HOCHSCHULE PFORZHEIM **– Faculty of Economics and Law –** **- Written Examination Example 2 -**	
Department: Economics	
Subject: International Economics	**Semester:** **Date:**
Examinant:	**Prof. Dr. Rainer Maurer**
Time:	**60 Minutes**
Auxiliary Means:	**Dictionary, Non-Programmable Calculator**

Notes:

(1) Please check the number of sheets and questions for completeness. You should find 7 questions and 6 sheets (inclusive the front page).

(2) Please use these sheets to answer the questions. **If you need more space, use the back of the preceding page!** Should these not be sufficient, use additional sheets and staple them at the end. Please take care for a correct numbering of all additional sheets.

(3) A correct answer yields the number of points noticed in the side column of each question. To pass the examination 50% of all available points have to reached (= 30 Points).

(4) Please give complete and comprehensible answers. Illegible answers cannot be accepted.

(5) If you use charts, please take care for a complete labeling.

Name: ______________________________

Matriculation-Number: ______________________________

Result: ______________________________

1.(a) Explain three different reasons that can cause international trade according to the classical trade theory. (6 points) (b) Explain under what conditions international trade can result between entirely identical countries. (8 points).	14	

(a)
1. The production technologies are different in different countries, so that the countries are differently productive in the production of certain goods, e.g. climatic differences in productivity play an important role in food production: wine production in Portugal vs. wine production in England.

2. Differences between the domestic autarky price and the foreign autarky price may also emerge when domestic and foreign countries are completely identical except for consumer demand preferences. In this case, different levels of demand for one good may lead to different levels of autarky prices for this good.

3. Different endowment with production factors: Heckscher / Ohlin show that in a country A, which has relatively more qualified workers and relatively few unqualified workers, the autarky prices of goods that require skilled labor (e.g. high-tech goods) are lower than in country B, which has relatively more unqualified workers and relatively few skilled workers. When it comes to free trade in such a scenario, high-tech goods are exported from country A to country B, while country B exports low-tech goods to country A.

(b) International trade between identical countries can result, if there are economies of scale in the production of a good (such as cars) and the demand is such that different product variants of the same good are requested (e.g., Porsche & Ferrari). In this case, a country's specialization depends on which country first started producing a specific product variant. This country can then manufacture this product variant with the lowest average cost, due to the economies of scale, so that it attracts the demand for this product variant from all other countries under free trade.

2. (a) Explain how the interest rate parity channel can be used by a central bank to influence the exchange rate of its currency. (7 points) (b) What problem can arise, if a central bank wants to appreciate the exchange rate of its currency via the interest rate parity channel while the country's economy is in a recession? (7 points) *(a) By expanding money supply, the central bank increases the supply of credit on the capital market, so that the capital market interest rate decreases. If an interest arbitrage equilibrium exists before, this will now be disturbed: An investment abroad now yields a higher income than an investment in at home. So the residents will want to invest more money abroad. To do so, they must exchange domestic currency for foreign currency. Thus, the supply of domestic currency in the foreign exchange market (or the demand for foreign currency) increases. This causes a depreciation of the domestic currency. This depreciation process continues until interest parity holds again. As a result, the expansion of the domestic money stock via the domestic capital market leads to a devaluation of the domestic currency.* *(b) In order to appreciate its own exchange rate via the interest rate parity channel, the central bank must reduce domestic money supply such that the domestic interest rate rises. This leads to a further decline in domestic investment demand and / or consumer demand. This will typically cause a recession. Hence, an appreciation of the domestic currency is in this case only possible at the price of a deepening of the already existing recession.*	14	

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(a) What conclusion follows from the Pareto criterion for the transition from autarky to free trade and what conclusion follows from the Kaldor / Hicks criterion? Assume the validity of classical trade theory. (5 points)
(b) Explain why there may be welfare losses in a country in transition from autarky to free trade, when external effects in the production of goods exist. (6 points)
(c) How can the introduction of import tariffs affect the export sector of a country? (6 points)

(a) According to the Pareto criterion (a change should always be realized out if it improves the situation of at least one person without worsening the situation of another person), a transition from autarky to free trade cannot be undertaken: as the winner of free trade do not compensate the looser, a transition to free trade is not a Pareto improvement. Kaldor and Hicks proposed a criterion according to which a transition to free trade shall always be realized under the standard assumptions of the classical trade theory, the so called Kaldor-Hicks criterion: A change shall always be realized, if the winner of this change can potentially compensate the looser and still retain a net profit.

