Q: What is Need in Economics ?

A need is something that is neccessary to live and function. It includes food, clothing, shelter and medical care.

Q: What is Want in Economics ?

Ans A want is something that can improve your quality of life. It is unlimited and may vary from person to person and time to time.

Q: Describe Demand in Economics:

Ans In simple words, demand is the number of goods that the consumers are ready and willing to buy at ~~sev~~ several prices during a given time frame. Actually it is an economic concept that relates to a consumers desire to purchase goods and services and willingness to pay a specific price for them.

There are two condition in demand -

i) Availity to pay

ii) Willingness to pay

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Q: Difference between Need and Want.

Basis	NEED	WANT
Nature	Limited	Unlimited
What is it	Something you must have	Something you wish to have
Represents	Neccessity	~~Inessential~~ Desire
Survival	Essential	Inessential
Change	May remain constant over time	May change over time
Non-fulfillment	May result in onset of disease or even death.	May result in disappointment.

Q: What are the three ways to maximize the benefits of human beings?

Ans: These are-

Q-1: What to produce?

Q-2: How to produce?

Q-3: For whom to produce?

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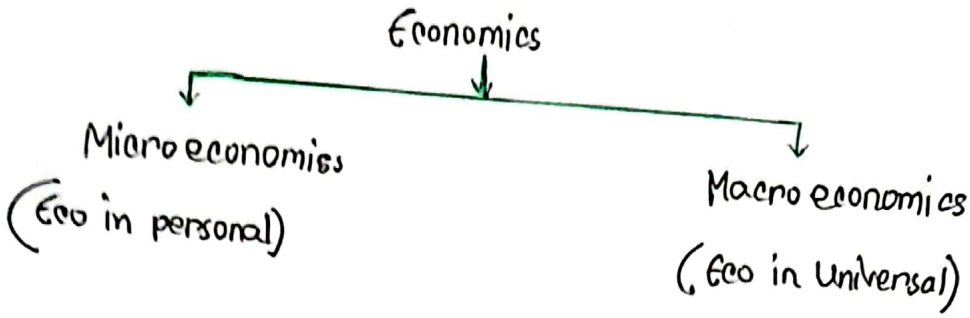
Q: What is Economics?

Ans Economocis is the study of how people make choices under scarcity and the results of these choices for society.



Q: What is Scarcity principle?

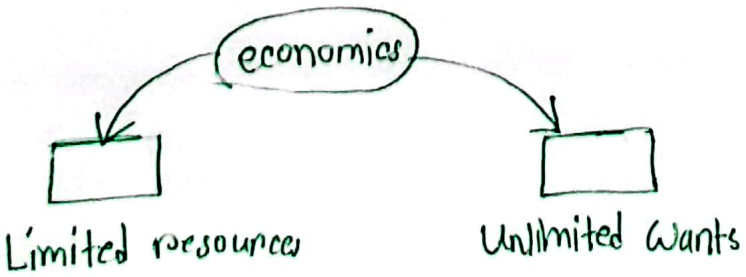
Ans: It is also called "No free-lunch principle". The principle is- People have boundless wants, but resources are limited. "Having more of one good thing usually means having less of another".

Q: What is opportunity cost?

Ans Opportunity cost refers to what you have to give up to buy what you want in terms of other goods or services.

Q: Can economics role as a bridge?

Ans: Economics connects two things; one is Limited resources and another is unlimited wants.



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Q: What is circular flow of economy?

Ans The circular flow model demonstrates how money moves from producers to households and back again in an endless loop.

In an economy, money moves from producers to workers as wages and then back from workers to producers as workers spend money on products and services.

Q: What is cost-benefit principle?

Ans: The cost-benefit principle is "Take an action is and only if the extra benefits are at least as great as the extra costs."

Q: What is economic surplus?

Ans The economic surplus of an action is equal to its benefit minus its costs.

Economic Surplus = Total benefits − Total Costs

Q: What is opportunity cost?

Ans Opportunity cost is the value of what must be forgone in order to take undertake an activity.

It considers only your best alternative.

Q: What is economic model?

Ans An economic model is a simplified description of reality, designed to yeild hypothesis about economic behaviour that can be tested.

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Q: What is pitfall in economics?

Ans In economics, pitfall can lead to incorrect conclutions, which may be used to make poor economic decisions and policies.

Q: What is marginal cost and benefit?

Ans: Marginal cost is the increase in total cost from one additional unit of an activity.

And marginal benefit is the increase in total benefit from one additional unit of an activity.

Q: What is incentive principle?

Ans: We are more likely to do something if its benefit rises, and less likely if cost rises.

Q: What is Microeconomics?

Ans: Microeconomics is the study of economics at an individual, group, or company level. It focuses on issues that affect individuals and companies.

Q: What is macroeconomics?

Ans Macroeconomics is the study of a national economy as a whole. It focuses on issues that affect nations and the world economy.

Q: What is Absolute Advantage?

Ans Absolute Advantage is an ability of an actor to produce more of a good or service than a competitor. A person has an absolute

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advantage at a particular task if he or she can perform the task in fewer hours than the other person.

Q: What is Comparative Advantage?

Ans: Comparative Advantage is the ability of an actor to produce a good or service for a lower opportunity cost than a competetor. He will get comparative advantages if ~~he~~ his opportunity cost of performing the task is lower than the other person's opportunity cost.

Q: What is the principle of Comparative Advantage?

Ans: The principle is, 'Everyone does best when each person (or each country) concentrates on the activities for which his or her opportunity cost is the lowest.

Q: What is specialization in economics?

Ans: Specialization is a method of production whereby an entity focuses on the production of a limited scope of goods to gain a greater degree of efficiency. It refers to focus on a specific aspect of a larger topic.

Q: What is PPC?

Ans: A production possibility curve illustrate the combination of two goods that can be produced with given resources.

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Q: What is unattainable and attainable point in PPF?

Ans: The points are unattainable on a PPF when they lie outside the PPF. And the points are attainable when they inside or on the PPF.

Q: What is dynamic economy?

Ans Dynamic Economy refers to an economy that is constantly changing and adapting to new situations, technologies and trade.

Q: What is shift in PPC?

Ans Shifts in Production Possibility curve are caused by things that change the output of an economy, including advances in technologies, changes in resources. and changes in labor force.

Q: Explain International Trade.

Ans: International Trade is the purchase and sale of goods and services by companies in different countries.

Q: What is the meaning of term 'outsourcing'?

Ans Outsourcing service work performed overseas by low-wage workers has been termed outsourcing.

Q: What is market?

Ans A market is a place where parties can gather to facilitate the exchange of goods and services.

Market

- perfect competition
- monopolistic competition
- oligopoly
- monopoly

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Q: What is central planning?

Ans: Central planning denotes the total ~~planning~~ body of goverment actions to determine and coordinate directions of national economic development.

Q: Who are the Buyers and sellers in the market?

Ans: A buyer's market refers to a situation in which purchasers have an advantages over seller in price negotiations.

On the other hand, The term seller refers to a party that offers a good, service or asset in return of for payment.

Q: What is Demand curve?

Ans A demand curve illustrates the quantity buyers would purchase at each possible price. It has a negative slopes.

Q: What is substitution effect and income effect?

Ans The substitution effect happens when consumers replace cheaper items with more expensive ones due to price changes or when their financial conditions improve, and vice-versa.

On the other hand, the income effect is the change in the consumption of goods by consumers based on their income.

Q: What is complementary product?

Ans A complementary product is an item that is bought together with the main product.

Q: What is substitute product?

Ans A substitute is goods is product or service that can be easily replaced with another by consumers.

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Q: What is Supply Curve?

Ans The Supply Curve illustrates the quantity of a good that sellers are willing to offer at each price.

Q: What is Market equilibrium?

Ans Market equillibrium is a market state where the supply in the market is equal to the demand in the market.

Q: What is Equilibrium Price and Equilibrium Quantity?

Ans The equilibrium price is the price at which the supply and demand curves intersect.

The equilibrium quantity is the quantity at which the supply and demand curves intersect.

Q: What is price ceiling?

Ans A price ceiling is a maximum allowable price, set by law.

Q: What is movement along the demand curve?

Ans A movement along a demand curve is a change in quantity demanded. It is caused by a change in the price of the good.

Q: What is shift along the demand curve?

Ans: A shift in the demand curve occurs when a determinant of demand other than price changes. It occurs when the demand for goods and services changes even though the price didn't

Q: What is normal good and inferior good?

Ans A normal good is a good where, when an individual's income rises, they buy more of that good. An if inferior good is a good where, when the individual's income rises they buy less of that good.

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Q: What is Surplus in economics?

Ans A surplus refers the amount by which a producer's or a consumer's willingness to pay exceeds the actual market price. There are two main types of surplus in economics: consumer surplus and producer surplus.

Q: What is Economic efficiency?

Ans Economic efficiency refers to a state where resources are allocated in a way that maximizes the production of goods and services.

Q: What is Economic Equilibrium Principle?

Ans The equilibrium Principle is a fundamental concept in economics that refers to the tendancy of markets to settle at a stable and balanced state, where the quantity demanded equals the quantity supplied.

Q: What is price elasticity of demand?

Ans Price elasticity of Demand is defined as the percentage change in quantity demanded from a 1% change in price.

Q: What is elasticity?

Ans Elasticity is an economic measure of how sensitive one economic factor is to changes in another.

Elasticity can be usefully divided into five broad categories -

i) perfectly elastic
ii) elastic
iii) perfectly inelastic
iv) inelastic
v) unitary

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Q: Describe Elastic Demand, Inelastic Demand and Unit elastic demand.

Ans When price elasticity is greater than 1, ~~demand is elastic~~, it is called elastic demand. If

If the price elasticity is less than 1, it is called inelastic demand.

And when the price elasticity is 1, demand is unit elastic or unitary elastic demand. Here a minor price change doesnt have a significant effect on demand.

Q: Write down the price elasticity notation.

And

$$\epsilon = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in price}}$$

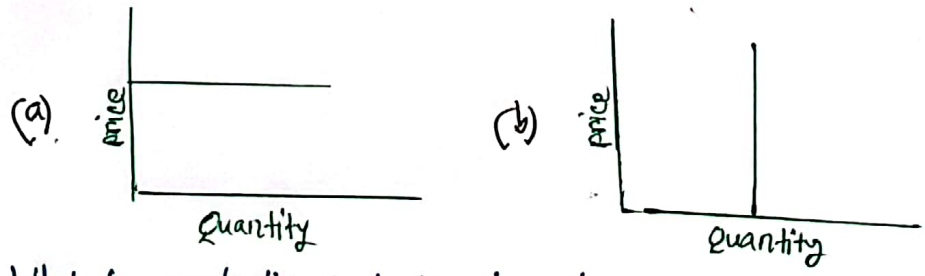
Q: What is Slope ?

Ans Slope is the ratio of the change in the value of the dependent variable to the change in the value of the independent variable.

It refers to the measures of the steepness of a line or curve on a graph.

Q: What is perfectly elastic demand ?

A When the slight or the or zero change in the price brings about infinite change in the quantity demanded, it is called perfectly elastic demand. (a)



Q: What is perfectly inelastic demand ?

A When change in the price of commodity has no effect on the quantity demanded of the commodity, it is called perfectly inelastic demand. (b)

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Q: What is expenditure ?

A Expenditure means money spent on purchasing goods or services.

Q: What is revenue ?

A Revenue refers the income that a firm receives from the sale of a good or service to its customers.

Q: What is cross-elasticity of demand ?

A: Refers to a way that changes in the price of one good can affect the quantity demanded for of another good.

Q: What is income elasticity of demand?

A: It is an economic measure of how responsive the quantity demanded for a good or service is to a change in income.

Q: Price Elasticity ~~in~~ su of supply.

A: The price elasticity of supply (PES) is measured by % change in Q.S. divided by % change in price.

Q: What is Law of Demand?

A: The law of demand states that the quantity purchased varies inversely with price.

Q: Reservation Price ?

A A reservation price is the limit on the price of a good or a service.

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Q: What is utility?

A: Utility is a term used to determine the worth or value of a good or services.

Q: What Mariginal utility?

A: Marginal utility is the added satisfaction a consumer gets from having one more unit of good or service.

Q: What is Rational Spending Rule?

A Spending should be allocated across goods so that the marginal utility per dollar is the same for each good.

Q: What is production?

A: Production refers to all the activities which are undertaken to produce goods and services for generation of income and satisfaction of wants.

Q: What is Productivity?

A: Productivity is a measure of the rate at which output of goods and services are produced per unit of input.

Q: What is Cost?

A: Cost is the monetary value of goods and services that producers and consumers purchase.

Q: What is Profit in economics?

Ans In economics, profit refers to the difference between the total revenue and total cost of producing and selling goods or services. Profit is total revenue minus total cost.

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Q: What is Economic Profit?

Ans The economic profit is the difference between a firms total revenue and the sum of its explicit and implicit costs.

Q: What is accounting profit?

Ans Accounting profit is net income earned after subtracting all dolars costs from total revenue.

Q: What is Macroeconomics?

Ans: Macroeconomy is branch of economics that studies how an overall economy - the markets, businesses, and government - behave.

Q: What is GNP in?

Ans Gross National Product (GNP) considers the value of commoditibs offered and servicebs rendered by an individual or company withing and outside of the its native country. It includes all tangible items like food, automobiles, machinery and services like educations., healthcare etc.

Q: What is GDP?

Ans GDP measures the monetary value of final goods and services that is, those that are bought by the final user - produced in a country in a given period of time.

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Q: What is inflation?

Ans Inflation is the rate of increase in prices over a given period of time. It reduce the value of the currency over time.

Q: Unemployment in economics?

Ans Unemployment referring a term to individuals who are employable and actively seeking a job ~~but~~ but are unable to find a job.

Q: What is money in economics?

Ans Money is a medium of exchange that is centralized, generally accepted, recognized, and facilitates transanctions of goods and services.

Money is a medium of exchange for vanibus goods and services in an economy.

Q: What are the functions of money?

Ans To summarize, money has taken many forms through the ages ages, but money consistently has three functions:

i) Store of value;
ii) unit of account;
iii) medium of exchange.

Q: What is Commercial Bank?

Ans Commercial Bank is a type of financial institutions that is

concerned with providing banking services to the general public and businesses by facilitating deposit, offering loan facilities.

Q: Describe Central Bank.

Ans Central Bank is the Apex financial institution of the country that is concerned with formation of monetary policies and the way money should be regulated in the economy. Also, it is the source of money supply in an economy.

Q: Describe Monitary Policies in economics?

Ans Monetary policy is the macroeconomic policy laid down by the central bank. It involves management of money supply and interest rate and is the demanded side economic policy used by the goverment of a country to achieve macroeconomic objective like Inflation, consumption, growth and liquidity.

Q: Describe Fiscal Policy.

Ans Fiscal policy is the use of goverment spending and ~~te~~ taxation to influence the economy. Governments typically use fiscal policy to promote strong and sustainable growth and reduce poverty

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Q: What is government budget?

Ans Goverment budget refers to an annual financial statement that denotes its anticipated expenditure and expected revenue generation in a fiscal year.

Q: What is economic Growth?

Ans Economic growth describes how much an entity, such as a country, is increasing and improving the goods and services it produces.

Q: What is Development?

Ans Economic Developement is programs, policies or activities that seek to improve the economic well-being and quality of life for a community.

Q: Describe Poverty in Economics.

Ans Poverty is about not having enough money to meet basic needs including food, clothing and shelter. Poverty is said to exist when people lack the means to satisfy their basic needs.

There are two types of ~~pov~~ poverty -

i) Relative Poverty

ii) Absolute Poverty

Q: What is HDI?

Ans HDI is a summary composite measures of a country's average achievement in three basic aspects of humand developement.

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i) Health;
ii) Knowledge;
iii) Standard of living;

Q: What is socio-economic development? How it can be measured?

Ans: Socio-economic development is the process of social and economic development in a society. It is measured with indicators, such as GDP, life expectancy, literacy and level of employment.

There are many socio-economic factors. These are-

- Income
- Education
- Employment
- Community Safety
- Social support.

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Microeconomics: Microeconomics is a branch of economics that ~~analyzies~~ considers the behaviour of decision takers within the economy, such as individuals, households and firms.

PPF: production possibility Frontier is the graph which indicates the various production possibilities of two commodities when resources are fixed.

Economics: The study of how people make choices under scarcity and the results of these choices for society.

The Scarcity principle: We have boundless wants, but resources are limited. Having more of one good thing usually means having less of another.

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Demand: Demand is a principle of economics that captures the consumer's desire to buy the product or service.

Supply: The total amount of specific product or service that is available to ~~con~~ customers is known as supply.

Equilibrium: Equilibrium is the economic condition where market demand and market supply are equal to each other and as a result prices become stable.

Marginal Utility: Marginal utility is an economic term which refers to extra satisfaction gained by a consumer for consuming an additional unit of commodity.

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Total Utility: Total utility is the overall satisfaction that a consumers derive from the consumption of particular goods and services.

production: production is the process of combining various inputs, both meterial and immaterial in order to create output.

Cost: Cost is the expenditure required to create and sell products and services or to acquire assets.

profit: profit is the difference between the revenue received from sales and the explicit costs of producing its goods and services, as well as opportunity costs.

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✓**Inflation:** When the price level of goods and services rises, the value of currency reduces it is called Inflation.

✓**Unemployment:** Unemployment is a term referring to individuals who are employable and actively seeking a job but our unable to find a job.

Money: Money is any item or medium of exchange that is accepted by people for the payment of goods and services.

Commercial bank: A commercial bank is a kind of financial instruction that carries all the operations related to deposit and withdrawal of money for general public.

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Central Bank: A central bank is a public institution that is responsible for implementing monetary policy, managing the currency of a country and controlling the money supply.

poverty: poverty is a state or condition in which one lacks the financial resources and essentials for a certain standard of living.

