

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 10/5 in the normal room.

Chapter 3: We will cover starting at Page 92; however, the material in the early part of the chapter is necessary for understanding the latter material. Be able to find the **revealed preference** from knowing which points are chosen on the budget constraints. Explain why the **equi-marginal principle** holds. Be able to prove that a **Laspeyres Price Index** over-estimates the cost of living and understand the economic logic behind that. Be able to calculate the Laspeyres and **Paasche Price Indices** for two goods and two years. Ignore chain-weighted index.

Chapter 4: Be able to derive the **price-consumption curve, individual demand curve, income-consumption curve, and the Engel curve**. Know how we can tell **inferior goods** using the latter two curves. Be able to draw the indifference curves and budget constraints to show a price change. Add an additional budget line which enables you to find the **income and substitution effects**. *Hint: the income effect is a parallel movement of the budget constraint because it represents income changing. The substitution effect moves along an indifference curve because that shows you are just as well off. Therefore, the new "fictitious" budget constraint is parallel to one budget constraint and crosses the other one.* Use the three important points to find whether either good is inferior and whether or not the goods are **substitutes or complements**. Be able to use the diagram to prove that **Giffen Goods** must be inferior goods. Be able to derive the market demand curve from the individual demand curves. Understand how expenditures, i.e. revenues, relate to the elasticity using the formula $MR = P[1+1/E_p]$. Understand why an unitary elastic demand curve must look like the isoelastic demand curve the book draws. Be able to find **consumer surplus** and expenditures on the demand diagram. Understand how the **bandwagon effect** and **snob effect** change the shape of the demand curve. What is the **identification problem** and how does that relate to estimating the demand curve? **Hints on the budget constraint diagram:** *Draw all of the budget constraints first because it is easier to draw the curved line tangent to a straight line than vice versa. The "extra third" budget constraint must be parallel to one of the other budget lines and crossing the other line. If you are doing a special case like a Giffen good, figure out where you want the tangency points to be before your draw the indifference curves. Make sure that one of the indifference curves is tangent to two of the budget constraints. The income effect is between the parallel budget constraints and the substitution effect is on the one indifference curve.*

Chapter 5 up to Page 165: Last time, this material was on Exam #3. Be able to use probabilities to calculate **expected payoff**, a.k.a. **expected value**, and **standard deviation**.

Non-graded Homework Assignment #4A to be reviewed with Assignment #4.

1) (35 points) Draw an indifference curve/budget constraint diagram with hamburger on the vertical axis and steak on the horizontal axis. Draw a change in a price of one of them such that you can show

hamburger is a Giffen Good. How did you know which price to change? Explain how your diagram shows hamburgers are Giffen Goods. Add in an additional budget line which will enable you to find the income and substitution effects. Use that to prove that hamburgers are also inferior goods.

2) (15 points) What is the equation which relates marginal revenue to the elasticity of demand. Use it to prove that if the good has an inelastic demand, then the marginal revenue is negative. Explain the economic reason this makes sense?

3) (15 points) Will the snob effect make the demand curve flatter or steeper? Explain your logic. A graph may be helpful.

4) (15 points) Explain what the identification problem is and how it makes finding the demand curve difficult.

5) (20 points) Suppose you had the offer of flipping a coin. In one case, if you got heads, then you would get \$0, but if it was tails, you get \$10. Find the expected payoff and the standard deviation. Suppose that there was a second game where you would pay \$5 if it was heads but you would get \$25 if it was tails. Find the expected payoff and the standard deviation. Show all work for all calculations. Which would you play? Explain your logic.