



ECON 101

Final Exam Review Session

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Introduction to Economics

- Key Concepts:

- **Economics** is the social science that studies the choices that individuals, businesses, governments, and entire societies make as they cope with scarcity.
- **Microeconomics** is the study of choices that individuals and businesses make, the way those choices interact in markets, and the influence of governments.
- **The economic way of thinking** is defined by concepts such as **tradeoff, rational choice, benefit, opportunity cost, marginal benefit and marginal cost.**
- **Production possibilities frontier (PPF)** is the boundary between the combinations of goods and services that can be produced and that cannot.



Introduction to Economics

- **Allocative efficiency** is achieved when we cannot produce more of any one good without giving up some other good that provides greater benefit.
- A person has a **comparative advantage** in an activity if that person can perform the activity at a lower opportunity cost than anyone else.
- A person has an **absolute advantage** if that person is more productive than others.



Demand and Supply

- Key Concepts:
 - **Quantity demanded** of a good or service is the amount that consumers plan to buy during a particular time period, and at a particular price.
 - **Law of demand:** Other things remaining the same, the higher the price of a good, the smaller is the quantity demanded.
 - **Demand** refers to the entire relationship between the price of the good and quantity demanded of the good.
 - **Changes in demand** can be caused by changes in **prices of related goods, expected future prices, income, expected future income, population, preferences.**



Demand and Supply

- **Quantity supplied** of a good or service is the amount that producers plan to sell during a given time period at a particular price.
- **Law of supply:** Other things remaining the same, the higher the price of a good, the greater is the quantity supplied.
- **Supply** refers to the entire relationship between the quantity supplied and the price of a good
- **Changes in supply** can be caused by changes in **prices of factors of production, prices of related goods, expected future prices, number of suppliers, technology, state of nature.**



Demand and Supply

- **Equilibrium price** is the price at which the quantity demanded equals the quantity supplied and **equilibrium quantity** is the quantity bought and sold at the equilibrium price.



Elasticity

- Key Concepts:
 - *Price elasticity of demand*=(Percentage change in quantity demanded)/(Percentage change in price)
 - *Elasticity of supply*=(Percentage change in quantity supplied)/(Percentage change in price)
 - Price elasticity of demand and elasticity of supply can be **perfect inelastic, inelastic, unit elastic, elastic, perfectly elastic.**



Elasticity

- *Income elasticity of demand*=(Percentage change in quantity demanded)/(Percentage change in income)
- *Cross elasticity of demand*=(Percentage change in quantity demanded)/(Percentage change in price of a substitute or complement)



Government Actions in Markets

- Key Concepts:
 - **Consumer surplus** is the excess of the benefit received from a good over the amount paid for it.
 - **Producer surplus** is the excess of the amount received from the sale of a good over the cost of producing it.



Utility, Possibilities, Preferences, and Choices

- Key Concepts:
 - **Consumption possibilities** are all the things that you can afford to buy. Described by a budget line.
 - **Total utility** is the total benefit that a person gets from the consumption of all different goods and services .
 - **Marginal utility** is the change in total utility that results from a one-unit increase in the quantity of a good consumed. We assume positive and diminishing marginal utility.
 - **Marginal utility per dollar** is the marginal utility from a good that results from spending one more dollar on it.
 - **Consumer equilibrium** is a situation in which a consumer has allocated all available income in the way that maximizes total utility. It happens when marginal utility per dollar for all goods are equal.



Utility, Possibilities, Preferences, and Choices

- **Real income** is the income expressed as a quantity of goods that the household can afford to buy.
- **Relative price** is the price of one good divided by the price of another good.
- **Indifference curve** is a line that shows combination of goods among which a consumer is indifferent.
- **Marginal rate of substitution (MRS)** is the rate at which a person will give up a good to get an additional unit of another good. It is usually a diminishing MRS.
- **Best affordable choice** happens on the highest attainable indifference curve where $MRS = \text{slope of budget line}$.



Output and Costs

- Key Concepts:
 - **Total product** is the maximum output that a given quantity of labor can produce.
 - **Marginal product** of labor is the increase in total product that results from a one-unit increase in the quantity of labor employed. Increasing initially and diminishing eventually.
 - **Average product** of labor is equal to total product divided by the quantity of labor. Maximum when it intersects the marginal product curve.



Output and Costs

- **Total cost = total fixed cost + total variable cost**
- **Marginal cost** is the increase in TC that results from a one-unit increase in Output
- **Average cost** is cost per unit of output. **AVC** curve and **ATC** are minimum where it intersects MC curve.
- **ATC = AVC + AFC**
- **Changes in Cost Curves** can be caused by changes in **Technology** and **Prices of factors of production**



Output and Costs

- In the **long run**, all firm's costs are variable. It faces diminishing return and diminishing marginal product of capital.
- **Economies of scale** are features of a firm's technology that make average total cost fall as output increases.
- **Diseconomies of scale** are features of a firm's technology that make average total cost rise as output increases.
- **Constant returns to scale** are features of a firm's technology that keep average total cost constant as output increases.



Perfect Competition

- Key Concepts:
 - **Perfect competition** is a market in which:
 - Many firms sell identical products to many buyers
 - There are no restrictions to entry into the industry
 - Established firms have no advantages over new ones
 - Sellers and buyers are well informed about prices
 - **Total revenue** is equal to price multiplied by quantity sold.
 - **Marginal revenue** is the change of total revenue that results from a one-unit increase in quantity sold.
 - **Demand** for a firm's product is perfectly elastic but not the market demand.