HDI: The human development index is a statistical tool used to measure a country's overall achievement in its social and economic dimensions.

* Functions of the Central Bank:

1. Currency regulator or bank of issue.
2. Bank to the government.
3. Custodian of cash reserves.
4. Custodian of international currency
5. Clearing house for transfer and settlement
6. protecting depositors interests.
7. Lender of last resort.
8. Controller of credit.

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Macroeconomics: Macroeconomics is a branch of economics that studies how an overall economy - the market, business, consumers. and government behave.

GNP: Gross national product refers to the total value of all the goods and services produced by the resident and business of a country.

GDP: Gross domestic product is the total monetary or market value of all the finished goods and services produced within a country's borders in a specific time ~~pr~~ period. (Nation's border)

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Elasticity: The percentage change in one variable relative to a percentage change in another.

Economic profit: Economic profit is the difference between a firm's total revenue and the sum of its explicit and implicit costs.

Market: A market is defined as the sum total of all the buyers and sellers in the area or region under consideration.

Absolute advantage: Absolute advantage is the ability of an entity to produce a product or service at a lower absolute cost per unit using a smaller number of inputs or a more efficient process than another entity producing the same good or service.

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The Cost-Benefit principle: Take an action if and only if the extra benefits are at least as great as the extra costs.

Economic Surplus: The economic surplus of an action is equal to its benefit minus its costs.

Opportunity Cost: Opportunity cost is the value of what must be foregone in order to undertake an activity.

Benefits: Actions are more likely to be taken if their benefits rise.

Costs: Actions are less likely to be taken if their costs rise.

The principle of Comparative Advantage: Everyone does best when each person concentrates on the activities for which his or her opportunity cost is the lowest.

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Limited resources
Unlimited wants > Connected economics

· What is the difference between wants and demand?

Demand : availity to pay
willingness to pay

Economics is a subject connected the two things to maximize the benefits of human beings.

1. What to produce? 2. How to produce?
3. For whom to produce?

Need → Neccessary
Want → Desire
Demand → ability to pay and willing to pay.
Priceless — জিনিসের value নাই, economics এ.
Price or value যার আছে তার economics এর মধ্যে পড়ে।

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Chapter : 03

Q1 : For each of the following changes, show the effect on the demand curve and state what will happen to market equilibrium price and quantity in the short run.

a) Consumers expect that the price of the good will be higher in the future.

b) The price of a substitute good rises.

c) Consumer incomes fall, and the good is normal.

d) Consumer incomes fall, and the good is inferior.

e) A medical report is published showing that this good is hazardous to your health.

f) The price of the good rises.

Answer:

a) Demand increases (now); equilibrium price and quantity increase.

b) Demand increases; equilibrium price and quantity increase.

c) Demand decreases; equilibrium price and quantity fall.

d) Demand increases; equilibrium price and quantity increase.

e) Demand decreases; equilibrium price and quantity fall.

f) This is a movement along the demand curve, and the quantity demanded will decrease.

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Q2: For each of the following changes, show the effect on the supply curve and state what will happen to market equilibrium price and quantity in the short run.

a. The government requires pollution control filters that raise costs on goods.

b. Wages of workers in this industry fall.

c. There is an improvement in technology.

d. The price of the good falls.

e. producers expect that the price of the good will fall in the future.

Answer:

a. Supply decreases; equilibrium price rises and quantity falls.

b. Supply increases; equilibrium price falls and quantity rises.

c. Supply increases; equilibrium price falls and quantity rises.

d. This is a movement along the supply curve, and the quantity supplied will decrease.

e. Supply increases (now); equilibrium price falls and quantity rises.

Q3: For each of the following sets of supply and demand curves, Calculate equilibrium price and quantity.

Question

a. $QD = 2000 - 2P$; $QS = 2P \Rightarrow Q = 1000$, $P = 500$

b. $QD = 500 - P$; $QS = 50 + P \Rightarrow Q = 275$, $P = 225$

c. $QD = 5000 - 10P$; $QS = -1000 + 5P \Rightarrow Q = 1000$, $P = 400$

Answer

Q4: Annual demand and supply for the Entronics company is given by:

$$QD = 5000 + 0.5I + 2.0A - 100P, \text{ and } QS = -5000 + 100P$$

Where Q is the quantity per year, P is price, I is income per household, and A is advertising expenditure.

a. If A = \$10,000 and I = \$25,000, what is the demand curve?

b. Given the demand curve in part a., what is equilibrium price and quantity?

c. If consumer incomes increase to \$30,000, what will be the impact on equilibrium price and quantity?

Answer:

a. $QD = 19,500 - 100P$

b. $P = \$122.50$, $Q = 7,250$

c. The new demand curve is $QD = 22,000 - 100P$. Thus the new equilibrium price is \$135, and the new quantity is 8,500.

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Q5: Industry supply and demand are given by $QD = 1000 - 2P$ and $QS = 3P$.

a. What is the equilibrium price and quantity?

b. At a price of \$100, will there be a shortage or a surplus, and how large will it be?

c. At a price of \$300, will there be a shortage or a surplus, and how large will it be?

Answer:

a. $P = \$200$, $Q = 600$

b. At a price of \$100, there will be a shortage. The quantity demanded will be 800, and the quantity supplied will be 300, and thus there will be a shortage of 500 units.

c. At a price of \$300, there will be a surplus. The quantity demanded will be 400, and the quantity supplied will be 900, and thus there will be a surplus of 600 units.

Q6: A goods Demand Curve is $QD = 50 - 2P$, and its supply Curve is $QS = 40 + P$.

a. When $P = \$10$, what is the difference, if any, between QD and QS?

b. When $P = \$2$, what is the difference, if any, between QD and QS?

c. What are the equilibrium values of P and Q?

Answer: a. $QD = 30$ and $QS = 50$

b. $QD = 46$ and $QS = 42$ c. $Q = 43.33$ and $P = \$3.33$

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Q7: A good's Demand Curve is $QD = 25 - P$, and its Supply curve is $QS = 10 + 2P$.

a. When $p = \$20$, What is the difference, if any, between QD and QS?

b. When $p = \$3$, What is the difference, if any, between QD and QS?

c. What are the equilibrium values of p and Q?

Answer:

a. $QD = 5$ and $QS = 50$; b. $QD = 22$ and $QS = 16$;

c. $Q = 20$ and $p = \$5$;

From Graphs to Equations...

Sample equations $p = 16 - 2Q^d$ is a straight-line demand curve with intercept 16 on the vertical (p) axis and a slope of -2

$p = 4 + 4Q^s$ is a straight-line supply curve with intercept 4 and a slope of 4.

To Equilibrium p and Q

Equilibrium is where p and Q are the same for demand and supply.

- set the two equations equal to each other (p=p) and solve for Q ($Q^s = Q^d = Q^*$) $\Rightarrow 16 - 2Q^* = 4 + 4Q^*$

$$\Rightarrow 6Q^* = 12$$

$$\Rightarrow Q^* = 2$$

use either the supply or demand curve and $Q^* = 2$ to find price $p = 16 - 2Q^*$

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Limited resources
unlimited wants } connected economics.

* What is the difference between wants and demand?

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willingness to pay;

Economics is a subject connected the two things to maximize the benefits of human beings.

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priceless জিনিসের value নাই economics এ.
price or value আছে যার তাই economics এর মধ্যে পড়ে.

Definitions:

- Variable – Dependent variable → Independent variable.
- parameter (constant)
  - slope (distance between two points ration of two variables)
  - Intercept

Slope এর নাম-

Elasticity, Marginal concept (MRS; MRTS),

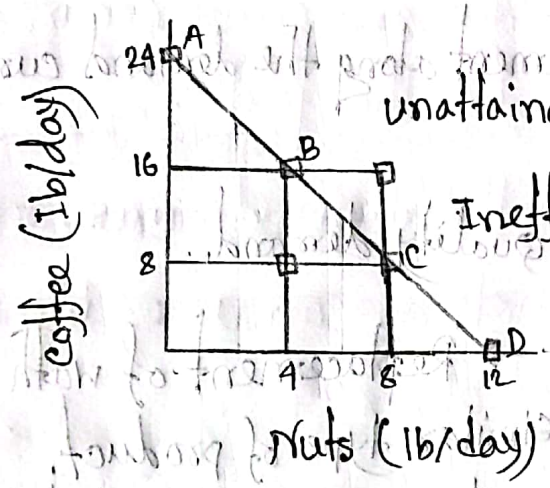
Differentiate value (1st difference, 2nd difference)

* Phone bill is $5 per month plus 10 cents per minute.

$$B = 5 + 0.10T$$

Comparative Advantage

productivity - Acquired knowledge,

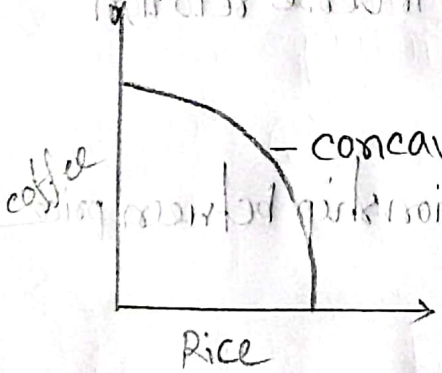


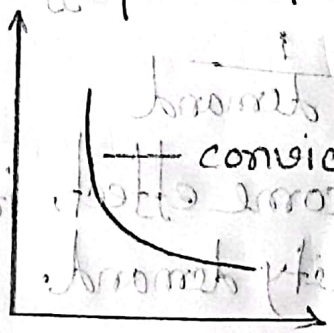
unattainable combination

Inefficient combination.

Incremental change নির্ণয় করা হয় differenciation দিয়ে।

Slope = ~~cost~~ opportunity cost.





* গ্রাফ দুইটির slope negative হলেও আলাদা কেন ব্যাখ্যা কর? product দিয়ে।

What is the difference between wants and demand?

Wants	Demand
1. Wants are requests directed to specific types of items.	1. Demands are requests for specific products that the buyer is willing to and able to pay for.

What is the difference between a movement along a demand curve and a shift of the demand curve?

⇒ The movement along a demand curve occurs due to a change in the price level of the goods.

In contrast, a shift in the demand curve occurs when other variables such as consumer income, substitute goods price and other changes.

Analytical Questions:

1) Suppose that the demand for oranges increases. Explain the long-run effects of the guiding function of price in this scenario.

⇒ In the long run, the higher price of oranges will signal more firms to enter the orange market, as it will seem more profitable than some other markets.

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As firms enter, supply increases, causing the price to fall relative to the short-run price and quantity to increase further. The higher short-run price has guided more resources into the market.

2) Suppose that the demand for oranges increases. Carefully explain how the rationing function of price will restore market equilibrium.

⇒ The increase in demand causes a shortage at the original equilibrium price; the quantity supplied is less than the new quantity demanded at that price. The existence of the shortage will cause the price to rise. As price rises, the quantity supplied will increase and the quantity demanded will decrease until equilibrium is reached at a higher price.

Chapter-4 (Demand Elasticity)

Analytical Question:

1) The initial price of a cup of coffee is $1, and at the price 400 cups are demanded. If the price falls to $0.90, the quantity demanded will increase to 500.

a) Calculate the (arc) price elasticity of demand for coffee.

b) Based on your answer, is the demand for coffee elastic or inelastic?

c) Based on your answer to a., if the price of coffee is increased by 100%, what will happen to the revenues from coffee? Carefully explain how you know.

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Answer:

a) Arc elasticity = -2.11

b) Elastic.

c) Revenues will fall. Demand is elastic, and thus a 1% increase in price will lead to a greater percentage decrease in quantity demanded. Revenues fall because the price increase does not make up for the reduction in sales.

2) The demand curve is $Q_D = 500 - 1/2\,P$.

a) Calculate the (point) price elasticity of demand when price is \$100. Is demand elastic or inelastic?

b) Calculate the (point) price elasticity of demand when price is \$700. Is demand elastic or inelastic?

c) Find the point at which point elasticity is equal to -1

Answer:

a) Elasticity = $-1/2\,(100/450) = -0.11$, and is inelastic.

b) Elasticity = $-1/2\,(700/150) = -2.5$, and is elastic.

c) Elasticity is -1 at the midpoint of the demand curve, which is at a price of \$500 and a quantity of 250.

3) Demand and supply in the wheat market are given by-

$QD = 2000 - 1000P$ and $QS = -500 + 1000P$

Where Q is millions of bushels and p is price per bushel.

a) Find the equilibrium price and quantity.

b) Suppose that the government wishes to support farm income and thus sets a price floor of \$1.50/bushel. Find the size of the farm surplus.

c) What is the cost of this program to the government?

Answer:

a) $P = \$1.25$, $Q = 750$

b) If $P = \$1.50$, $QD = 500$ and $QS = 1000$. The surplus is 500(million) bushels.

c) $\$1.50 \times 500 = \$750$ million.

4) If a good's demand function is $Q = 30 - 3P$, then calculate the price elasticity of demand when

a) good price is \$3 using the point elasticity formula.

b) good price is \$4 using the point elasticity formula.

c) good price decreases from \$4 to \$3, using the arc elasticity formula.

d) good price is \$5, using the point elasticity formula.

e) good price increases from \$4 to \$5, using the arc elasticity formula

Answer:

a) -0.429

b) -0.667

c) -0.538

d) -1.000

e) -0.818

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5) If a price of corn is \$3.00 a bushel, 5,000 bushels would be demand. If the price rises to \$4.00 a bushel, 4,000 bushels would be demand.

a) What is the (arc) price elasticity of demand?

b) Based on this answer, if the price of corn rose to \$5.00 a bushel what would be the demand for corn?

c) If the price of corn decreased from \$4.00 to \$3.00 a bushel what would be the change in total revenue for sellers of corn?

d) If the price of corn increased from \$4.00 to \$5.00 a bushel, what would be the change in total revenue for sellers of corn?

Answer: a) −0.778; b) 3,309; c) −\$1,000; d) +\$545

6) Domestic demand for a good is QD = 3000 − 25P. The domestic supply of the good is QS = 20P. Foreign producers can supply and quantity at a price (P) of \$30.

a) What is the domestic equilibrium price and quantity?

b) At this domestic equilibrium price, how much of the good will be supplied by domestic producers and how much by foreign producers?

Answer:

a) P = \$30 and Q = 2250

b) Domestic producers supply 600 units and foreign producers supply 1650 units.

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7) The income elasticity for most staple foods, such as wheat, is known to be between zero and one.

a) As incomes rise over time, what will happen to the demand for wheat?

b) What will happen to the quantity of wheat purchased by consumers?

c) What will happen to the percentage of their budgets that consumers spend on wheat?

d) All other things equal, are farmers likely to be relatively better off or relatively worse off in periods of rising incomes?

Answer:

a) Demand will increase, since wheat has a positive income elasticity.

b) The quantity of wheat purchased will increase.

c) The percentage of consumer budgets spent on wheat and other staple goods will fall, since the percentage change in the demand for wheat will be less than the percentage change in income.

d) Farmers are likely to be relatively worse off, since the demand for what they are selling will be rising less rapidly than the demand for other goods that they are likely to purchase.

Chapter-5 (Demand Estimation and Forecasting)

Analytical Questions:

1) The demand equation for the Widget Company has been estimated to be: $Q = 20{,}000 + 10I - 50P + 20PC$

where, Q = monthly number of widgets sold, I = average monthly income, P = price of widgets, and PC = average price of competing goods.

a) If next month's income is forecast to be 2,000, the price of competing goods is forecast to be \$20, and the price of widgets will be set at \$30, forecast sales.

b) What will sales be if the price is dropped to \$20?

Answer:

a) The forecast for sales is 38,900.

b) The forecast for sales will be 39,400.

a) $Q = 20{,}000 + 10 \times 2000 - 50 \times 30 + 20 \times 20 = 38{,}900$

b) $Q = 20{,}000 + 10 \times 2000 - 50 \times 20 + 20 \times 20 = 39{,}400$

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2) Based on annual data from 2000-2010, the Gadget Company estimates that sales are growing according to a linear trend.

$$Q = 50{,}000 + 200t$$

where t is time and $t=0$ in 2000.

a) Forecast sales for 2013.

b) Do you see any problems with this forecasting method?

Answer:

a) 52,600

b) The equation is based on data from 2000-2010. The further away from the final year, the less likely the equation is to be correct, as more factors may alter the trend seen in the data. A further issue is that the model is based on only 11 observed values.

3) If \$1,000 is placed in an account earning 8% annually on January 1, 1999, how much would be in this account on January 1, 2013?

Answer: \$2,937.

4) You are given the following straight-line trend equation:

Sales $= 1{,}275 + 89.3t$, where 1990 represents $t=1$. project sales for 2000.

Answer: 2,257.3

5) The following are the sales achieved by Jensen Fabrics during the last 7 years.

2007	$ 116,000
2008	124,000
2009	127,000
2010	146,000
2011	155,000
2012	154,000
2013	162,000

Using the compound growth rate calculation, what would be your estimate for sales in 2014?

