and two goods (*present wheat* and *future wheat*), one may explain international borrowing and lending. For this simple model, draw a typical production possibility frontier for Home and explain why this curve can also be interpreted as a production function of the good *future wheat*.

e) (*9 points*) Iran primarily exports oil whereas it imports high-tech products. Using the standard-trade-model, illustrate graphically the impact on Iran's terms of trade of the following events:

A) Iran applies an improved technology for producing high-tech-products;
B) an unusually called winter in Iran;
C) the USA introduce an export subsidy for high-tech products;
D) the European Union develops new car engines that are much more fuel efficient.