Wilfrid W. Csaplar Jr. Advanced Microeconomics Review Sheet for Exam #2

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, 3/19.

Chapter 13: What are **games, payoffs, strategies, dominant strategy,** and **optimal strategy**? How do we find the **Nash Equilibrium** and **maximin, a.k.a., safe or secure strategies**? What are **mixed** and **pure strategies**? Why does it matter how long a **repeated game** is repeated? How can the **tit-for-tat** strategy possibly yield a cooperative equilibrium? Be able to find the **extensive form, a.k.a., decision tree** for a **sequential game** and its solution. Why are **threats, commitments** and **credibility** important for trying to achieve a cooperative situation especially **entry deterrence**? What are the differences between these types of auctions **English, Dutch, open, sealed bid, first price, second price, private value** and **common value**? What is the **winner's curse** and why might it occur? Why do you want many bidders in a private value auction? Why should a common value auction be open not sealed bid? Why would you want a minimum bid on a private value auction?

Chapter 14: What is meant by a **derived demand**? Why is the $\mathbf{MRP_L}$ for a monopolistic firm different from a perfectly competitive firm? Understand the **S/D for labor diagram** with fixed capital. Why does it take its shape? What moves the lines? Why is the $\mathbf{D_L}$ different from the MRP_L line when capital is variable? Why is the industry demand for labor different from the sum of the firms' demand curves? How does the demand for inputs differ in the short-run and the long-run? Be able to use the **S/D for inputs** to derive the firm's **ME/MRP** diagram for inputs. Be able to derive the **backwards bending labor supply** diagram from the indifference curve/budget constraint diagram for income versus labor. How does the **labor market diagram** differ for a firm with **monopolistic output market** and a competitive market? How do we find **economic rent**? (It is basically producer surplus except that it is for an input rather than a final product.) Understand the **monopsony power diagram for inputs**. Why does **MV=ME** and **ME=MRP**? Be able to understand how a **floor with monopsony power** will affect the purchases. Note that I added that graph in class and the homework assignment. Understand the **monopolist in the factor market**. How do **labor unions** affect **non-union workers**?

Chapter 15 up to Page 565, 570 - 575 (the skipped pages will be on Exam #3): What are **stocks and flows**? What is the formula for **PDV**? Note that I changed the book's R to **r** and is the **discount rate** which is related to the interest rate. How do we find the **value of lost earnings**? What do the **g** and **m** mean in the equation? How do we find the **value of a bond**? Understand how to read the information on a bond like on Page 560. Be able to find the **net present value** of a **capital investment**. How can you tell if the investment is a good one? ~~What is the **risk premium**? How does it relate to **diversifiable** and **nondiversifiable risk**? Be able to use the **CAPM** method of finding the **β** and the discount rate. What does the beta mean?~~ How do consumers determine whether or not to buy a durable good? How do they determine which one is better (for example using the **energy guide**)? How do you determine whether your **human capital** will be worth it?

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

1) (25 points) Suppose you are about to graduate and are thinking about a 2-year masters program. The program costs $10K a year. If you get a job now, you would earn $40K a year for the rest of your working

life, which will be 45 years. If you get the masters degree, you will earn $45K per year until you retire. Setup the equation for calculating the effective rate of return you will be getting. Explain how you determined with values you put where and how you would find the effective rate of return if asked to do so. (I will not ask you to. The Business Dept will tell you how to type it into a calculator to do that.)

2) (5 points) Given the way Question #1 is written, is the effective rate of return the real or nominal return? Explain your logic.

3) (25 points) Suppose a $1000 has a coupon rate of 6% and a maturity of 3/17/2026 with interest paid annually on the 17th of March. If you are willing to settle for a 4% return, then setup the equation which will could be used to calculate the price you would be willing to pay. Explain why you put each number where you put it. Without calculating it, would the answer be $1000, more than $1000, or less than $1000? Explain your logic.

4) (25 points) Suppose that a factory costs $1M to build this year. Next year, it will lose $500K. The 10 years after that, it will make $400K per year. At the end, you can sell the factory for $300K. Setup the equation for calculating the effective rate of return you will be getting. Explain how you determined with values you put where and how you would find the effective rate of return if asked to do so.

5) (10 points) For students who have not had economics or business courses, they will tell you that if a college costs $20K/year, that a four year education costs $80K. What are two problems with that calculation? Explain why those are problems.

6) (10 points) Publishers' Clearing House has had where you could "win $1M a year forever". (It is not really forever, but let us pretend it is.) If you want a 5% return, then what is the value of winning that? Show all work.