

Exam Review

Chapter 3

What are the assumptions characterizing consumer preferences?

What is a utility function?

What is marginal utility?

Draw and properly label a diagram showing indifference curves that represent a consumer's preferences.

What are the properties of indifference curves?

How do the assumptions made about preferences lead to indifference curves with the properties listed above?

What is the marginal rate of substitution, and why is it equal to a ratio of marginal utilities?

Chapter 4

What is the equation for a consumer's budget constraint?

How does one graph a consumer's budget line?

What is the slope of a consumer's budget line?

How do changes in p_x , p_y , and I cause the budget line to shift?

Use both indifference curves and a budget line to illustrate a consumer's utility maximizing choice of a bundle of consumption goods. Explain why an indifference curve is normally tangent to the budget line at the consumer's optimum.

Write an equation that must be true at a point of tangency between a budget line and an indifference curve.

What is the composite good convention? How does this affect your interpretation of the budget-line indifference curve diagram?

Chapter 5

Use the budget line-indifference curve diagram to derive points on a consumer's demand curve for good X.

Use the budget line-indifference curve diagram to show how a change in income affects the quantity of good X demanded.

What are normal, inferior, and Giffen goods?

Use the budget line-indifference curve diagram to illustrate income and substitution effects of a price change (increase or decrease).

Use the composite good convention and the tangency condition for a consumer optimum to explain why the price of good X is equal to a consumer's marginal willingness to pay for good X.

What is consumer surplus?

Show the change in consumer surplus that occurs when the price of a good increases.

What are the compensating and equivalent variations associated with a price increase?

Use a budget line-indifference curve diagram to illustrate the compensating and equivalent variations associated with a price change.

Under what circumstances are compensating and equivalent variations equal?

How is a market demand curve derived from individual consumer demand curves?

Chapter 6

Write an equation for a firm's production function.

Define the marginal product of labor (capital). Define the average product of labor (capital).

What is an isoquant line? Draw and label a diagram showing isoquant lines for a firm.

What is the marginal rate of technical substitution, and why is it equal to a ratio of marginal products?

Define the elasticity of substitution. Intuitively, what is this measuring?

Chapter 7

Define: opportunity cost, implicit and explicit costs, sunk and non-sunk costs, fixed and variable costs, the short run and the long run.

What is an isocost line? Plot an isocost line.

For the long run, use the isoquant-isocost diagram to illustrate the solution to a cost minimization problem

Write an equation for the tangency condition for a long-run cost minimization problem.

Explain how a firm's long-run cost function is related to (derived from) cost minimization problems illustrated with isocost and isoquant lines.

For the short run, illustrate the solution to a cost minimization problem in the isoquant-isocost diagram.

Chapter 8

How is the long-run marginal cost curve related to the long-run total cost curve?

How is the long-run average cost curve related to the long-run total cost curve?

When AC and MC curves are plotted in the same diagram, why does MC intersect AC at the minimum of the AC curve?

How is a single short-run total cost curve related to the firm's long-run total cost curve?

How is a single short-run average cost curve related to the firm's long-run average cost curve?

How is the firm's long-run marginal cost curve related to the family of short-run marginal cost curves?

Chapter 9

What are the assumptions that characterize a perfectly competitive market?

Why are competitive firms price-takers?

What is the profit maximization condition for a profit-maximizing firm selecting an output in a perfectly competitive market?

What is the short-run shut down condition? Consider cases where all fixed costs are sunk, or not.

Why is a competitive firm's short-run supply identical to its marginal cost curve, for the portion of the marginal cost curve that lies above ANSC?

Illustrate a short-run equilibrium for a competitive market with a two-part diagram, showing market demand and supply in one part of the diagram, and the profit-maximization decision of a typical firm in the other part of the diagram.

In a short-run equilibrium in a competitive market, firms might earn positive profits. However, in a long-run equilibrium firms earn zero profit. Why? What happens to force profits to zero as a market moves from a short-run equilibrium to a long-run equilibrium?

Suppose that marginal costs are lower for dairy farms in Wisconsin than for dairy farms in South Carolina. In a competitive market equilibrium, how can profits be equal to zero for firms located in both states?

Chapter 10

For short-run equilibria in competitive markets, identify consumer surplus and producer surplus.

Chapters 11 and 12

How is a monopolist different from a perfectly competitive firm?

For a monopolist, why is marginal revenue (at a given output level) less than price?

Illustrate the profit-maximizing choice of output for a monopoly firm.

What is the monopoly mark-up formula?

Why does Professor Chappell dislike monopoly?

What is price discrimination?

What conditions must be satisfied if a firm is able to profitably engage in price discrimination?

How are first, second, and third degree price discrimination different?

What is the profit maximization condition for a monopolist engaging in third degree price discrimination across two customer groups?

What is a two-part tariff, and when is the marginal price under a two-part tariff likely to be set close to marginal cost? When is the marginal price likely to be above marginal cost?

Why is popcorn so expensive at the movies?

Explain how a mobile phone service monopoly might devise plans and subscription rates (assuming it knows that customers are either high- or low-demand types, but doesn't know which type each individual is).

Chapters 13 and 14

How is monopolistic competition similar to monopoly? To perfect competition?

Illustrate profit maximizing choice of output for a monopolistically competitive firm in the short-run and in the long-run.

Describe what is meant by a Nash equilibrium?

Describe the set-up and equilibrium of the prisoners' dilemma game.

Are Nash equilibrium strategies always dominant strategies?

What is a subgame perfect Nash equilibrium (what is backward induction?).

What are the assumptions of the Cournot oligopoly model? How does one solve a Cournot model?

What is the Bertrand oligopoly model? What is the solution for the Bertrand model?