

This review sheet is intended to cover everything that could be on the exam; however, it is possible that I may have inadvertently overlooked something. 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 on 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.

The review session will be Wednesday 4/2 at 7:00 in the normal room, Richardson 104.

#### Chapter 5:

This exam starts with page 163. Know why isoquants and isocost lines take their shapes and how to find the quantities of capital and labor used in production, and how a company may respond to changes in wages or rental rates. Note that for the most part, they work just like indifference curves and budget constraints; however, we are generally trying to stay on the same isoquant. Use them to derive the short-run and long-run total cost, total fixed cost, total variable cost, average total cost, average fixed cost, average variable cost, and marginal cost curves. Then be able to show changes in costs on those graphs. What is a sunk cost and how does it differ from a fixed cost? Why is that distinction important? Note that sunk costs make no difference to decisions. Why? Be able to calculate the different cost functions from the others in a table or with equations. For example, marginal “anything” is the derivative of total “anything” with respect to quantity. Understand why the LRATC is the envelope of the SRATCs. (Unimportant note for other courses, the same logic applies to all short-run and long-run cost curves except for marginal costs.) How can we tell if we have economies of scale or economies of scope? Do not worry about the mathematics of economies of scope.

#### Chapter 6:

What are the advantages and disadvantages of using the spot market, contracts, and vertical integration to obtain inputs? What are the transaction costs? How do site specific investment, physical-asset specific investment, dedicated assets, and human capital affect the decision of how to acquire the inputs? Why do specialized assets cause costly bargaining, underinvestment, and the “hold-up problem”? Use figure 6-2 to understand how firms decide on the optimal length of the contract. Note that the vertical axis should be \$/year because the curves are marginal rather than total. Know why the branches in figure 6-5 result in the decisions the book says they should. What is the principal-agent problem? How is it manifested in the owner-manager relationship and the manager-worker relationship? How can it be reduced in both cases? Ignore the appendix. (Since a person’s appendix is useless, why would you want to name part of a book after it?)

#### Chapter 7:

This chapter looks at the structure-conduct-performance paradigm of industrial organization. For structure, be able to calculate CR4, CR10, and HHI. Note that for the latter, I gave an alternative method that is mathematically identical, but easier to use. What are some of the problems with trying to do these calculations? What is the Rothschild index? Why is it important? Why is potential entry important? For conduct, know how to calculate the Lerner index and why it is important. What are the advantages of vertical, horizontal, and conglomerate mergers? What do the following terms mean, crown jewel, going private, golden parachutes, leveraged buyout, poison pill, proxy contest, raider, target, tender offer, and white knight? **Know the guidelines from the Department of Justice (DOJ)’s Anti-trust Division. As I said in class, I thought the book was wrong, but my notes agreed with the book. I was right, the book is wrong. According to [http://www.usdoj.gov/atr/public/guidelines/horiz\\_book/15.html](http://www.usdoj.gov/atr/public/guidelines/horiz_book/15.html) on the DOJ’s web page, the guidelines revised in 1997 say that if the post-merger HHI is less than 1000, the merger is likely to be approved. If  $1000 < \text{HHI} < 1800$ , then it will likely to be approved unless the change in the HHI is greater than 100. If the HHI is greater than 1800, then it is unlikely to be approved unless the change in the HHI is less than 50.** Why are R & D and advertising important for conduct? For the performance, know how profits measure it. The Dansby-Willig performance index is not discussed in sufficient detail by the book or by me to be useful, so ignore it. How do structure,

conduct, and performance inter-relate?

Chapter 8 up to page 273:

What is meant by perfect competition? How does the demand differ for the industry and the firm? Why do all firms set  $MR = MC$ ? Note that like all marginal things,  $MR$  is the derivative of  $TR$  with respect to  $Q$ . Given that prices are assumed constant by perfectly competitive firms,  $MR = P$ , but only for perfectly competitive firms. Know how to determine the firms' profits on the  $MC/ATC/AVC/D/MR$  diagram. Prove that the short-run shut-down point is the price at the minimum of the  $AVC$  curve. Know how to get the firms' supply curves from that diagram and use that to get the supply curve for the industry. Know how to use the firm  $MC/ATC$  diagram and the industry  $S/D$  diagram to show the long-run equilibrium in the industry. Note that as firms enter, the industry supply curve moves, but the firms have a change in the demand. **Caution on all of the diagrams that involve  $MR$ ,  $MC$ ,  $ATC$ ,  $AVC$ ,  $S$ , and  $D$  curves, the vertical axis must have  $\$/Q$  or  $P$  on it. Sometimes the book puts just  $\$$ . That is only correct for  $TC$ ,  $TVC$ , and  $TR$ .**

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Economics 280  
HW#6

Non-graded assignment #6A

To be reviewed with

- 1) (20 points) Draw the  $MC/AVC/ATC/D/MR$  diagram for a perfectly competitive firm that is losing money but staying in business. Illustrate on it their losses and what their losses would be if they shut down. Explain how you got the price, quantity they produce, their loss, and their loss if they shut-down.
- 2) (15 points) Explain the economics as to why firms choose the output such that  $MR = MC$ . Why does  $MR = P$  for perfectly competitive firms? You can use either calculus or economics to answer the second half of that question.
- 3) (40 points) Draw the  $MC/AVC/ATC/D/MR$  diagram for a perfectly competitive firm that is making money. Beside it, draw the industry  $S/D$  diagram that corresponds to that diagram. Show what will happen in the long-run to both the firm and to the industry. Explain the movements of the curves.
- 4) (5 points) We say that perfectly competitive firms earn no profits in the long-run. Why would a firm stay in business if there are no profits?
- 5) (20 points) Draw the  $TR/SRTC$  diagram for a perfectly competitive firm. Find the profit-maximizing output. Explain how you chose that quantity.