Answer: $ 171,200 (growth rate is 5.7%)

6) The following are the actual sales for the last six periods.

period	Sales
1	750
2	820
3	600
4	850
5	900
6	700

* Using a-3-month moving average, what would be your prediction for period 7? Answer: 817

* If the exponential smoothing forecasting method is used, and the smoothing factor is .6, what will be the ~~factor~~ forecast for period 7? Answer: 761

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Chapter- 6 (The Theory and Estimation of Production)

Analytical Questions:

** 1)

Number of workers	output
0	0
1	50
2	110
3	300
4	450
5	590
6	665
7	700
8	725
9	710
10	705

1) The table above shows the weekly relationship between output and number of workers for a factory with a fixed size of plant.

a) Calculate the marginal product of labor.

b) At what point does diminishing returns set in?

c) Calculate the average product of labor.

d) Find the three stages of production

Answer:

Number of workers	Output	MPL	APL
0	0	--	--
1	50	50	50
2	110	60	55
3	300	190	100
4	450	150	112.5
5	590	140	118
6	665	75	110.83
7	700	35	100
8	725	25	90.63
9	710	-15	78.89
10	705	-5	70.5

a) See table.

b) Diminishing returns sets in after the third worker is hired.

c) See table.

d) Stage I is between the first and approximately the 5th worker (until APL is maximized); Stage II is from the 5th worker to the 8th worker (MPL still positive) and stage III begins with the hiring of the 9th worker (MPL becomes negative)

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2) A firm has two plants, one in the United States and one in Mexico, and it cannot change the size of the plants or the amount of capital equipment. The wage in Mexico is \$5. The wage in the U.S. is \$20. Given current ~~empl~~ employment, the marginal product of the last worker in Mexico is 100, and the marginal product of the last worker in the U.S is 500.

a) Is the firm maximizing output relative to its labor cost? Show how you know.

b) If it is not, what should the firm do?

Answer:

a) Maximizing output between plants requires that (MPL/W) U.S = (MPL/W) MEXICO. Since 100/5 (= 20) is not equal to 500/20 (=25), the firm is not maximizing output relative to its labor cost.

b) The firm should hire more U.S. workers and fewer Mexican workers, all other things equal.

3) A firm is making a long-run planning decision. It wants to decide on the optimal size of plant and labor force. It is considering building a medium-sized plant and hiring 100 workers. Engineering estimates suggest that at those levels the marginal product of capital will be 100 and the marginal product of labor will be 75. If the wage rate is \$5 and the

rental rate on capital is \$10, is the firm making the right decision? Support your answer.

Answer: No, the firm is not making the right decision; Minimizing cost (Maximizing output) requires that $(MPL/w) = (MPK/r)$. $100/10 < 75/5$, so the firm should plan to build a smaller plant and employ more workers, all other things equal.

4) For each of the following functions, describe returns to scale.

a) $Q = K + L$

b) $Q = K^{1/2} L^{3/4}$

c) $Q = K^2 L$

Answer: a) Constant returns to scale,
b) Decreasing returns to scale.
c) Increasing returns to scale.

~~Answer:~~

5) If a production function is given by the equation $Q = 12X + 10X^2 - X^3$, where Q = Output and X = Input, then calculate the equations for

a) Average product; b) Marginal product;
c) point of diminishing average returns
d) point of diminishing marginal returns.

Answer:

a) $AP = Q/X$; or $12 + 10X - X^2$

b) $MP = dQ/dX$, or $12 + 20X - 3X^2$

c) DAR occurs where AP at a maximum, or $dAP/dX = 0$, or $10 - 2X = 0$, $X = 5$

d) DMR occurs where MP at a maximum, or $dMP/dX = 0$, or $20 - 6X = 0$; $X = 3.33$

** 6) Given the production Function $Q = 72X + 15X2 - X3$, where Q = Output and X = Input

a) What is the Marginal product (MP) when $X = 8$?

b) What is the Average product (AP) when $X = 6$?

c) At what value of X will Q be at its maximum?

d) At what value of X will Diminishing Returns set in?

Answer:

a) $MP = 72 + 30X - 2X2$, $MP = 120$ when $X = 8$;

b) $AP = 72 + 15X - X2$, $AP = 126$ when $X = 6$;

c) Q at a maximum when MP is 0, or $X = 12$ [-2 has no meaning]

d) Diminishing returns sets in when MP at a maximum value, or $X = 5$

Chapter: 7 (The Theory and Estimation of Cost)

Analytical Questions:

** 1) You have opened your own word-processing service. You bought a personal computer, and paid $5,000 for it. However, due to the cost changes in the computer industry, the current price of an equivalent machine is $2,500. You could sell any used machine for $1,000. If you were not word processing, you could earn $20,000 per year at an alternative job. Assume that the interest rate is 10%. You can also hire an assistant who can do everything that you can do for $20,000

per year (you would still continue to do word processing).

One person using one computer can produce 11,000 typed pages per year, and the price per page for your service is $2.

You are considering three options: ① expand your business by hiring an assistant; ② leave your business the way it is; ③ shut down. Based on the costs and revenues above, which should you do? Explain and show any relevant calculations.

Answer:

Option 1:

Revenue = $22,000

Opportunity cost of your time = 20,000

Opportunity cost of interest on salvage value of existing computer = 100

Economic profit = $1,900

Option 2:

You still earn $1,900 as above.

Revenue from additional worker = 22,000

Wages = 20,000

Opportunity cost of interest on purchase of new computer = 250

Depreciation = 1,500

Economic profit from additional worker = $250

Total economic profit = $2,150

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Option 3:

Revenue = 0

No costs, since opportunity costs no longer apply, and fixed costs are sunk.

Economic profit = 0

(could possibly view the $1,000 you get from selling the used computer as revenue, but makes no difference to final solution of problem).

Option 2, expand your business, is the best option.

** 2) Fred's Widget Company has purchased $500,000 in equipment, which can be sold for a salvage value of $300,000 at any time. The best interest rate on alternative investments is 5%. What is the cost of using this machinery for one year? How would your answer be different if the machinery had not yet been purchased?

Answer: Short-run cost = $15,000

cost if the machinery was not purchased = $200,000 + $25,000 = $225,000

Explanation: The short-run cost is just the forgone interest. The short-run depreciation is sunk, and the salvage value doesn't change. The long-run cost (if the machine has not been purchased) is the depreciation cost plus the foregone interest on the whole $500,000.

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3) For each of the following cost functions, find MC, AC and AVC.

a) $TC = 20{,}000 + 10Q$

b) $TC = 18{,}000 + Q + 0.2Q^2$

Answer:

a) $MC = 10$; $AC = (20{,}000/Q) + 10$; $AVC = 10$

b) $MC = 1 + 0.4Q$; $AC = (18{,}000/Q) + 1 + 0.2Q$; $AVC = 1 + 0.2Q$

4) For each of the following cost functions, if possible, find minimum AC and minimum AVC.

a) $TC = 20{,}000 + 10Q$

b) $TC = 18{,}000 + Q + 0.2Q^2$

Answer:

a) set $MC = AC$.

$10 = (20{,}000/Q) + 10$

In this case, AC is decreasing everywhere, and thus there is no minimum average cost (although it will approach \$10).

set $MC = AVC$

$10 = 10$

$MC = AVC = 10$ for all values of Q in this instance.

b) set $MC = AC$:

$1 + 0.4Q = (18{,}000/Q) + 1 + 0.2Q$

$Q = 300$, and at that point, $AC = \$121$.

set $MC = AVC$

$1 + 0.4Q = 1 + 0.2Q$

$Q = 0$, and at that point, $AVC = \$1$.

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4) The following table shows the relationship between output and number of workers in the short run. If the wage is \$50/day, find marginal cost of production.

Number of workers	output
0	0
1	50
2	110
3	300
4	450
5	590
6	665
7	700
8	725
9	740
10	735

Answer:

Number of workers	output	MPL	MC (=W/MPL)
0	0	--	--
1	50	50	1.00
2	110	60	0.91
3	300	190	0.26
4	450	150	0.33
5	590	140	0.36
6	665	75	0.67
7	700	35	1.43
8	725	25	2.00
9	740	15	3.33
10	735	-5	--

5) How would each of the following affect the firm's marginal, average and average variable cost curves?

a) An increase in wages.
b) A decrease in material costs.
c) The government imposes a fixed amount of tax.
d) The rent that the firm pays on the building that it leases decreases.

Answer:

a) Wages are a variable cost, so MC, AVC and ATC increase.
b) Materials are a variable cost, so MC, AVC, and ATC decrease.
c) A fixed or lump-sum tax increase ATC but not MC or AVC.
d) Rent is generally viewed as a fixed cost, so ATC decrease, but MC and AVC are unchanged.

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6) Consider a firm that has just built a plant which cost $1,000. Each worker costs $5.00 per hour. Based on this information fill in the table below.

Number of worker Hours	output	Marginal product	Fixed cost	Variable cost	Total cost	Marginal cost	Average Variable cost	Average Total cost
0	0					--	--	--
50	400							
100	900							
150	1300							
200	1600							
250	1800							
300	1900							
350	1950							

Answer:

Number of Worker Hours	output	Marginal product	Fixed cost	Variable cost	Total cost	Marginal cost	Average Variable cost	Average Total cost
0	0	-	1,000	0	1,000	-	-	-
50	400	4	1,000	250	1,250	1.25	1.25	6.25
100	900	10	1,000	500	1,500	0.50	0.7143	2.1429
150	1300	14	1,000	750	1,750	0.3571	0.5357	1.25
200	1600	5	1,000	1000	2,000	1	0.6061	1.2121
250	1800	3	1,000	1250	2,250	1.6667	0.6944	1.25
300	1900	2	1,000	1500	2,500	2.50	0.7895	1.3158
350	1950	1.5	1,000	1750	2,750	3.3333	0.8861	1.3924

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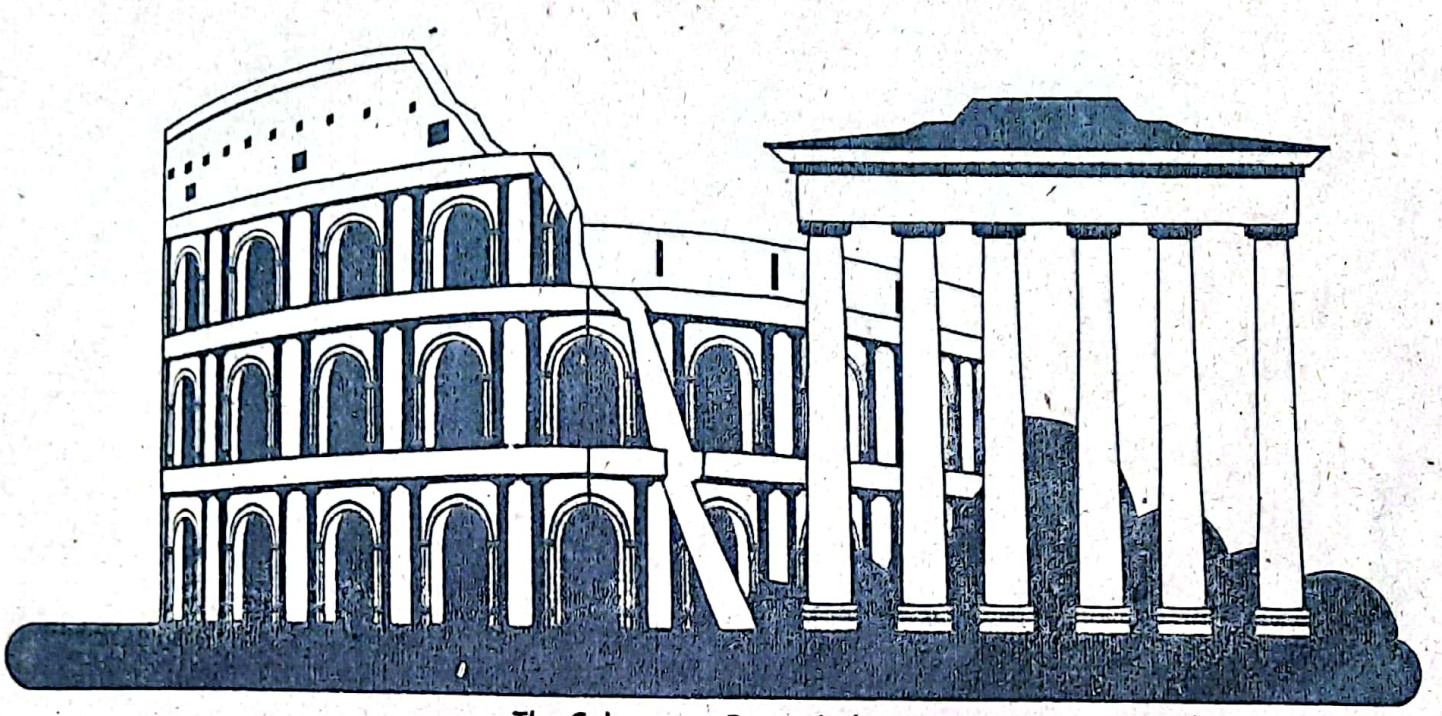
CLASSMATE



The Colosseum-Rome, Italy

EXERCISE BOOK

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Principles of Economics

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Limited Resources Unlimited want

need → nessessary

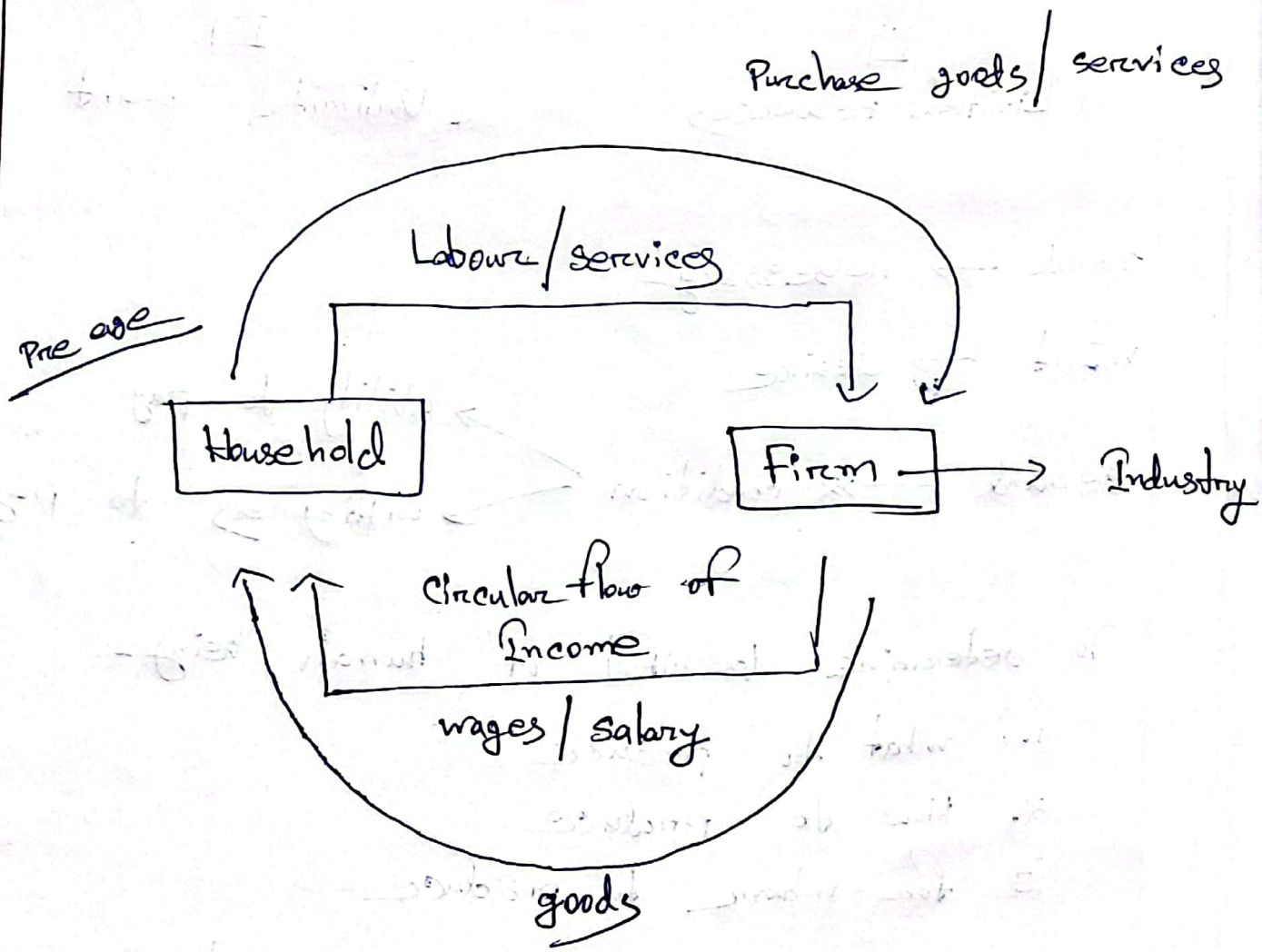
want → desire

demand → condition → ability to pay
→ willingness to pay

To determine benifit of human being

1. what to produce
2. How to produce
3. for whom to produce

<u>Opportunity cost</u>: next ~~bet~~ best alternative option I sacrificing.



Slope :

26/02/23

elasticity

Merginal concept

differentiated value

Slide - 15, 16, 17, 19, 20, 21

Chapter 1 Appendix.

6/03/23

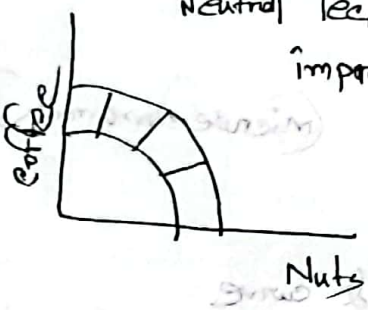
Exchange and Opportunity Cost

The principle of comparative Advantage

Production Possibilities curve

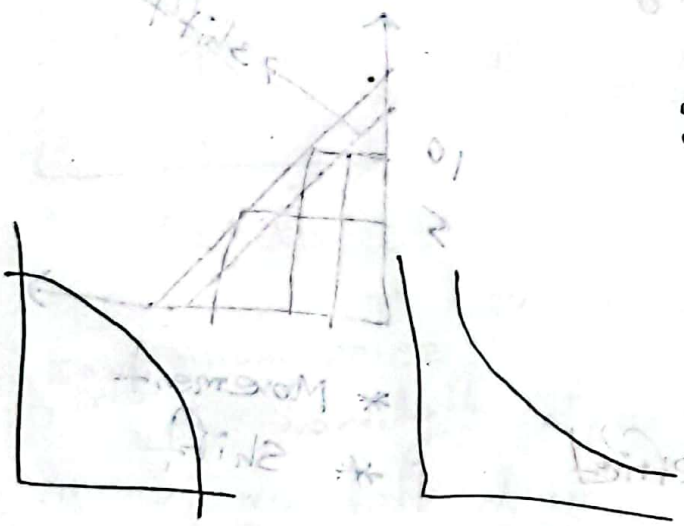
Shifts in PPC

Neutral Technical improvement



Technical improvement in Nuts

Technical improvement



slop same but different ?

chapter

i) opportunitity cost is the slop of PPF

ii) To find out comperative advance we use the concept of opportunity costs?

