

Studying for Dr. Jepsen's Principles of Micro Exams

On each exam, there will be a mix of questions with respect to the levels of difficulty (easy, medium, hard) and types of questions (definitions, applications, analytical, graphs, tables, etc.). There will be a few easy questions (approximately 10%), a lot of medium difficulty questions (approximately 80%), and a few hard questions (approximately 10%).

Here are some examples of each level of difficulty, descriptions of types of questions, and general study techniques:

EASY QUESTIONS:

Easy questions are primarily definitions. You can prepare for these questions by reviewing terms in your notes and the textbook. The matching sections of the study guide (where you match "Key Terms" with "Definitions") is another useful way to study for these type of questions.

Example:

The marginal rate of substitution is

- a. equal to the ratio of the prices of the goods.
- b. a curve that shows consumption bundles that give the consumer the same level of satisfaction.
- c. the rate at which the consumer is willing to trade one good for another.
- d. the reason that indifference curves cannot intersect.
- e. the limit on the consumption bundles that a consumer can afford.

You will notice that this question comes from the matching questions in the study guide. Not all questions will be word-for-word from the study guide, but practicing the problems in the guide will help you prepare for exams, even when the wording for a question is similar but not identical to the book or study guide.

MEDIUM QUESTIONS:

Medium-difficulty questions come in several forms. The following is a list of the most common types but may not represent every question type. Many questions could be included in more than one category.

***Questions that test several ideas:**

You will learn the definitions of a production function, marginal product, and diminishing marginal product. The following question requires you to understand all three concepts and to calculate a series of marginal products.

Example:

Table 1

Amount of Labor	Amount of Output
0	0
1	200
2	500
3	675
4	825
5	900

Refer to Table 1. Diminishing marginal product begins with the addition of the

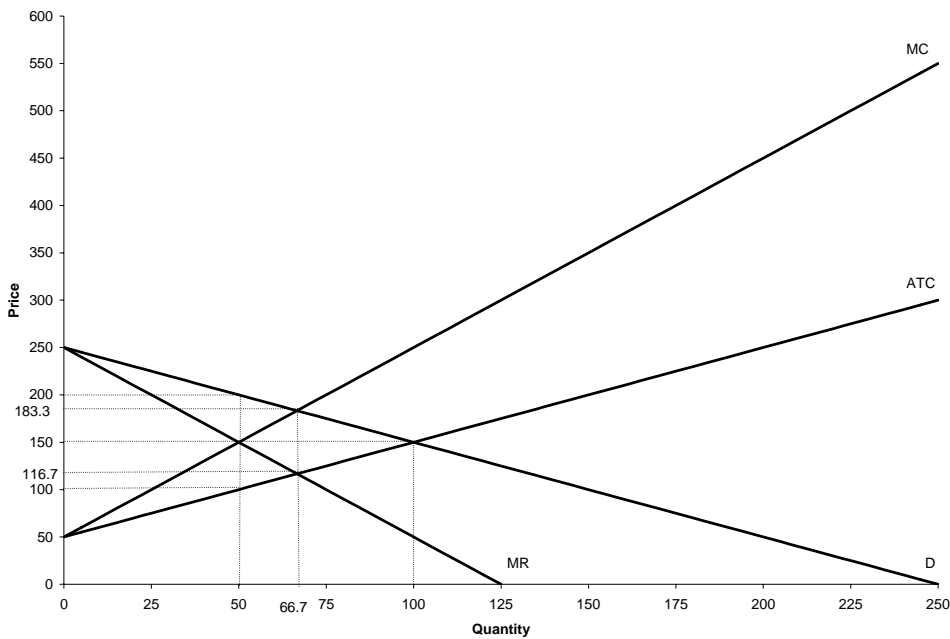
- a. first worker.
- b. second worker.
- c. third worker.
- d. fourth worker.
- e. fifth worker.

***Questions that require you to apply material:**

You will learn that a profit-maximizing monopolist produces an output level where marginal revenue (MR) equals marginal cost (MC). The monopolist charges a price where that quantity occurs on the demand curve. Total revenue equals price times quantity. Total cost equals average total cost times quantity. Profit equals total revenue minus total cost. I will present a graph similar to Figure 2 in class. You should know how to find the monopolist's output level (Q), price, total revenue, total cost, and profit.

Example:

Figure 2



Refer to Figure 2. A profit-maximizing monopolist would charge a price of

- a. \$50 and earn a profit of \$10,000.
- b. \$200 and earn a profit of \$10,000.
- c. \$200 and earn a profit of \$5,000.
- d. \$150 and earn a loss of \$15,000.
- e. \$150 and earn a profit of \$2,500.