Perfect Competition

- **Economic profit** = $TR - TC$. Maximized when $MC = MR$.
- **Economic loss** = $TFC + (AVC - P) * Q$
- **Shutdown point** is the price and quantity in which it is indifferent between producing and shutting down. Occurs at the price and quantity at which average variable cost is minimum.
- **Firm's Supply Curve** is equal to MC after cross the AVC
- **Break even** occurs at the price and quantity at which average total cost is minimum



Perfect Competition

- **Entry and exit in the long-run:**
 - Economic profit incentives new firms to **enter** a market. New firms on that market makes market price falls and economic profit decrease.
 - Economic loss incentives new firms to **exit** a market. Less firms on that market makes market price rise and economic profit increase.
 - Firms make zero economic profit on **long-run equilibrium**



Monopoly

- Key Concepts:

- **Monopoly** is a market with a single firm that produces a good or service with no close substitute and is protected by **barriers to entry** that includes **natural**, **ownership**, and **legal** barriers to entry.
- **MR < P**
- **Single-price monopoly** Profit-maximizing quantity when $MR = MC$ and price determined by demand curve. Higher price and smaller output when compared with perfect competition.
- **Price discrimination** charges different prices for the same product.
- **Perfect price discrimination** occurs if a firm can sell each unit of output for the highest price someone is willing to pay for it.



QUESTIONS?



EXERCISES!!!



Introduction to Economics

Assume that Anju and Zain both produce cakes and pies. Anju can produce a maximum of 40 cakes, or 25 pies per hour. Meanwhile, Zain can produce a maximum of 50 cakes, or 40 pies per hour.

- a. Who has an absolute advantage in cake production?
- b. Who has an absolute advantage in pie production?
- c. Who has a comparative advantage in cake production?
- d. Who has a comparative advantage in pie production?
- e. How can both benefit from trade?



Demand and Supply

“Monday’s mass shutdown of the Toronto subway system was a bonanza for alternative modes of transportation, including Uber, the online ride-hailing company. Unfortunately, it was also a bonanza for economic ignorance and self-defeating kvetching. Faced with a sudden and massive increase in the number of people calling upon its services, Uber did what it does in all such situations: it switched to what it calls “surge pricing,” based on an algorithm that raises prices in those areas of the city where demand is highest, and for as long as the surge remains in effect. Prices in some areas were reported to be three or four times Uber’s normal rates.”

From: <http://news.nationalpost.com/full-comment/national-post-view-ubers-real-life-lesson-in-econ-101>

Please explain the rationale behind Uber’s surge pricing.



Elasticity

- Please explain the relationship between total revenue and elasticity
- The price of orange increases by 20%, which cause a decrease in demand for orange by 10%. Comment about the elasticity of demand



Government Actions in Markets

The losers under rent control include

- a. Long-time renters who keep their apartments
- b. Renters who live in marginal apartments that are taken off the market
- c. Landlords
- d. B and C



Government Actions in Markets

A subsidy

- a. Lowers the price received by farmers
- b. Decreases the quantity supplied in the market
- c. Raises the price received by farmers
- d. Prevents the deadweight loss from underproduction
- e. Decreases total revenue received by farmers



Utility, Possibilities, Preferences, and Choices

- Explain why the indifferent curves are (1) convex, (2) do not cross, (3) increasing outward
- Graph a budget line indicating the consumer equilibrium and its indifference curve.



Output and Costs

Profits are maximized at the output at which marginal cost equals marginal revenue. If the market price falls below the minimum average variable cost:

- a. the firm should shut down.
- b. the firm should produce more.
- c. the firm should produce less.
- d. None of the above.



Output and Costs

Which of the following statement about a long run cost curve is true?

- a. The minimum is always below the minimum point reached by a short run cost curve.
- b. There are always decreasing returns to scale.
- c. It shows the minimum average cost to produce a given output when all inputs can be varied.
- d. All the above.



Output and Costs

As output increases, marginal cost will eventually

a. increase because of the law of increasing returns

b. increase because of the law of diminishing returns.

c. decrease because of the law of diminishing returns.

d. decrease because of the law of increasing returns.



Perfect Competition

- Explain in words why the demand curve a firm faces in a perfectly competitive market is horizontal
- Which of the following is always true for a perfectly competitive firm?
 - a. $P = MR$
 - b. $P = ATC$
 - c. $MR = ATC$
 - d. $P = AVC$



Monopoly

BC Translink decide to implement perfect price discrimination.

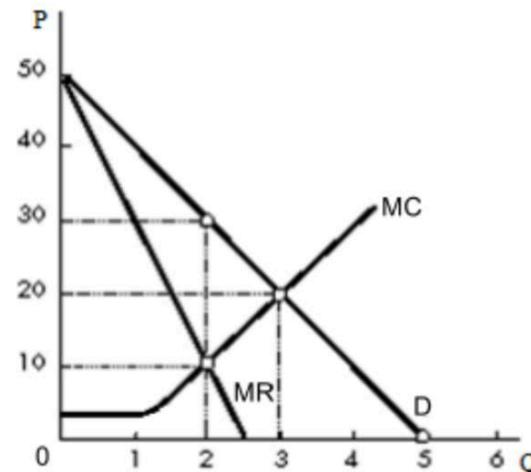
- a. What are the conditions for price discrimination?
- b. What are the results of perfect price discrimination? Illustrate with graph



Monopoly

The graph below shows the market demand, marginal revenue, and marginal cost curves of a single-price monopoly.

- What are the profit-maximizing output and price of the monopoly?
- If it were a perfectly competitive market, what would be the profit-maximizing output and price?



- Shade on the graph above the areas of consumer surplus, producer surplus, and the deadweight loss created by the monopoly?



Monopoly

Please compare on a graph monopoly and perfect competition.