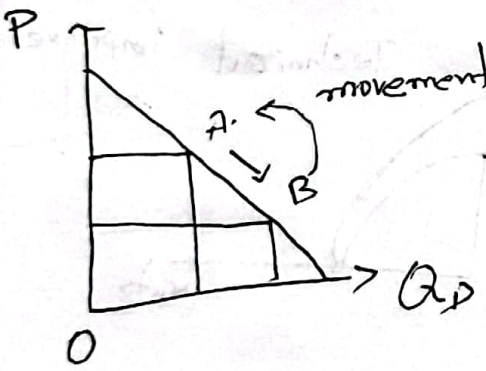
iii) How do we acheive specilization?

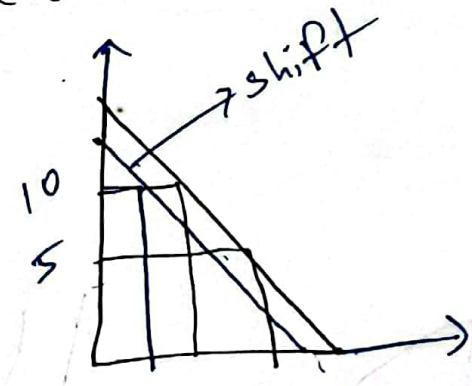
iv) straight line production frontier..

vi) Curve production frontier.

chapter -3 (microeconomics)

coke





substitution effect?

Due to substitution effect.

Due to income effect.

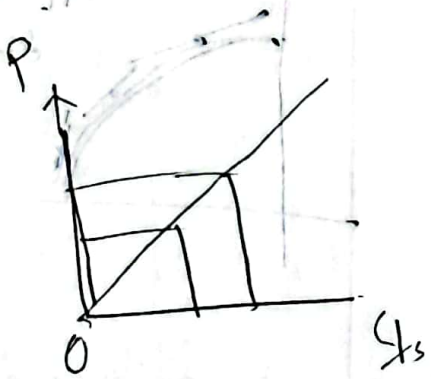
* Movement
* Shift

Complementary goods Products এর দাম কমলে main product কমে যায়।

→ Shift হলে Price change হবে না ✓✓

→ movement হলে price change হবে। ✓✓

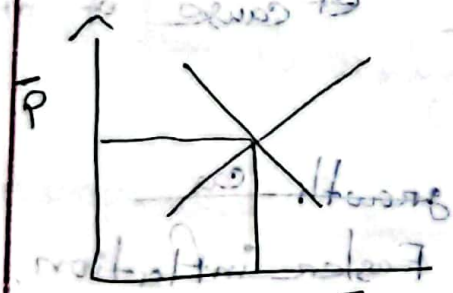
*** T.T Q → what is the difference between shift and movement?



Problem

$$Q_D = -12P + 24$$

$$Q_S = 12P + 34$$



$\bar{Q}_D = \bar{Q}_S$

Chapter-3 এর শেষে Apendix এ Example দেয়া আছে।

Equilibrium price

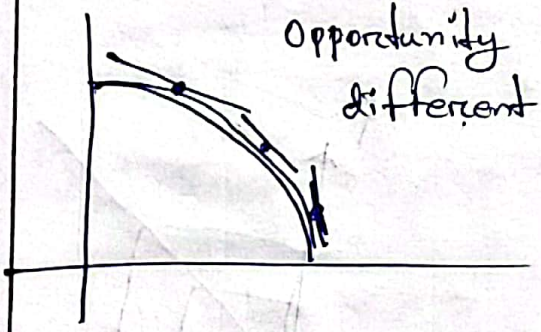
" quantity

T.T. sylebus → Chapter 1,2,3

self

Opportunity cost: refers to what you have to give up to buy what you want in terms of other goods and services.

* what you give up to get what you want.



Opportunity cost of PPF (slope) different on each point.

* The monetary theory of inflation asserts that money supply growth is the ~~et~~ cause of inflation.

Faster money supply ↑ ~~growth cas.~~ Faster inflation.

#

Production probability curve: The production Possibilities ~~front~~ curve is a graph that shows the various combinations of two goods that an economy can possibly produce with the given available factors of production and the available technology of production.

It also known as

→ Production Possibility boundary

→ " " frontier

→ Opportunity cost curve

→ Transformation curve

→ Transformation Boundary

Comparative Advantage:

Less opportunity cost

* Comparative advantage is an economy's ability to produce a particular good or service at lower opportunity cost, than its trading partners.

* Comparative advantage is the ability of a country to produce a good or service for a lower opportunity cost than other countries

A	B
10	12

12 —— 10

1 —— $\frac{10}{12}$

O.C of A = $\frac{10}{12}$

10 —— 12

O.C of B = $\frac{12}{10}$

1 —— $\frac{12}{10}$

Labour cost ⇒ Comparative Advantage

comodity	USA	ENG
CAR	80	120
COMP	90	100

Labour

Opportunity cost

	USA	ENG
Car	$\frac{8}{9}$ unit comp ✓	$\frac{6}{5}$ unit comp
Comp	$\frac{9}{8}$ unit CAR comp	$\frac{5}{6}$ unit CAR ✓

CAR $\frac{8}{9} < \frac{6}{5} \Rightarrow$ USA

Computer $\frac{5}{6} < \frac{9}{8} \Rightarrow$ ENG

Demand: Demand is a principle of economics that captures the consumer's desire to buy the product or services

Supply: Supply in economics is defined as the total amount of a given product or service a supplier offers to consumers at a given time periode.

Demand: willingness or desire to ~~by~~ buy goods

$$\text{demand} \propto \frac{1}{\text{price}}$$

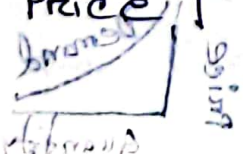
Movement along Demand Curve

When the demand of the commodity change to rise or fall in Price of the commodity

Type of movement:

i) Upward Movement (Contraction)

Price ↑ Demand ↓



ii) Downward Movement (Extraction)

Price ↓ Demand ↑

Shift in Demand curve:

When the demand of the commodity change due to reason othe than price of the commodi

Two Type of shift.

i) Leftward shift

Decrease in Demand

Price constant, Demand ↓

ii) Rightward shift

Increase in demand

Price constant, Demand ↑

Demand Curve: A demand curve illustrates the quality quantity buyers would purchase at each possible price.

Demand curve have a negative slope.

A graph that shows the relationship between the price of a certain commodity and the quantity of that commodity that is demanded at that price

Supply curve: The supply curve illustrates the quantity of a good that sellers are willing to offer at each price.

A graphic representation of the relationship between product price and quantity and quantity of product that a seller is willing and able to supply.

* $P = 16 - 2Q^d$ is a straight line demand curve with intercept 16 on the vertical (P) axis and a slope of -2.

$P = 4 + 4Q^s$ is a straight line demand curve with intercept 4 and a slope of 4.

Equilibrium is where P and Q are the same for demand and supply.

$P = P$ and $Q^s = Q^d = Q^*$

$16 - 2Q^* = 4 + 4Q^*$

$Q^* = 2$

Use either the supply or demand curve and $Q^* = 2$ to find price

$P = 16 - 2Q^*$

$P = 16 - 2 \times 2$

$P = \$12$

Normative Economic: says how people should behave.

Positive Economic: predicts how people will behave.

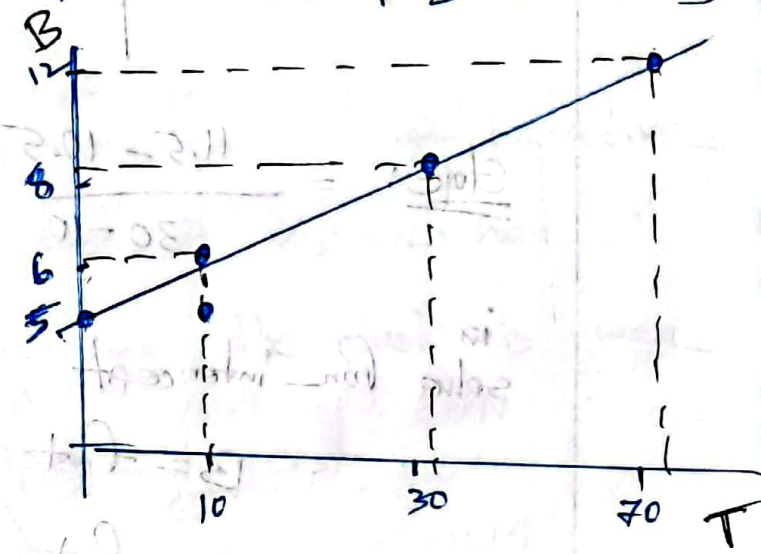
Microeconomics: is the study of individuals and business decision regarding the allocation of resources.

Macroeconomics: looks at the decision of countries and government.

Chapter - 1: Appendix

* Phone bill is ~~5 $~~ \$5 per month plus 10 cents per minute

$$B = 5 + 0.1\,T$$



Horizontal is independent

vertical is dependent variable.

To graph

→ plot the intercept

→ plot one other point

→ connect the point

* In → T

De → B

Intercep = 4

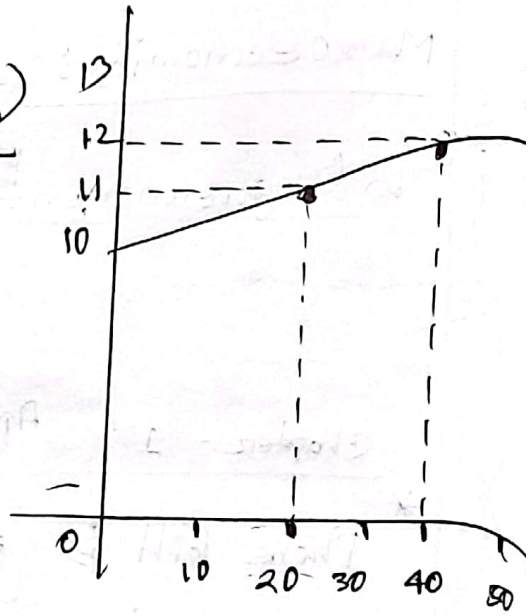
$$\text{slope} = \frac{\cancel{4}\,2}{\cancel{20}\,5} = 0.2$$

$$= \frac{12-8}{40-20}$$

$$B = 4 + 0.2\,T$$

*

bill ($/month)	Calls (min/month)
$ 10.5	10
$ 11.00	20
$ 11.5	30
$ 12.00	40



Slope: $= \frac{11.5 - 10.5}{30 - 10} = 0.05$

solve for intercept

$$B = f + 0.05\,T$$

$$11 = f + 0.05 \times 20$$

$$f = 11 - 1 = 10$$

$$\boxed{B = 10 + 0.05\,T}$$

*

Plan 1 $\quad B = 10 + 0.04\,T$

Plan 2 $\quad B = 20 + 0.02\,T$

$$B = 20 + 0.02\,T$$

$$B = 10 + 0.04\,T$$

$$0 = 10 - 0.02\,T$$

$$T = \frac{10}{0.02} = 500$$

$$B = 10 + 0.04 \times 500$$

$$= 30$$

Chapter 2

Absolute Advantage: A person has an absolute advantage at a particular task if he or she can perform th the task in fewer hours than the other person.

Comparative advantage: A person has a comparative advantage at a particular task if his or her opportunity cost of performing the task is lower than the other person's opportunity cost.

The Priciple of Comparative Advantage: Everyone does best when each person (or each country) concentrates on the activities for which his or her opportunity cost is the lowest.

Comparative Advantage Example :

Production time	Web update	bike repair
Mary	20 minutes	10 minutes
Paula	30 minutes	30 minutes

→ Mary has an absolute advantage in both

→ Comparative advantage drives specialization.

Opportunity cost	Web ~~wd~~ update	Bike Repair
Mary	2 repairs	0.5 update
Paula	1 repair	1 update

Production Possible Curve : A production possible curve illustrates the combinations of two goods that can be produced with given resources.

→ The PPC is drawn to illustrate all possible combination of two goods that can be produced within the limitation of scare resources.

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Merginal analysis: Marginal refers to the focus on the cost or benefit of the next unit or individual.

for example, the cost to produce one more widget or the profit earned by adding ~~mor~~ one more worker

Marginal analysis is an examination of the associated costs and potential benefits of specific business activities or financial decisions.

Elasticity: Elasticity measures the percentage change of one economic variable in response to a percentage change in another.

-> it describes a change in behavior of ~~by~~ buyers and sellers in response to a change in price for a good or service.

Specialization: in economic is the process of an organization concentrating its labour and resources on a certain type of Production to be more efficient and create a comparative advantage for an economy

Movement	Shift
i) when demand of the comodity change to rise or fall in price of the comomodity.	i) when demand of the commodity change due to reason other than price of the commodity.
ii) causing factor price	ii) non-price factor such as income, future price expectation, consumer tastes and preferences.
iii) Movement occurs along a curve, where quantity moves up and down on the same demand curve.	iii) Shift causes the curve to change position to the right or to the left, changing any combination of price and quantity.
iv) Two types: i) Upward ii) Downward	iv) Two types: i) Left ward ii) Right ward.

Substitution effect: is the decrease in sales for a product that can be attributed to consumers switching to cheaper alternatives when its price rises.

→ it happens when consumers replace cheaper items with more expensive one due to price changes or when their financial conditions improve.

Chapter 4

Elasticity

23/03/23

Income (Y)

$$E_p = \frac{\% \Delta \text{ in } Q_D}{\% \Delta \text{ in } P}$$

P_1, P_2

Q_{D_1}, Q_{D_2}

>1 হলে Elastic

$$= \frac{\dfrac{Q_{D_1} - Q_{D_2}}{\dfrac{(Q_{D_1} + Q_{D_2})}{2}}}{\dfrac{Y_1 - Y_2}{\dfrac{(Y_1 + Y_2)}{2}}}$$

Mid point methode

$= -2.30$

$H_P \uparrow M_{Q_D} \uparrow$

$Q_D \uparrow P \downarrow$

$P \uparrow Q_D \downarrow$

Elastic | ~~monitoring~~ Non elastic

Type of Elasticity:

i) Price elasticity

ii) Income elasticity

iii) ~~Cost~~ Cross elasticity

Substitude goods:

semester এসাইনমেন্ট

Appendix এর math বাদে সব-

i) Mid point এর math

ii) Revenue calculate of product

iii) Cross elasticity থেকে যা coment করে sign/value

Cross elasticity

$$E_c = \frac{\%\Delta \text{ in } Q_{D\,Tea}}{\%\Delta \text{ in } P_{sugar}}$$

change

-1.10

negetive relation
complementary goods.

value & sign আলাদা রাখতে হবে।

$E = 1$ Unit elasticity

Revenue = total sell

= Price × Quantity

Types of price Elasticity

$E_d = 1$, unitary elastic

$E_d > 1$, Elastic

$E_d < 1$, Inelastic

$E_d = 0$, Perfectly Inelastic

$E_d = \infty$, Perfectly elastic

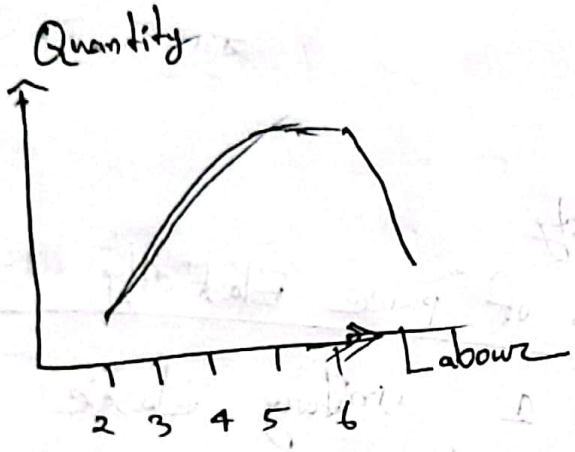
demand / price
movement / shift
এতে math আসবে

Production

Factors of production:

i) Land
ii) Labour
iii) capital
iv) Idea

$$Q = f(L, K, A)$$



Marginal productivity of labour:

$$\boxed{MP_L = \frac{\Delta TQ}{\Delta L}}$$

MP_L

$\frac{60-70}{5-6} = 10$ marginal productivity of Labour 6 is 10

$\frac{70-0}{6-7}$ = curve become downward.

$= -70$

T.T-2 Elasticity & Production

Point of inflaction

Exam a আসবে Explaination

Law of diminishing return:

Number of worker	Output	Merginal productivity of Labour (MP_L)
0	50	
1	60	(60-50)/(1-0) = 10
2	70	(70-60)/(2-1) = 10
3	80	(80-70)/(3-2) = 10
4	90	(90-80)/(4-3) = 10
5	100	(100-90)/(5-4) = 10
6	110	(110-100)/(6-5) = 10
7	120	(120-110)/(7-6) = 10
8	130	(130-120)/(8-7) = 10
9	140	(140-130)/(9-8) = 10

H.W MP_L - কেন বাড়ে

Exam a আসবে

Book: Prieiple of Eco Michle Perking

Self

Elasticity: Elasticity is an economic concept used to measure the change in the aggregate quantity demanded of a good or service in relation to price movements of that good or service.