***Questions that require you to make comparisons:**

When we discuss levels of competition, one of the most important concepts is to be able to make comparisons across the four categories of market structures: perfect competition, monopoly, oligopoly, monopolistic competition. You will learn about the potential for a firm to earn short-run and long-run profits depending on the market structure in which it operates.

Example:

Firms in which of the following market structures can earn economic profits in both the short run and the long run?

- a. perfect competition and monopoly only
- b. oligopoly and monopoly only
- c. perfect competition, monopoly, and monopolistic competition only
- d. perfect competition only
- e. perfect competition, monopoly, monopolistic competition, and oligopoly

HARD QUESTIONS:

Hard questions are usually either “medium-type” questions over the most challenging material in a section or extensions and/or applications of topics that we cover in class to material that you haven’t seen before. There are two keys to studying for hard questions. First, make sure that you devote sufficient time to the challenging material before each exam. Don’t worry – if you come to class, you’ll know which topics are the most challenging. Second, when you are studying a topic, make sure to think about different variations of problems. For example, when you are studying indifference curves, budget constraints, and tangency points, your book shows a graph of an optimal consumption point after income *increases* for a normal good and for an inferior good. You will want to consider what the same graphs would look like if income *decreases*. When you study the relationship between total output and marginal product, make sure that you can calculate marginal product when given total output *and* calculate total output when given marginal product.

In general, be on the lookout for ways to switch what you are given and what you have to find. There are many examples when several variables will be related to each other. You will learn that fixed cost plus variable cost equals total cost. Average total cost (ATC) is total cost divided by output, average variable cost (AVC) is variable cost divided by output, and average fixed cost (AFC) is fixed cost divided by output. Thus, average total cost equals average fixed cost plus average variable cost. If you are given AVC and AFC, can you find ATC? This is a pretty easy application. What if you were given ATC and AVC. Can you find AFC? Further, suppose that

you saw a graph of average total cost and average variable cost. How would you find average fixed cost? Think about ways to turn graphs into algebra problems and algebra problems into graphs.

You will learn about the relationship between elasticity and total revenue. If demand is price elastic, then an increase in price will cause total revenue to decrease. If demand is price inelastic, then an increase in price will cause total revenue to increase. The question below is hard because you must combine several concepts. First, you must realize that shifting supply to the right represents a movement along the demand curve that decreases the price. If a decrease in price results in an increase in total revenue, then demand must be price elastic in that region. Notice that you must know the opposite effects of the statements in the second and third sentences of this paragraph, and you must recognize how a shift in supply affects the demand curve.

Example:

An increase in supply (shift to the right) will increase total revenue in that market if

- a. supply is price elastic.
- b. supply is price inelastic.
- c. demand is price elastic.
- d. demand is price inelastic.

GENERAL TIPS:

- Come to class. The more time I spend on something in class lectures, the more likely it is to be on the exam. You should expect that the number of questions from each chapter will be about proportional to the time devoted to the topics in class and in the text.
- Understand that there are synonyms for many terms. For example, quantity, output, and total product mean the same thing. Total revenue, total sales revenue, and total expenditure mean the same thing.
- Begin studying by memorizing definitions.
- But note that memorization alone is not enough! You need to *understand* the reasoning behind concepts rather than simply memorizing results. For example, there are four relationships between the price elasticity of demand and total revenue (TR): elastic demand with a price increase (TR decreases), elastic demand with a price decrease (TR increases), inelastic demand with a price increase (TR increases), and inelastic demand with a price decrease (TR decreases). Do not try to memorize all four relationships. Instead, focus on *why* elasticity is related to total revenue. Once you understand the relationship, you don't need to memorize *any* of the four relationships.
- Practice, practice, practice. Sitting in class is passive learning. Taking notes is active learning. Practicing problems is very active learning – it reinforces what you've seen and heard. Practice the problems that we cover in class. Practice some problems from other sources such as end-of-chapter questions, problems from the study guide, and the practice quizzes (ungraded). Then change the problems that we cover in class to anticipate exam problems. If we do an example in class where the price increases, practice the same problem for a price decrease. Redraw the important graphs from scratch.
- Think! Think about the general concepts we study. Think about the specific examples. Think about how one topic relates to another topic. Think about how the concept could change slightly (for example, a shift in demand instead of a shift in supply). Think about the assumptions that are required for a specific concept.
- Get help if you are confused. Stop by my office hours if you have a quick question. Make an appointment with me if you have a more complex question – the best way to contact me is to email me to set up an appointment; that way you'll have time without the interruptions of people stopping by during office hours. Stop by the tutors who are located in the first floor lounge of the Curris Business Building. They may be able to explain the problem in a different way than I do; they may be available at times when I am not.