

This review sheet is intended to cover everything that could be on the exam; however, it is possible that I will have accidentally left something off. You are still responsible for everything in the chapters covered except anything that I explicitly say you are not responsible for. Therefore, if I left something off of this sheet, it can still be on the exam. There will be no multiple-choice questions. Most of the questions will be like the ones in the homework assignments, and possibly a few definition questions, but I am more likely to ask questions that make you use the definitions rather than recite them. I will probably ask one of the questions from the book at the end of the chapters.

The review session will be at a time to be determined in class, probably Sunday 3/30.

Chapter 6: How does **increasing returns to scale (IRTS and external economies)** relate to the PPF? How does that affect trade? What are **monopolies, oligopolies, outsourcing, and offshoring**? How do they affect trade? Why does the study of **intra-industry trade** require **differentiated products**? Be able to calculate the **intra-industry trade index (T)**. Explain why the diagram of costs/demand for a **monopolistically competitive** firm looks as drawn. *Note the vertical axis is wrong. It should be  $\$/Q$ . The same is true for the **graph of the number of firms vs. the price**.* Understand the **Product Cycle Model**. Be able to explain the reason each stage looks as is drawn. How do **transportation costs, logistic costs, and tariffs** affect the supply and demand for a good on the trade market. That is the graph where the exporting country is on one side of the axis and the other side of the axis is the other country. Explain how transportation costs can affect where a company sets up in **resource-oriented industries** and **market-oriented industries**, but not **footloose industries**. How can **environmental standards** affect for companies setup?

Chapter 7: In this chapter, we are looking at **comparative statics** rather than **dynamic analysis**. What do those mean? Understand the difference between **balanced growth** and the **growth of one factor**. Be able to explain the **Rybczynski Theorem**. (Do not worry, I won't take off for spelling it wrong.) What is meant by **neutral technical progress, labor-saving technical progress, and capital-saving progress**. How do they affect the PPF? What is meant by **protrade, antitrade, and neutral growth**? Be able to show them on the PPF/CPF/indifference curve diagram and the offer curve diagram for a **small country**. Why does the offer curve diagram look like that? What happens to welfare of the small country with each of these movements? We will assume that all goods are **normal goods** rather than **inferior goods**. *Remember, normally the labor intensive good is on the horizontal axis for the PPF and the offer curve diagrams.* Understand what is meant by the **terms-of-trade effect** and the **wealth effect** of growing the economy. Understand how **immiserizing growth** can result and be able to show it on PPF/CPF/indifference curve diagram. Be able to show on both the PPF/CPF diagram and the offer curve diagram how a country could have growth which benefits both its terms of trade and its wealth. For Section 7.6, understand how growth in both countries can undo the negative effects of the other country's growth and that tastes can move the offer curve. (I will not ask you to move the indifference curves because that is messy.)

Chapter 8: What are meant by **import tariff, export tariff, ad valorem tariff, specific tariff, and compound tariff**? Be able to show the partial equilibrium analysis (S/D) of an import tariff and an export tariff for a small country and an import tariff for a large country. Be able to find **consumer surplus (CS), producer surplus (PS), and tariff revenue (TR)** (if applicable) for free trade, autarky, and with the tariff. Use that to find the **dead-weight loss (DWL)**. Know which part of the DWL is from **consumption inefficiency** and which part is from **production inefficiency**. Be able to calculate the **effective rate of protection, a.k.a., rate of effective protection (ERP)** for an industry from its tariff

rate, the tariff rates of imported inputs, and the **value added** which comes from domestic sources and that which comes from abroad. (Note that I could have changed  $a_i t_i$  to  $\Sigma a_i t_i$  and  $a_i$  to  $\Sigma a_i$  so that there could be different tariffs on imported inputs.) The five results on Page 231 are results you should understand why they hold. Result #3 only holds if  $t > t_i$ . Understand why that is true. Be able to show the general equilibrium (PPF/CPF) diagram for a small country. *Note: with the tariff, the production and consumption points are where the new domestic price line is tangent to the PPF and the indifference curves respectively. However, they are both on the same line whose slope equals the world price. The distance between the two domestic price lines is the tariff revenue. Note the graph in the book is a tariff on importing the labor intensive good. If it was an import tariff on the capital intensive good, then the tariff revenue would be measured vertically.* Know the **Stolper-Samuelson Theorem**. Be able to draw the effects of a tariff on the offer curve diagram for a large country. *Note that in Figure 8.6, the tariff revenue is horizontal because it is an import tariff and imports for Country 1 are measured horizontally.* Be able to add the **indifference curves** to the offer curve diagram. *Note that for the labor abundant country, the indifference curves get steeper because as the country moves to the right, they are exporting more so they must get an ever increasing amount of imports (move up more). Similarly, for the capital abundant country, the indifference curves get flatter because as the country moves up, they are exporting more so they must get an ever increasing amount of imports (move right more).* Be able to find the **optimal tariff** and explain how the large country is gaining from the tariff and how we know the world is losing. The graph can be seen in Appendix A8.6. Ignore the Metzler Paradox. Understand why retaliation is a problem for the optimal tariff.

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Non-graded Homework Assignment #6A to be reviewed with Assignment #6.

- 1) (15 points) Suppose there is an import tariff of 20% on sweaters and a 10% import tariff on wool. If half of the cost of a sweater is the wool, then what is the effective rate of protection (ERP)? Show all work. Explain the economics as to why it is not 20%.
- 2) (20 points) Draw the S/D diagram for a small country which **exports** the good. Show a non-prohibitive tariff. Find consumer surplus, producer surplus, and tariff revenue, both before and after the tariff. Who is hurt? Who gains? Does the country gain or lose?
- 3) (25 points) Draw the CPF/PPF/indifference curve diagram for a small country which imports the capital-intensive good. Show the effects of an import tariff. Briefly explain how you found the new production point and new consumption point.
- 4) (20 points) State the Stolper-Samuelson Theorem. Explain why it makes sense. Given that logic, who in the USA would gain from import tariffs? Explain your logic.
- 5) (20 points) Draw the offer curve diagram for two large countries. Add the trade indifference curves for the country importing the capital-intensive good. Use that diagram to find the optimal import tariff. Explain why the tariff moves the offer curve as drawn and how you know you found the optimal tariff.