→ A product is considered to be elastic if the quantity demand of the product changes more than proportionally when its price ~~increase~~ increases or decreases.

→ In economics, elasticity measures the percentage change of one economic variable in response to a percentage change in another.

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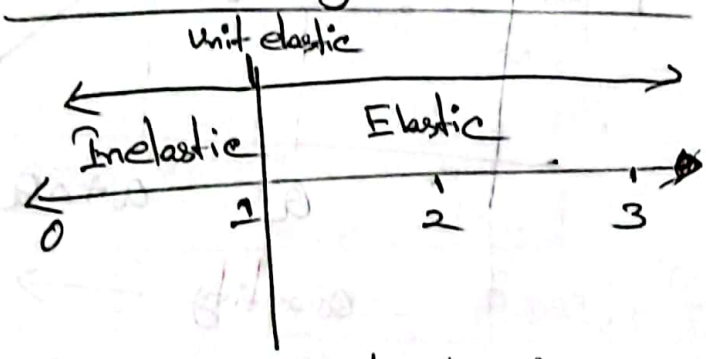
Price elasticity of demand : ~~the ratio~~ The variation in demand in response to a variation in price is called price elasticity of demand.

→ The ratio of the percentage ~~chane~~ change in quantity demanded to the percentage change in price of particular commodity.

$$\varepsilon = \frac{\text{Percentage change in } \boxed{\text{quantity}} \text{ demanded}}{\text{percentage change in } \boxed{\text{price}}}$$

Price Elasticity of Demand



* If price elasticity is greater than 1, demand is $\boxed{\text{elastic}}$

* In elastic demand, percentange change in quantity is greater than percentage change in price

* In elastic demand, demand is responsive to price.

ΔQ = change in quantity

$\Delta Q/Q$ = percentage change in quantity

ΔP = change in price.

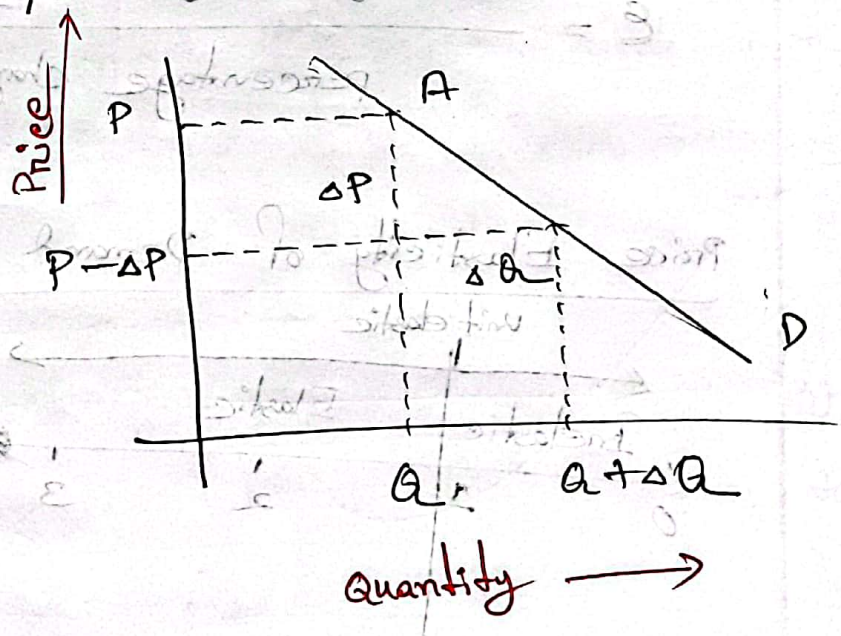
$\Delta P/P$ = percentage change in price.

$$\varepsilon = \frac{\Delta Q/Q}{\Delta P/P}$$

$$\varepsilon = \frac{\Delta Q}{Q} \times \frac{P}{\Delta P}$$

$$= \frac{P}{Q} \times \frac{\Delta Q}{\Delta P}$$

$$\varepsilon = \frac{P}{Q} \times \frac{1}{\text{slope}}$$



Cost

28/03/23

FC, VC, MC, AC, TC

Fixed cost : যেটা নির্দিষ্ট হয়

variable cost : use করলে cost দিতে হবে

Total cost (TC) = VC + FC

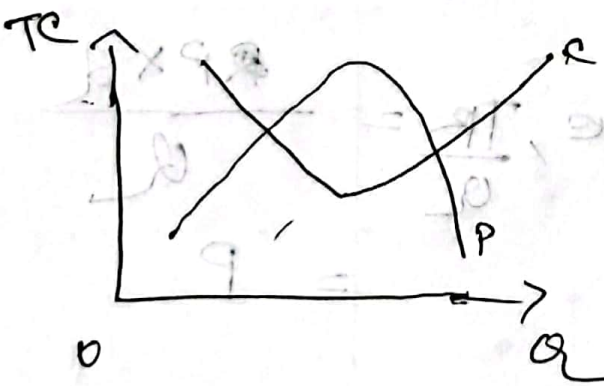
Marginal cost : 1 unit production বাড়ানোর জন্য Total cost এর পরিবর্তন।

$$\boxed{MC = \frac{\Delta TC}{\Delta TQ}} = \frac{\text{change in production cost}}{\text{change in quantity}}$$

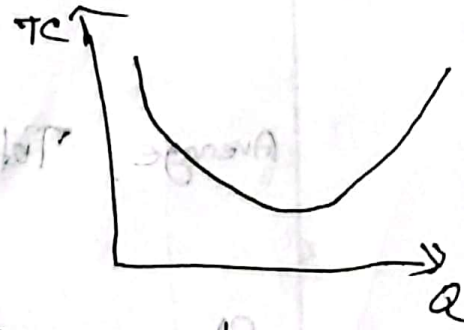
$$MC = \frac{w}{MP_L} \qquad w = \text{wage}$$

Average cost : $= \frac{TC}{Q}$

$$ATC = AVC + AFC \left[\frac{TC}{Q} = \frac{VC}{Q} + \frac{FC}{Q}\right]$$



Mirror image



same concept diminising Law

Market

Perfect market = identical product, identical price

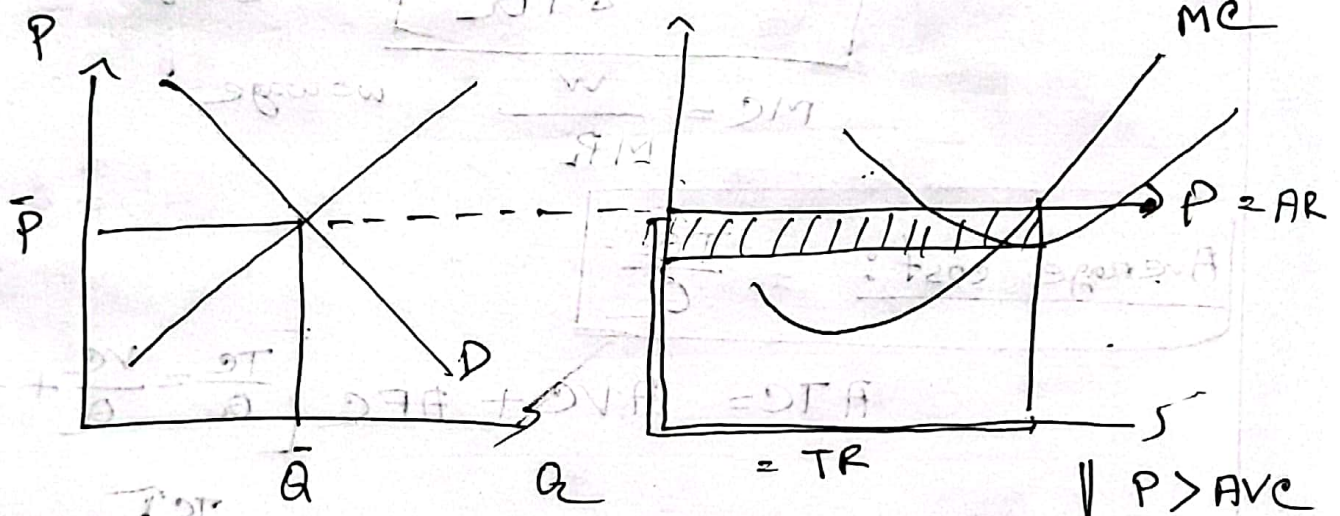
inperfec market = monopoly, oligopoly, price নিজেরা set করা যায়

Equilibrium হবার শর্ত

i) $MR = MC$

ii) $\frac{\Delta TR}{\Delta Q} = MR$ (merginal revenue)

iii) MC curve cuts MR curve from below



$P > AVC$

Average Total Revenue, $\frac{TR}{Q} = \frac{P \times Q}{Q}$

$= P$

Profit $\pi = TR - TC$

Profit $\Delta \pi = MR - MC$

$\frac{V.C}{Q} = VC$ $\quad AVC = \frac{VC}{Q}$

Profit: $P > AVC$

Loss: $P < AVC$

Shut down: $ATC > P$

Function of the Central Bank

GDP / GNP

Central Bank / Commercial Bank

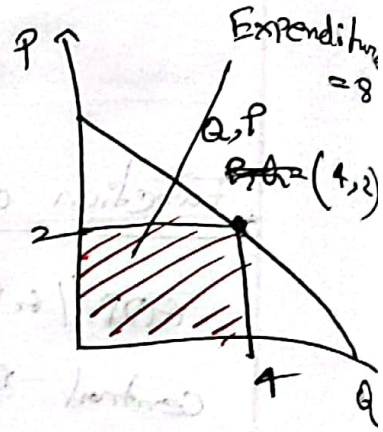
power

self

Price Elasticity

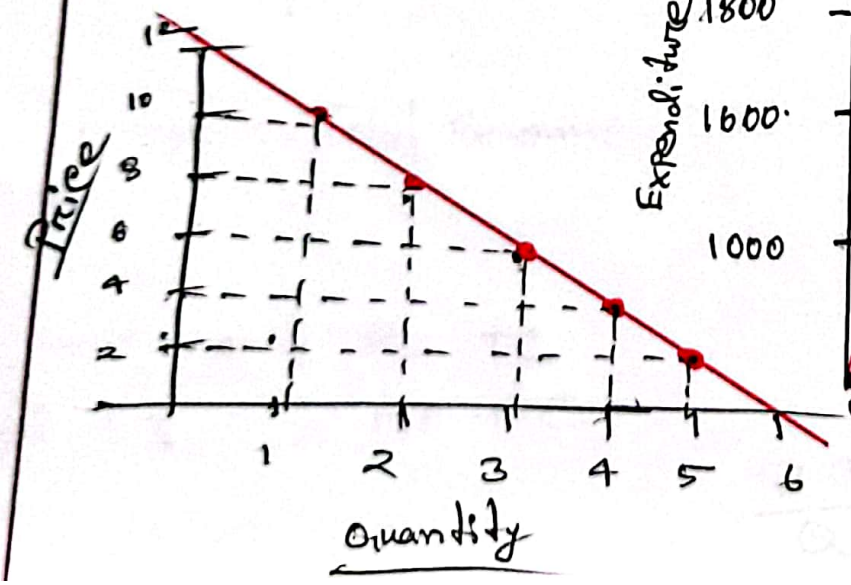
* Change in expenditure depends on elasticity.

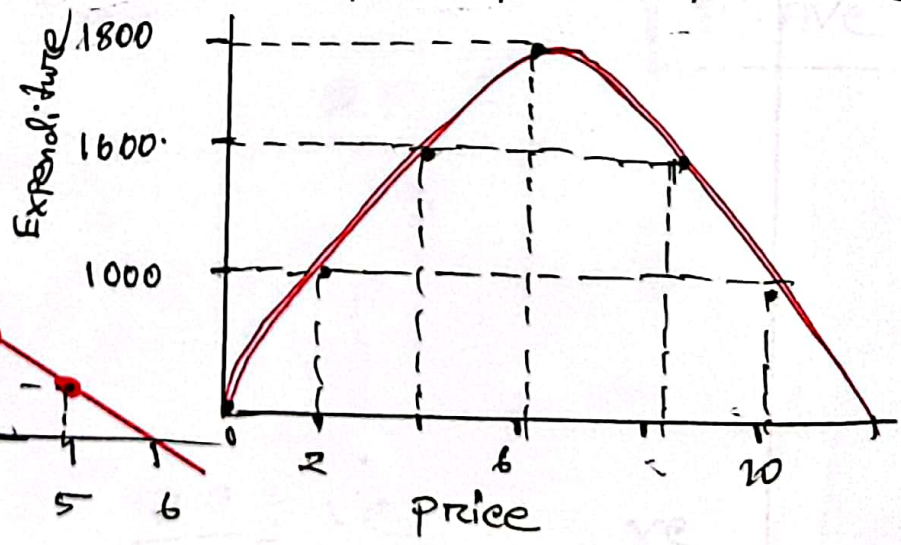
* Total expenditure is the area of a ~~rec~~ rectangle with height P and width Q.



Effect of price change on total Expenditure

Price ($)	12	10	8	6	4	2	0
Quantity	0	1000	2000	3000	4000	5000	6000
Expenditure ($)	0	1000	1600	1800	1600	1000	0





Elasticity, Price change, Expenditure

If demand is Elastic
($\varepsilon > 1$)

A price ~~will reduce~~ increase will reduce total expenditure.

$\uparrow P \times \downarrow Q = \downarrow PQ$

A price reduction will increase total expenditure

$\cancel{P\downarrow}$ $\downarrow P \times \uparrow Q = \uparrow PQ$

If demand is Inelastic
($\varepsilon < 1$)

A price increase will increase total expenditure.

$\uparrow P \times \downarrow Q = \uparrow PQ$

A price reduction will ~~increase~~ reduce total expenditure

$\downarrow P \times \uparrow Q = \downarrow PQ$

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Income Elasticity of Demand: Income elasticity of demand measures the responsiveness change in the demand of a commodity due to change in the income of consumer.

$$E_y = \frac{\text{\% change in Quantity demanded}}{\text{\% change in income}}$$

$$E_y = \frac{\Delta Q}{\Delta Y} \times \frac{Y}{Q}$$

$Y \rightarrow$ old Income

$Q \rightarrow$ Old Qty

$\Delta Q =$ New Qty (Q_1) − old Qty (Q)

$\Delta y =$ New income (Y_1) − Old Income (Y)

07/05/23

Moritary ~~& Phy~~ Policy :

2 types — 1) Contractionary → fight against infuation
2) Expen tionary

Infuation: Too much money chases to few goods.

Expentionary policy

→ Central Bank purchase Bonds from commercial Banks, when there is Deflation in the economy → Expantionary policy occur.

Infuation
- → Cost push infuation
- → Demand push infuation

Unemployment → structural
→ Frictional
→ cyclical
→ Natural

self

Price Elasticity of Demand: when change in quantity demanded is measured with respect to change in own price of the commodity.

Income Elasticity of Demand: when change in quantity demanded is measured with respect to change in income of the buyer.

Cross Elasticity of Demand: when change in quantity demanded of one commodity is measured with respect to change in price of other commodity.

$$\text{Price Elasticity of demand} = \frac{\%\text{ change in quantity demanded}}{\%\text{ change in price}}$$

$$\text{Price Elasticity of Supply} = \frac{\%\text{ change in quantity supplied}}{\%\text{ change in price}}$$

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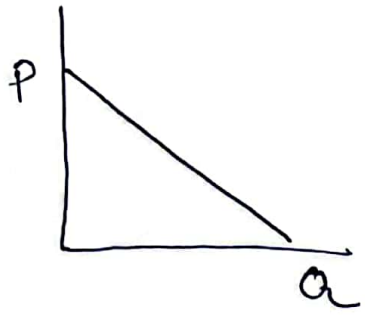
Price Elasticity of Demand



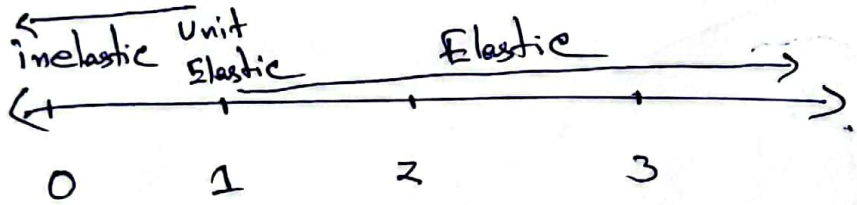
$$= \frac{\frac{2-1}{1}}{\frac{10-6}{10}} = \frac{\frac{1}{4}}{\frac{10}{1}} = \frac{1}{0.4} = 2.5$$

$$= \frac{\frac{6-10}{10}}{\frac{2-1}{1}} = \frac{\frac{4}{10}}{\frac{1}{1}} = 0.4$$

* Elasticity ε

* $\varepsilon = \dfrac{\%\text{ change in quantity demanded}}{\%\text{ change in price}}$

* Price elasticity of demand is always negative.