(b) External effects: The production of a good by industry A, causes cost advantages for other industries for which industry A receives no compensation (positive externalities). Therefore, the producers of industry A do not consider this cost advantage for the other industries in the transition from autarky to free trade. If therefore in case of free trade, the price of the good of industry A falls, a reduction in the production quantities of industry A follows, which causes an increase in production costs and hence welfare losses in the industries which take advantage of the externalities. If these welfare losses are larger than the welfare gains from free trade with the good produced in industry A, then a transition from autarky to free trade can reduce the overall welfare.

(c) Under normal conditions, the introduction of an import tariff, increases the domestic production in the import sector. If the tariff is high enough, the imports will shrink to zero, because domestic consumption will fall and domestic production will increase due to the higher domestic price. The increase in domestic production then increases the demand for production factors. As a result, the prices of immobile domestic production factors, such as labor, real estate, land etc., are beginning to rise. This now increases production costs in the export industry, where these production factors are also used. As a result, the demand of the export industries falls, such that exports are shrinking. Import tariffs can therefore cause a reduction of domestic exports.

4. Explain the process of economic growth in a Solow / Swan model of an open economy. What factors determine the long-term steady state equilibrium under such conditions?	15	

The process of economic growth in an open economy: In an open economy savers can invest their money in that country, where they receive the highest capital return. Domestic investment is then no longer necessarily equal to domestic savings. This means:

If the world market interest rate is ***lower*** *than the domestic interest rate would be in case of autarky, domestic borrowing abroad to purchase investment goods, which are invested in the domestic capital stock, are profitable in case of an open economy. Then the domestic capital stock grows faster than in case of autarky and its steady state level is higher. So GDP is growing faster, because of capital imports. For the credits received from abroad, however, an interest has to be paid. Hence a part of the capital income generated domestically flows abroad each year. The gross national product (GNP = the domestic income part of the GDP) is therefore smaller than GDP. However, immobile domestic production factors (above all labor) also receive a higher compensation because of their higher productivity due to the higher steady state capital stock. The net effect on the income of domestic residents is therefore positive.*

Alternatively:

If the world market interest rate is ***higher*** *than the domestic interest rate would be in case of autarky, foreign borrowing on the domestic credit markets to purchase investment goods, which are then invested in the foreign capital stock, are profitable in case of an open economy. Then the domestic capital stock grows slower than in autarky and the resulting steady state level is smaller. So GDP is growing also slower. For the credits granted abroad, however, interest is paid to the domestic savers. Hence a part of foreign capital returns flows back to the domestic economy each year. The gross national product (GNP) is therefore larger than GDP. However, immobile domestic production factors (above all labor) receive a smaller compensation because of their lower productivity due to the lower steady state capital stock. The net effect on the income of the domestic residents is therefore negative. (**10Punkte**)*

Influencing factors: *In order to be able to maintain a "high" domestic capital stock (and thus a high GDP) under free trade, savers need to be able to reach a high interest rate when investing their money in the domestic economy. Therefore there must be sufficient domestic investment opportunities with high returns. This is the case, when many production factors, which are complementary to physical capital, are available in the home country. Factors of production, which are complementary to physical capital increase the productivity of physical capital and thus lead to higher returns on capital. As a result, domestic investment and hence the growth rate of the capital stock is rising. Factors of production, which are complementary to physical capital are technical knowledge, human capital, raw labor, land, real estate, legal security, infrastructure, internal and external security.* ***(5 Punkte****)*