

**REVISED REVIEW SHEET**

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 Wednesday, 12/7 at 6:00 in the normal room.

Chapter 22: Be able to illustrate movements of the ATC/AVC/AFC/MC curves and/or to find the errors in a graph. Understand how the product of labor curves relate to the cost curves. How do the long-run cost curves relate to the short-run curves?

Chapter 23: Understand why  $MR=MC$  is profit maximizing for ALL firms regardless of type. What is meant by **perfect competition**? Why do those firms have  $MR = AR = P$ ? Be able to find on the **MC/ATC/AVC/D/MR** diagram: the quantity a firm produces, the price they charge, their profits or their losses. Determine the **short-run and long-run shutdown prices**. Why do firms shut down then? How do we get the **supply curve for a firm**? How do we get the **industry short-run supply curve** from the firms' curves? For the graph on Page 544, only worry about **constant cost industries**. However, you should know what could cause the **decreasing cost industry** and the **increasing cost industry**. (The graphs for increasing and decreasing cost industries are too difficult.) Know how the industry and firm supply/demand diagrams inter-relate.

Chapter 24: What is a **monopolist**? Why does it need a **barrier to entry**? How do the following cause barriers to entry? **Ownership of resources, economies of scale, licences, franchises, patents, tariffs, and regulations**. What is a **cartel**? How do the **demand and marginal revenue curves of a monopolist** differ from those of a perfectly competitive firm? Why are they like that? What is meant by **price searcher**, a.k.a. **price setter**? Why do **all** profit maximizing firms set  $MR=MC$ ? Be able to draw the ATC/MC/AVC/D/MR diagram for a monopoly and find the quantity produced and price charged. What is meant by **perfect price discrimination**? (In other courses you may find out about other types of price discrimination.) What are the advantages and disadvantages of that type of firm? Where do they produce? Be able to prove that monopolies do not produce the socially optimal quantity unless they are perfect price discriminating monopolists.

Chapter 25: What is a **monopolistically competitive industry**? What is **product differentiation**? Why do they advertise? How does the D/ATC/MC diagram look for a firm making short-run profits, making short-run losses, and in the **long-run equilibrium**? *Hint for the long-run graph. Draw the D and MR first. Then draw the ATC tangent to the demand. Draw the MC go through the MR directly below the tangency point and through the minimum of the ATC. Remember, the minimum of the ATC cannot be at the tangency point.* Illustrate the movements of the graphs from the short-run profits or losses to the long-run. Why does the slope of the firm's demand change as other firms enter or exit? Why is the change in slope virtually undetectable? Understand the advantages and disadvantages of **direct marketing, mass marketing, and interactive marketing**? What are the differences between **informational advertising and persuasive advertising**? What are the qualities of **search goods, experience goods, and credence goods**? Ignore the pages on "information products".

Chapter 26: What is an **oligopoly**? Why does it need barriers to entry? How do we use **CR4** and **HHI** to

measure how concentrated an industry is? (I won't ask you how to spell Herfindahl-Hirschman Index). Why is it difficult to figure out which firms should be counted and which should not be? Why does the Department of Justice guidelines on mergers use HHI rather than CR4? For game theory, understand what is meant by **zero-sum game**, **negative-sum game**, and **positive-sum game**? Be able to use a **payoff matrix** to find the **Nash Equilibrium(-ia)**, **cooperative outcome**, and **dominant strategies** (if they exist). Understand the problems caused by the **prisoner's dilemma**. *Hint on the equilibria. Always list the equilibrium as (player 1's strategy, player 2's strategy). The payoffs are not the equilibrium.* What is a **cartel**? Why are they easier to enforce if there are a small number of firms, make relatively similar products, have easily observable prices, and the prices do not change much? Ignore network effects.

Chapter 28: What is meant by **MRPL**? Why is it = **MPL\*MR** (sometimes called **MPPL\*MR**). Why is that usually **MP\*P** for perfectly competitive firms? What is **MFC**? Why is the firm's **demand for labor** the same as **MRPL**? Note the vertical axis should be \$/L or wage. Be able to derive the **market demand for labor**. *It is basically the same derivation as the perfectly competitive industry's supply curve.* What determines the labor supply? What moves labor demand and labor supply? Ignore outsourcing. Why do monopolists hire fewer workers? Why should  $MPL/w = MPK/r = MP_{land}/P_{land}$  where  $w$  is the wage rate and  $r$  is the rental rate?

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This is the non-graded Assignment #11A that will be reviewed with Assignment #11.

- 1) (20 points each) Illustrate each of the following events on the supply and demand for labor of college professors. Explain why the curve(s) moved as drawn.
  - A) The demand for a college education increases.
  - B) More people get a Ph.D.
- 2) (10 points) Why should  $MPL/w = MPK/r$ ?
- 3) (10 points) Would having similar products help the industry to keep a cartel or would it be more likely to break up a cartel? Explain your logic.
- 4) (10 points) The diagram for the monopolist's demand and supply in the labor market has a labeling error. What is it? Explain how you know what it should be.
- 5) (30 points) Draw the perfectly competitive firm's labor supply/labor demand diagram and beside it, the industry labor supply/labor demand diagram. Explain how the two graphs depend upon each other.

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Review sheet for the Final.

My finals are comprehensive. I try to evenly cover the material from the three tests. I will put on the important topics and I will have a few questions on topics I had wanted to ask, but I did not have enough time on the tests to ask about. The review session will be at a time chosen by the students. The current time for the exam is set for Friday 12/16 at 8:00. If the class agrees, we can change the time. One time which has been suggested is 10:00 the same day. That time slot is for MWF 10:10 classes. I have an exam in the normal room at that time. We can move it then providing it does not cause any problems for students.