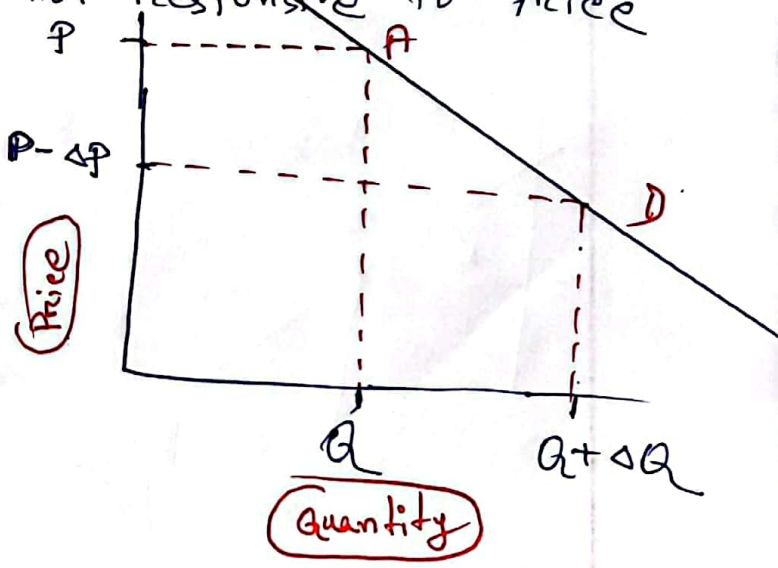
* 

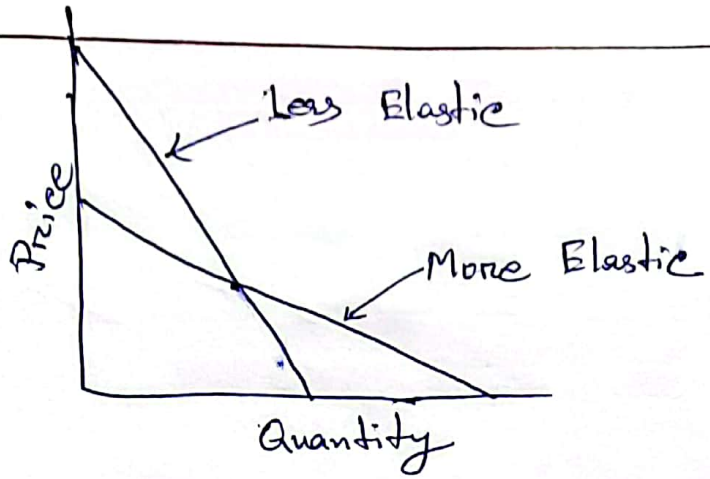
Elastic $\longrightarrow$ demand is responsive to price

Inelastic $\longrightarrow$ " " not responsive to price

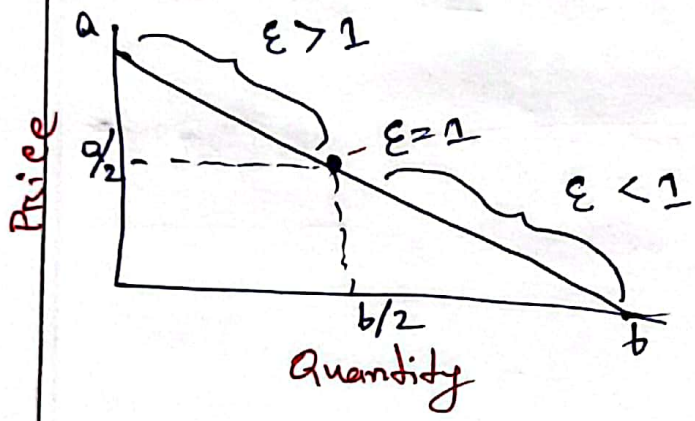
$$\boxed{\varepsilon = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}}$$

$$\varepsilon = \frac{1}{\text{slope}} \times \frac{P}{Q}$$

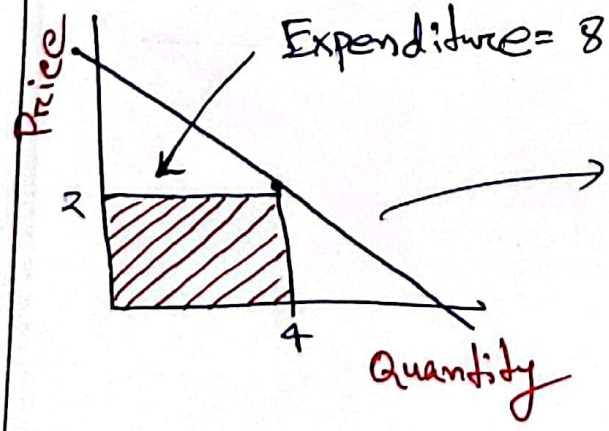




* Price elasticity is different at each point.
* slope is the same for the demand curve.



* ~~Total~~ change in expenditure depends on elasticity.
* Total expenditure = total revenue.



Total expenditure is the area of a rectangle with height p and width Q

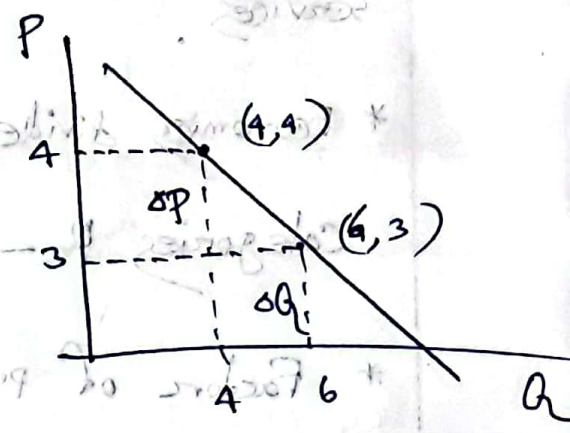
Price বাড়লে Expenditure কমে, কিন্তু ~~কম~~ কমতে কমতে একটা নির্দিষ্ট point এ Expenditure কমতে শুরু করে।

Mid point formula for Elasticity

$$\varepsilon = \frac{\Delta Q / (Q_A + Q_B)}{\Delta P / (P_A + P_B)}$$

$$\varepsilon = \frac{2/(4+6)}{1/(3+4)}$$

$$= 1.4 \text{ Ans.}$$



Production

Production: converts inputs into output.

Factor of Production: In economics, factor of production are resources people use to produce goods and services.

* Economics divide the factors of production into four categories — land, labour, capital, entrepreneurship.

* Factor of production is an economic concept that refers to the inputs needed to produce goods and services.

* A factor of production is an input used in the production of a good or a service.

* **Short run:** The short run is a concept that states that, within a certain period in the future, at least one input is fixed while others are variable.

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* A short Run in economics refers to a manufacturing planning period in which a business tries to meet the marked demand by keeping one or more production inputs fixed while changing others.

<u>Long Run:</u> The long run is a periode of time in which all factors of production and costs are variable.

→ The long run is a situation where all main factors of production are variable.

<u>Law of Diminishing Returns:</u> The law of diminishing returns states that in productive processes, increasing a factor of production by one unit, while holding all other production factors constant, will at some point return a lower unit of output per incremental unit of input.

→ It states that as investment in a particular area increases, the rate of profit from that investment, after a certain point, cannot continue to increase if other variables remain at a constant. As investment continues past the point the rate of returns begins to decrease.

Cost concept

Fixed cost: is the sum of all payments for fixed inputs. (অনিবার্য প্রতিনিধি খরচ)

Variable cost: is the sum of all payments for variable inputs. (কর্মচারীর খরচ)

Total cost: is the sum of all payments for all inputs

Total cost = fixed cost + variable cost

Marginal cost: is the change in total cost divided by the change in output

→ Marginal cost is the extra ~~incured~~ incurred in producing one more unit of a product.

$MC = \frac{\Delta C}{\Delta Q}$ change in cost
" " quantity

→ In economic, marginal cost is the change in total production cost that comes from making or producing one additional unit.

$\boxed{\text{Profit} = \text{total revenue} - \text{total cost}}$

* Total revenue comes from selling the bottles
* Total cost = labor (fixed) cost + capital (variable) cost

Marginal benefit is a maximum amount a consumer is willing to pay for an additional good or service.

Cost benefit principle : state that the action should only be taken if the benefits derived from it are greater than the costs.

Marginal Revenue : is the increase in revenue that results from the ~~sale~~ sale of one additional unit of output.

$MR = \frac{\text{Change in Revenue}}{\text{Change in Quantity}}$

* Extra benefit = Price

* Extra cost = marginal cost

Marginal Utility: Addition made to total utility by consuming one additional unit of the commodity.

$$MU_n = TU_n - TU_{n-1}$$

Marginal Revenue: Addition made to total revenue by selling one additional unit of the commodity.

$$MR_n = TR_n - TR_{n-1}$$

Marginal cost: Addition made to total cost by producing one additional unit of the ~~Como~~ commodity

$$MC_n = TC_n - TC_{n-1}$$

Marginal productivity: Addition made to total productivity by employing one additional unit of the factor

$$MPL_n = TPL_n - TPL_{n-1}$$

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* when marginal product is increasing, the marginal cost is decreasing.

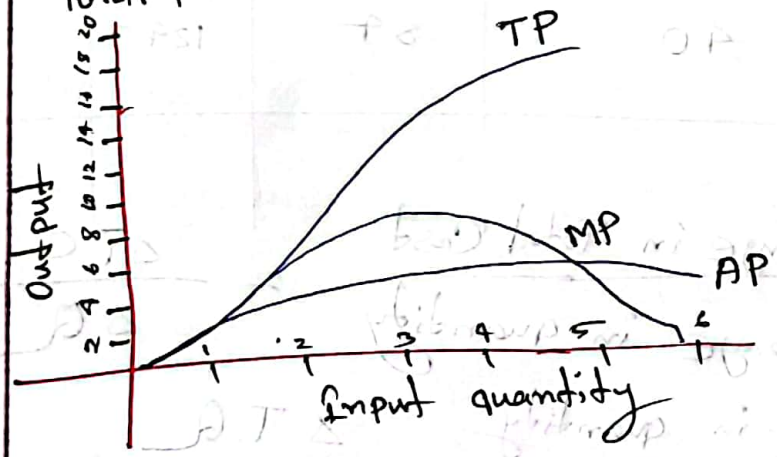
when marginal product is decreasing, the marginal cost is increasing

variable input → Labor or workers.

fixed input → factory, building, equipment.

$$\text{Marginal product} = \frac{\text{change in Output}}{\text{change in input}}$$

Total product (TP) = total volume or amount of final output.



→ when MP (Marginal product) is declining, and negative total product declines.

→ when the MP becomes zero, total Product reaches its maximum.

→ At maximum average product (AP), MP and AP equal each other.

Workers	Bottles per Day (output)	Fixed cost	Variable cost	Total cost	Marginal Cost
0	0	40	0	40	0.15
1	80	40	12	52	0.1
2	200	40	24	64	0.2
3	260	40	36	76	0.3
4	300	40	48	88	0.4
5	330	40	60	100	0.6
6	350	40	72	112	1
7	362	40	84	124	

$$\text{Marginal cost} = \frac{\text{change in Total Cost}}{\text{change in quantity}} = \frac{\Delta TC}{\Delta Q}$$

$$MPL = \frac{\text{change in quantity}}{\text{change in input}} = \frac{\Delta TQ}{\Delta L}$$ (change in Labour

* Law of Diminishing Returns states that additional inputs will lead to less additional output.

Number of workers	Output	MPL	APL
0	0	--	--
1	50	50	50
2	110	60	55
3	300	190	100
4	450	150	112.5
5	590	140	118
6	665	75	110.83
7	700	35	100
8	725	25	90.625
9	710	-15	78.89
10	705	-5	70.5

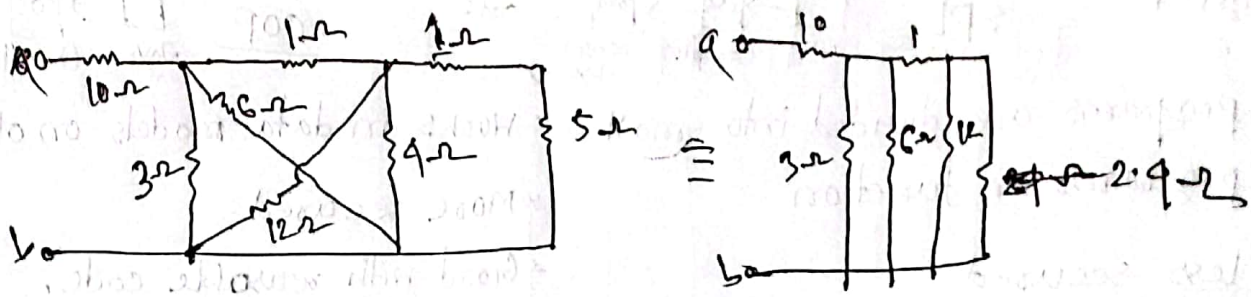
Average product of Labour: refers to the average output per unit of the variable input.

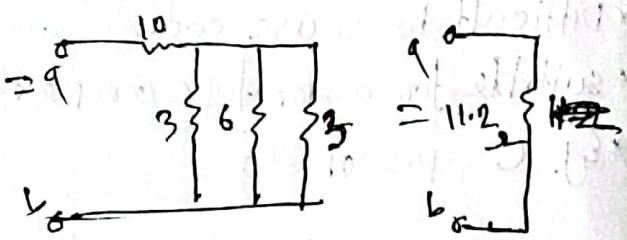
* average of total product per unit

$$APL = \frac{\text{Total product}}{\text{Variable input}}$$

CamScanner

※ Find R_{ab}





$R_{ab} = 11.2\Omega$

Dr. Munshi Naser
01794 666 824
Skill Tone
YouTube: Dr. Munshi Naser - Skill Tone.

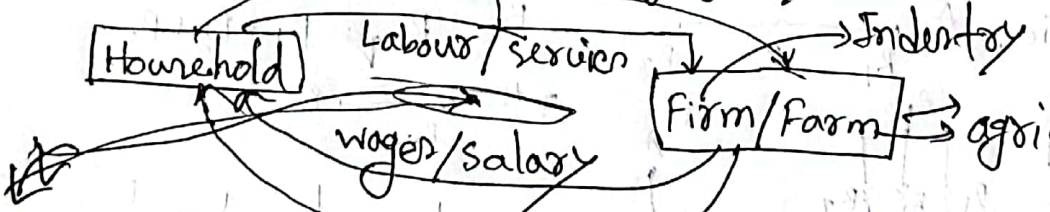
Economics Economics

Limited resources — unlimited wants

need — necessary
want — desire
demand — (2) conditions: ① ability to pay ② willingness to pay

1. What to produce?
2. ~~Whom~~ How to produce?
3. For ~~home~~ Whom to produce?

Opportunity cost → next best all option I am sacrificing.



Two-sector Economy. ~~Cir~~ Circular Flow of Income.

306

Economics

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Tousif

IPE 17

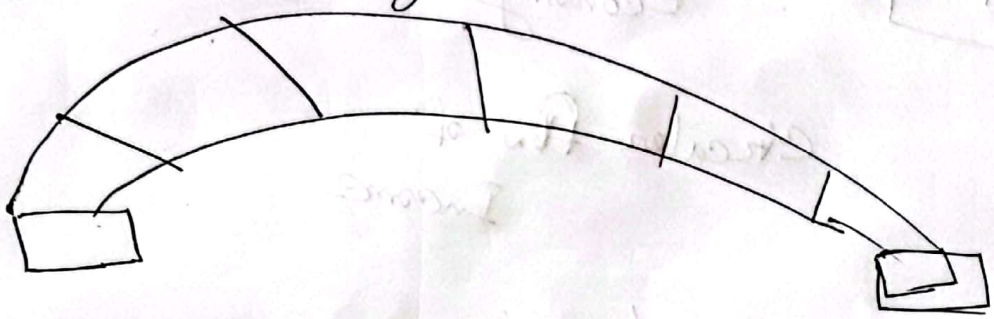
need

wanted → desire

demand

ability to pay

willingness to pay



Limited Resource

Limited wants

Resource / want

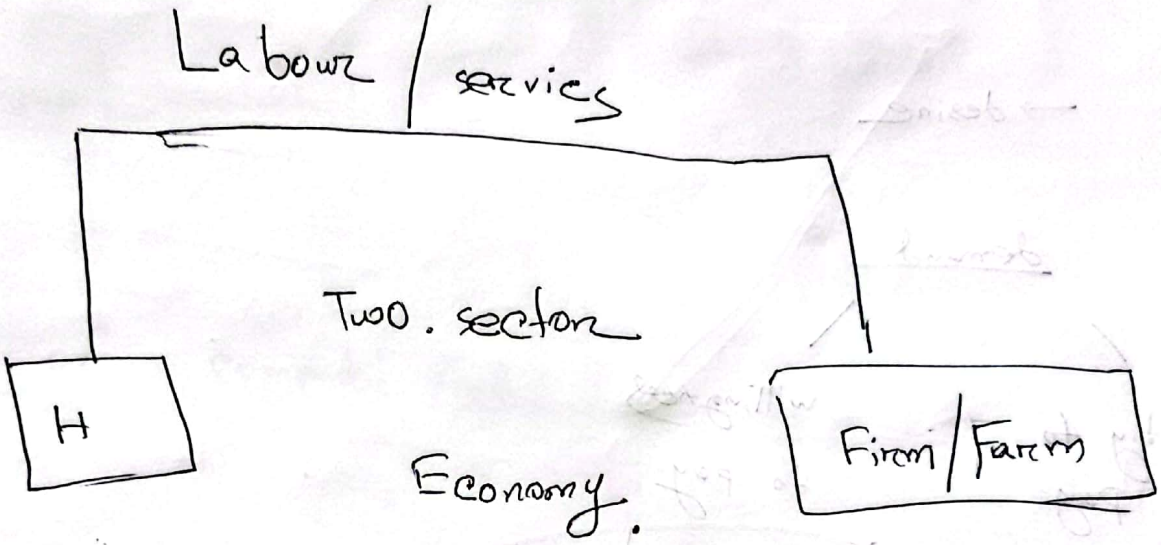
i) What to produce ?

ii) How to produce ?

iii) for whom to produce ?

opportunity cost : next best alternative option.

wage : pure wage goods / services



Two. sector Economy.

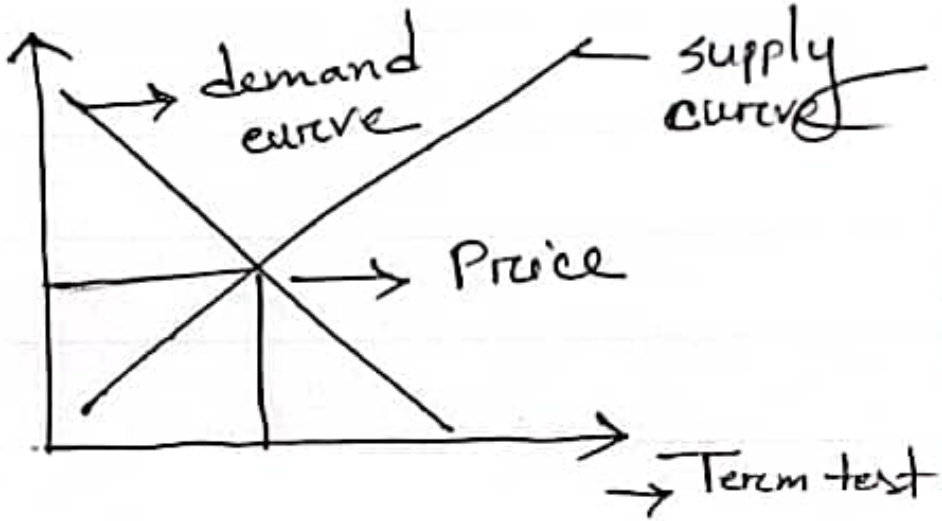
Circular flow of Income

wages / salary

goods

Equilibrium price.

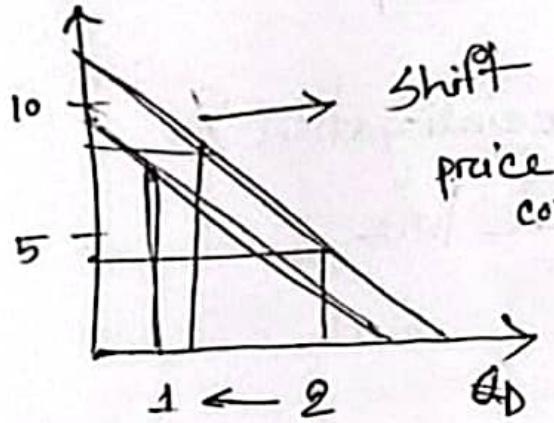
Seller, buyer agree করলে।



CamScanner

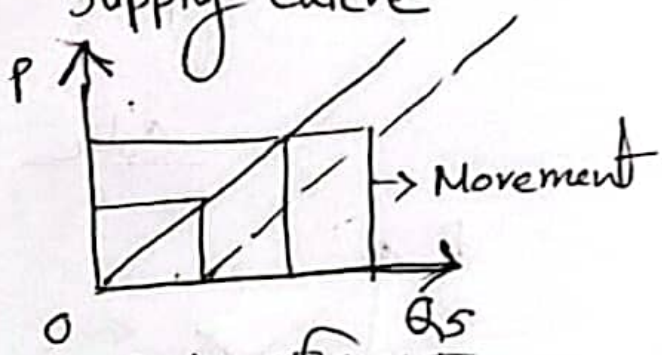
Due to income effect,
inverse relationship between price and Quantity demand.

complimentary goods
Butter এর দাম বাড়লে
Bread এর ডিমান্ড কমবে।
চা - চিনি



Shift
price constant থাকবে

Supply curve



price বেশি হলে উৎপাদন বেশি হবে।

Demand curve -
Movement
Shift

Non price factor

$P = -2Q_D + 12$

$P =$

Problem : $Q_D = -12P + 24$

$Q_S = 12P + 34$

$Q_D = Q_S$

$24P = -10$

$P = -\frac{10}{24}$

Price কম হলেও যদি
পারিপার্শ্বিক কারণে supply
কমে যায়, তাহলে Shift হবে।
বর্ষাকালে ছাতার উৎপাদন।

CamScanner

1. Opportunity cost is the slope of P.P.F.

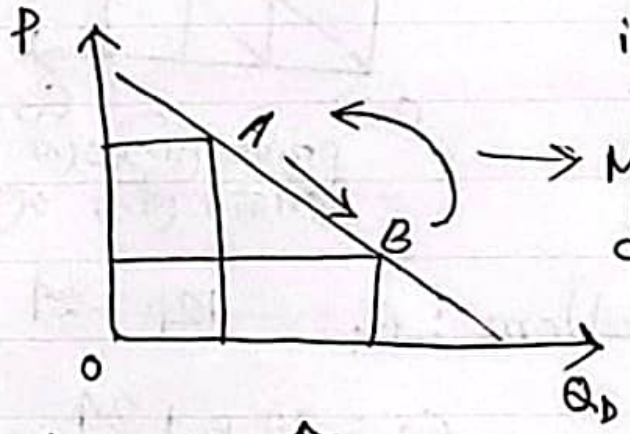
2. To find out the comparative advantage we use opportunity cost concept.

3. How do we achieve specialization?

4. Straight line and curve line . . .

Chapter three

Coke



if all other things remain constant.

→ Movement along the demand curve (Price change)

Coke price ↑

Substitution effect → Replacement of with similar type of product.

Due to substitution effect, we have a inverse relation

$$\text{price} \propto \frac{1}{\text{demand}}$$

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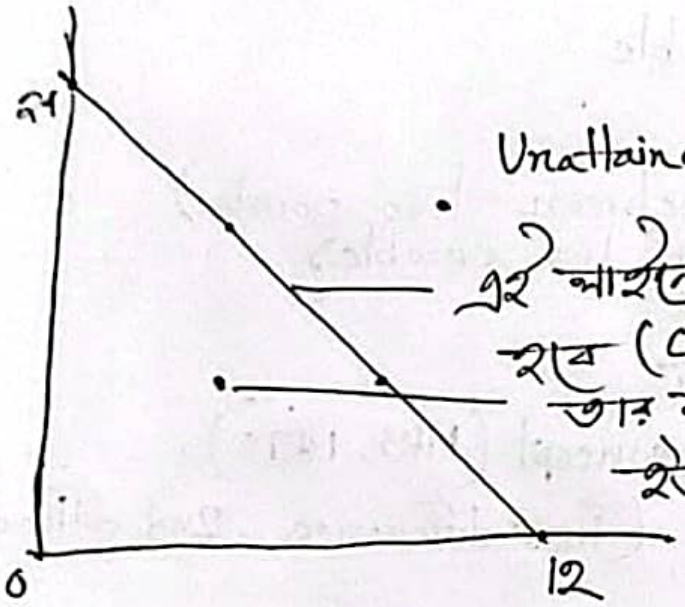
Comparative Advantage

productivity - Acquired knowledge,

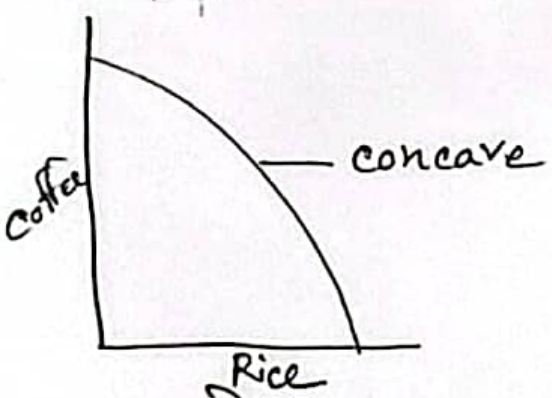


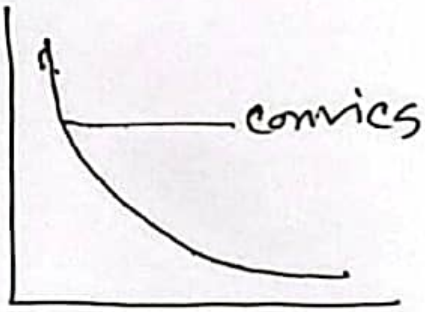
Unattainable combination

এই লাইনে Product Ratio থাকলে হবে (combination of two goods) তার মানে Resource পুরো ইউজ হয় নি।

Incremental change নির্ণয় করি differenciation দিয়ে

Slope = opportunity cost





একই slope এর জন্য দুটা আলাদা গ্রাফ কেনো ?
product দিয়ে।

Definitions

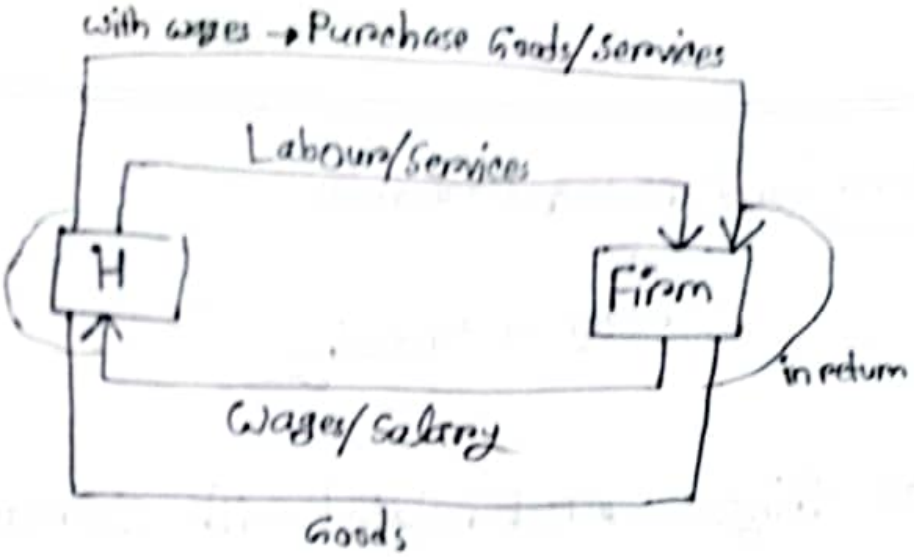
- Equation
- Variable
  - Dependent variable
  - Independent variable
- Parameter (constant)
  - Slope (distance between two points)
  - Intercept ratio of two variables

Slope এর নাম

Elasticity, Marginal concept (MRS, MRTS),
Difference ~~trasthad~~ Value (First difference, 2nd difference)

Phone bill is \$ 5 per month plus 10 cents per minute.

$$B = 5 + 0.10T$$



Two sector economy / Circular flow of Income

26-02-2022

ECO

SLOPE → Ratio between two variables

Difference Difference Name of Slop in Eco.

SLOPE → Elasticity → Marginal concept (MRS/MRTS) → Differentiate value

$$B = 5 + 0.1T$$

B → Dependent variable; 5 → intercept; 0.1 → SLOPE; T → independent variable

(ভাগেলিনের বাটি)

Everythings are related with price in Economics.

To maximise the benefits of human ~~born~~ beings -

Q-1: What to produce? কি

Q-2: How to produce? কিভাবে

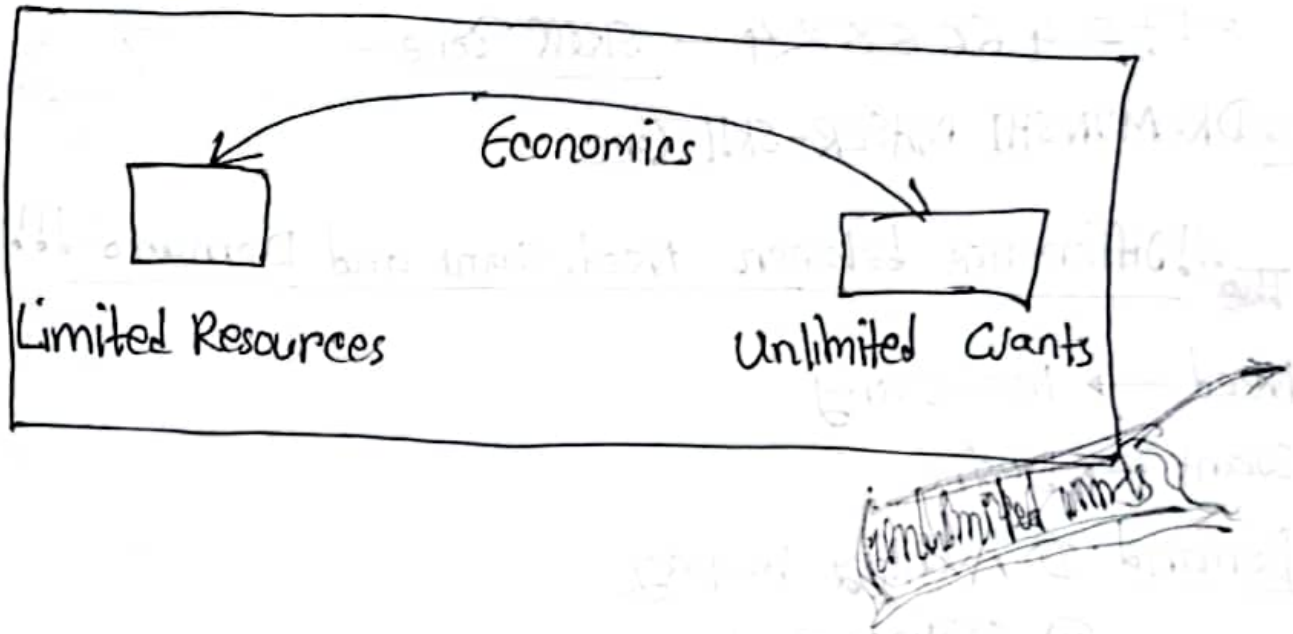
Q-3: For whom to produce? কার জন্য

Opportunity cost

↳ Next best alternative option that sacrifice

Class (Opportunity) ⟷ Movie (Cost)

Farm ↕ Firm



JVM JRE JDK

Verloose Code == Byte code

CSE-219

Principle of Computer Architecture

- Computer Attribute
- " Organization

Amdhals law

Concurrent

$1T = 10^{12}$

23/02/22

16 Economy

ECO

Dr. Munshi Naser

01794666824 — Skill Tone -

YouTube: DR. MUNSHI NASER-SKIL Tone

Pakistan

!!! Difference between Need, Want and Demand !!!

Need → Neccessary

Want → Desire

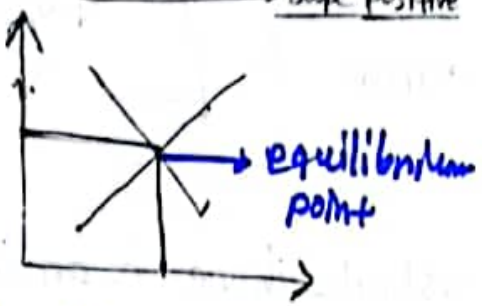
Demand: (i) Availity to pay

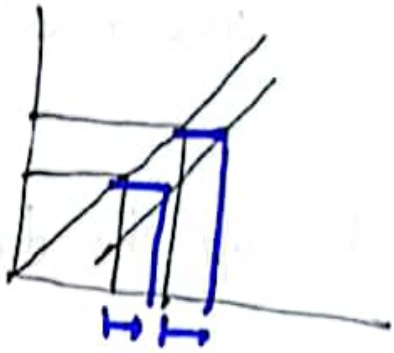
(ii) willingness to pay

$Q_D = -12p + 24$ → slope negative

$Q_S = 12p + 34$ → slope positive

supply





$Q_D = Q_S$

Chap-3 এর শেষে Apendix ।

Slope in Demand → Negative

" " Supply → positive

Chap-1, 2, 3 → TT → Sunday

07-03

SRE

TT- রবিবার → Chap-1, 2, 4

Requirment
- → System Requirment
- → User "

Micro and Macro Economics

Coke belong in industry

priceless things → not related with Economics

H. Task → 15, 16, 17, 19, 20, 21. Apendix part of Chap-1

SWE 226

Step-1: Payment

inventory

Scanning

↓

Product Key

↓ matching with required product

Product matched

↓

Reduce the amount of tk from

Daraz Featured

- Order Tracking
- Donating
- Customer Care
-

26/03

Eco

Opportunity cost ✓

Production possibilities curve

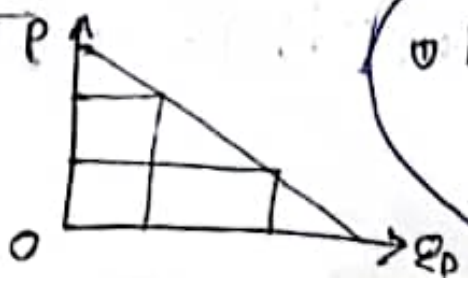
Shifts in ppc

Key points of chapter

- Opportunity cost is the slope of PPF
- To find out the comparative Advantage we use the opportunity cost.
- How do we achive specialization.
- Straigh line and curves. production possibility curve
- Convex and concave curve slope

difference

Chapter-03



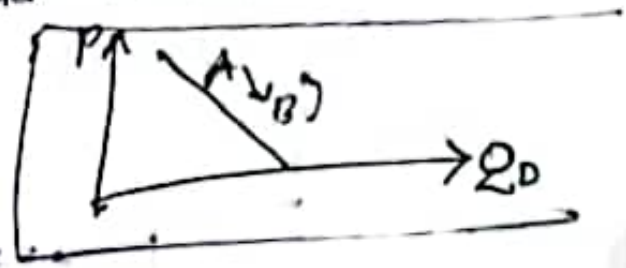
- Due to substitution effect
- Due to income effect

price goes up

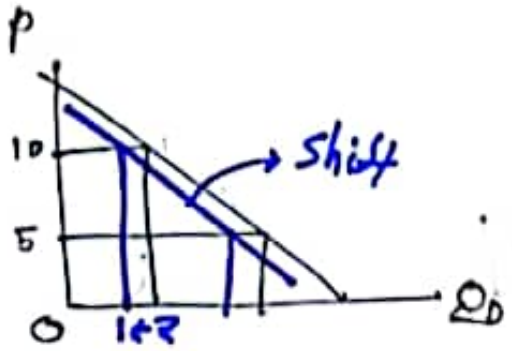
demand curve → related to buyers
supply curve → " " suppliers

⊛ The lower price demand → The higher quantity demand

Movement along the demand curve



If all other things remains constant, there is an ~~inverse~~ inverse relationship between price and product demand.



Shift in Demand.

(i) Movement
(ii) Shift in Demand

⊛ Complementary Product এর দাম বেড়ে গেলে তার সাথে complementary goods এর demand কমে যায়।

complementary product → coke → sugar

Substitute product → coke ⟺ pepsi

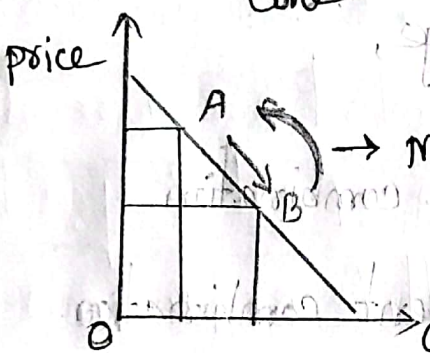
(II) What is the difference between movement curve and shift in demand ~~curve~~ curve?

CamScanner

1. Opportunity cost is the slope of PPF
2. To find out the comparative advantage we use opportunity cost concept.
3. How do we acheive specialization?
4. Straight-line and curve line.

Chapter : 3

Coke



→ Movement along the demand curve.

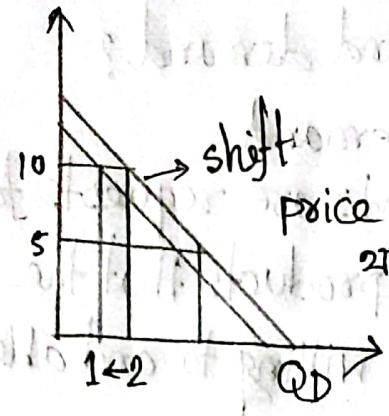
Quality demand.

~~Due to~~ substitution effect → Replacement of with similar type of product.

Due to substitution effect, we have a inverse relation

$$\text{price} \propto \frac{1}{\text{demand}}$$

Due to income effect, inverse relationship between price and Quality demand.



price constant থাকবে।

Complimentary goods.

Butter এর দাম বাড়লে Bread এর ~~দাম~~ ডিমান্ড কমবে।

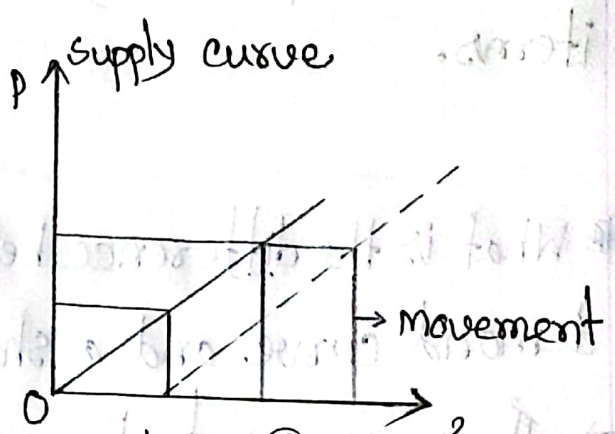
Example: চা - চিনি।

Demand curve -

Movement

Shift

Non price factor.



price বেশি হলে উৎপাদন বাড়বে।

price same হলেও যদি পারিপার্শ্বিক কারণে supply বেড়ে যায়, তাহলে shift হবে।

for example: বর্ষাকালে ছাতার উৎপাদন।

problem: $Q_D = -12P + 24$

$Q_S = 12P + 34$

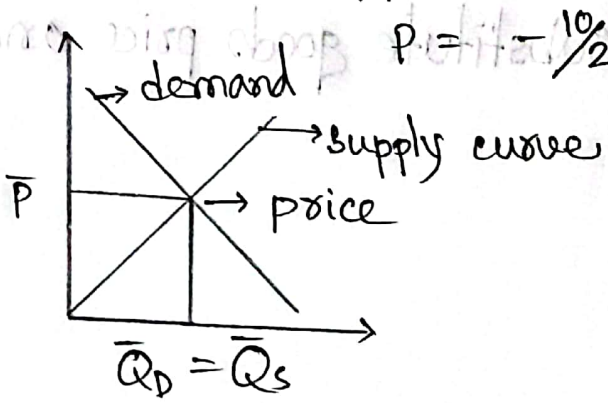
$Q_D = Q_S$

$24P = -10$

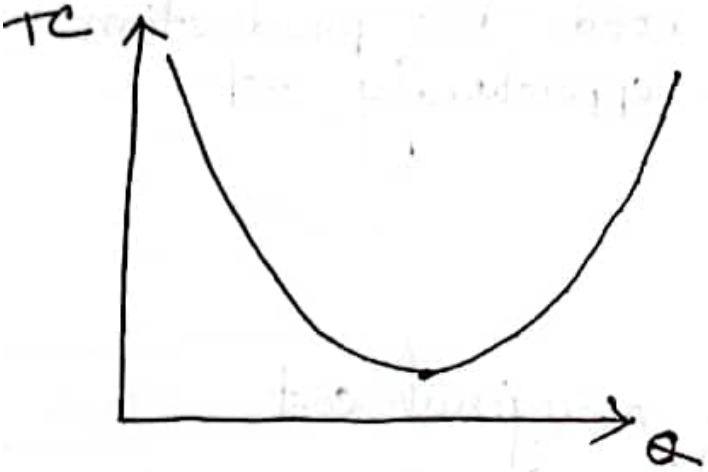
$P = -10/24$.

Equilibrium price

seller, buyer agree করলে।

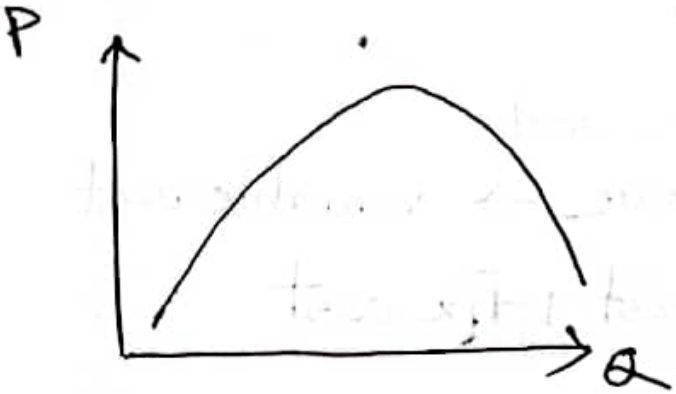


11 What is the difference between movement along the demand curve and shift curve.



cost curve

Mirror Image



product curve

Law of deminating return →

যের পয়েন্ট থেকে curve নিচের দিকে নামতেছে।

No of Workers	Output	MP_L
0	50	0
1	60	10
2	70	10
3	80	10
4	90	10
5	100	10
6	110	10
7	120	10
8	130	10
9	140	10

Principals of Economics – Michel

1 labour এর জন্য production / Quantity change

More elasticity → more sensitive to price

Luxurios goods → elastic goods.

3. Cross → price goes up
switch to another smilar product with less price.

Horlicks price ↑ ⟶ Complain ↑ ~~price~~ Demand

Negative relationship ('−' sign দিয়ে indicate)

Complementary goods

একটার price বেড়ে গেলে, অপর product এর Q. Demand কমে যাবে।

$$E_c = \frac{\% \Delta \text{ in } Q_{D\,Tea}}{\% \Delta \text{ in } P_{sugar}}$$

$= -1.1$

This two goods are complimentary.

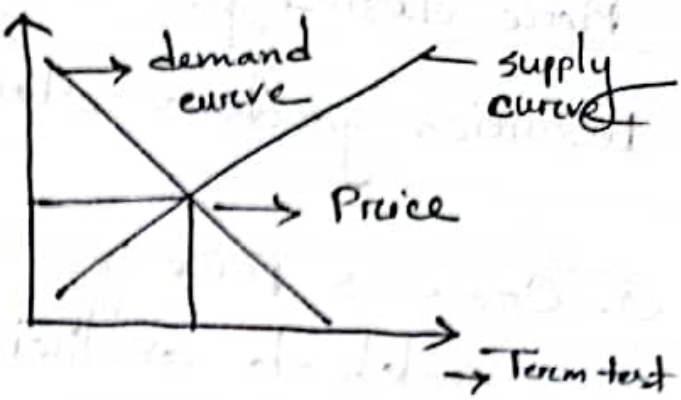
$+1.1$
↓
substitude products.

Value এবং sign - আলাদা ব্যাখ্যা দিতে হবে।

E = 1 হলে Unit Elasticity

Equilibrium price.

Seller, buyer agree করলে।



Elasticity → responsiveness

Degree of responsiveness.

$$E_p = \frac{\% \Delta \text{ in } Q_D}{\% \Delta \text{ in } P}$$; $P_1, P_2, Q_{D_1}, Q_{D_2}$ given

Midpoint Method :

$$E_p = \frac{\dfrac{Q_{D_1} - Q_{D_2}}{(Q_{D_1} + Q_{D_2})/2}}{\dfrac{P_1 - P_2}{\dfrac{(P_1 + P_2)}{2}}}$$

$E_p = (-)$

$P\uparrow \quad Q_D\downarrow$

$Q_D\uparrow \quad P\downarrow$

$\uparrow\uparrow \quad \downarrow\downarrow$

positive relation (+)

1. Price elasticity of demand →
2. Income elasticity of demand
3. Cross elasticity of demand

② → $P_1 - P_2$ এর পরিবর্তে $Y_1 - Y_2$

elasticity > 1 → product is elastic

Feglo-FZ
Ferrous Ascorbate + Folic Acid + Zinc

CamScanner

Market

Perfect competetive Market:

Identical product - Identical price
Easy entry
Easy exist

Bank এর Interest Rate.

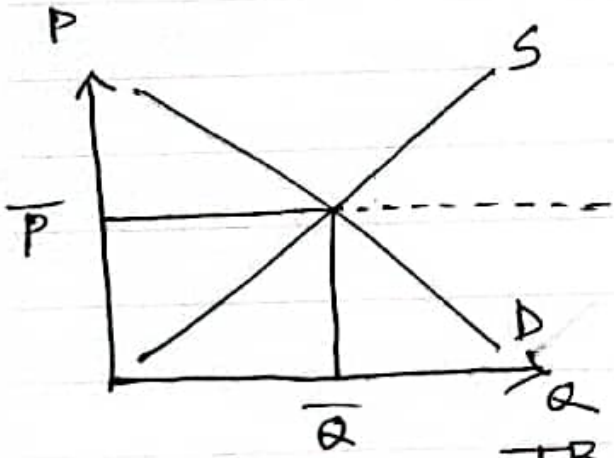
Imperfect Market:

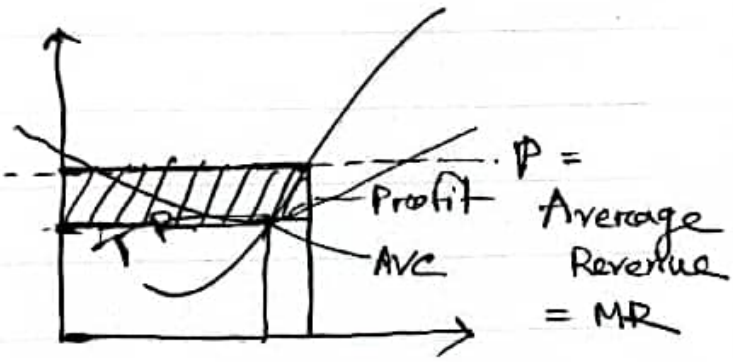
Monopoly → একটা Institute.
Olygopoly - কয়েকটা company মিলে price বাড়ায় / কমায়

Marginal Revenue = M.C for equillibrium condition.

$\rightarrow \frac{\Delta TR}{\Delta Q}$

MC curve cuts MR curve from below.





$A.R = \frac{TR}{Q} = \frac{P \times Q}{Q} = P$

P > AVC
↳ Profit

Profit = TR - TC
Δ = ΔTR - ΔMC

Feglo-FZ®
Ferrous Ascorbate + Folic Acid + Zinc

CamScanner

Chapter → 4, 5, 6, 7

Revenue —

Total cost
Capital

TR − TC = Profit.

↓

price × Quantity

. Revenue, Normal elasticity. cross elasticity
Explain and calculate.

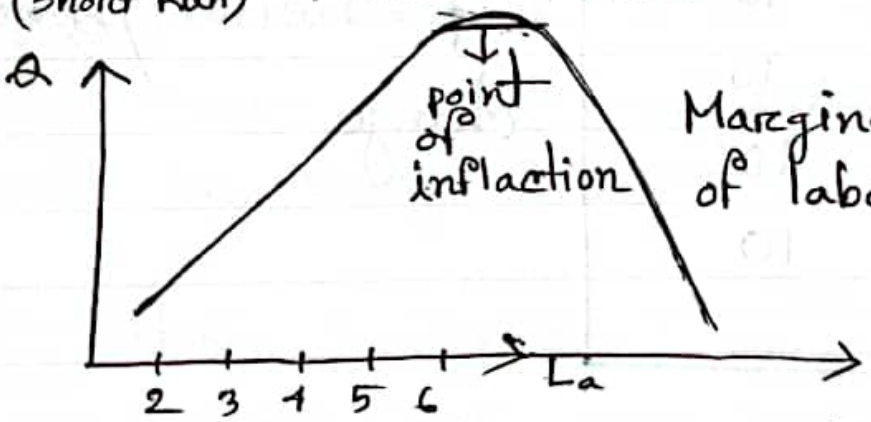
Production

1. What is factors of production?
Land, labour, capital, idea (উদ্যোক্তা)

$Q = f(L_a, K, A)$

↓

(Short Run) movable element



Marginal Productivity of labour,

$$MP_L = \frac{\Delta TQ}{\Delta TL}$$

যখন থেকে একজন labourএর MP_L (−)এ চলে যাবে।
তখন থেকে slope negative হবে।

$MP_L = 0$ হলে কোনো Labour ই থাকবে না।

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Cost :

Cost is something that needs for production.

1. Economic cost → opportunity cost
2. Accounting cost

1. Economic cost :

Fix cost, variable cost, marginal cost, Total cost, Average cost.

বাসাভাড়া, বেতন, বিল। → Fix cost

যতটুকু উৎপাদন ততটুকু Cost, labour → variable cost

Total cost = variable cost + fix cost

1 unit production এর জন্য cost এর change.
Incremental change in production, what would be change in cost.

$$M.C = \frac{\Delta TC}{\Delta TQ} = \frac{Wage}{MP_L}$$

$$A.C = \frac{Total\ cost}{Quantity}$$

$$ATC = AVC + AFC$$
$$= \frac{VC}{Q} + \frac{FC}{Q}$$

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Ferrous Fumarate + Folic Acid + Zinc

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শাহজালাল বিজ্ঞান ও প্রযুক্তি বিশ্ববিদ্যালয়, সিলেট

পরীক্ষা কেন্দ্রের সিল

রেজিস্ট্রেশন নম্বর : 2020831050

কোর্স নম্বর :

বিভাগ : SWE

তারিখ : 13-3-23

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পরিদর্শকের স্বাক্ষর

Q.1| What is the difference need, want and demand? Give two examples. – 5

Q.2| Graphically show the difference between movement along the demand curve and shift in the demand curve → 15 (what is movement, what is shift – 3, 8 for 2 graph, graph explanation with example – 4)

Ans to the question no : 1

Need : The necessary things is known as need in economics

Want : The things we desire is called want.

Demand : There are 3 things in any demand. It has a price or value, our willingness to pay and ability to pay.

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c) Explain the difference between a positive and a negative externalities and explain why they ... an externality.

i. After eating a burger, you vomit ~~all your~~ on your best friend
ii. A flood in ~~soul~~ Istanbul it causes the prices of bananas to increase
iii. Your mobile phone goes off during the lecture
iv. You visit the doctor and get a flu vaccination
v. Tension in the Middle East increases the prices of petrol

Group B

[Answer all the questions]

4. Answer any FIVE **2x5=10**

a) Why does the size of a countries GDP matter?
b) How does GDP affect the quality of life of the countries people?
c) How does the value added of a business differ from the profits of a business?
d) How is the unemployment rate calculated?
e) Which is a greater problem: anticipated inflation or unanticipated inflation
f) What is participation rate
g) What is potential GDP? Does it remain constant overtime?
h) Give a definition of poverty.

5. Answer any Four **4x5=20**

a) Distinguish between nominal GDP and real GDP. How can we calculate economic growth rate?
b) What determines the long run economic growth?
c) What is GDP deflector and how it is calculated?
d) What potential biases exist in calculating the consumer price index?
e) Distinguish between demand pull inflation and cost push inflation
f) What are the functions of money?
g) What is the impact of inflation on purchasing power of consumers?

6. Answer any TWO **2x10=20**

a) Describe the four major components of ~~wechess~~ expenditures in GDP. Why is GDP an imperfect measure of economic well-being? What types of production does GDP not measure?
b) Explain the costs of unemployment considering costs to the economy, cost to the individual and the social cost.
c) How does a central bank control the price level using the open market operation - explain?

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Shahjalal University of Science and Technology
Institute of Information and Communication Technology (IICT)
Software Engineering
2nd Year 1st Semester Final Examination' June 2022 (Session: 2019-20)
Course Code: ECO 205w Credits: 3 Course Title: Principles of Economics
Time: 3 hrs Total Marks: 100

Group A
[Answer all the questions]

1. Answer any FIVE **5x2=10**

a) Why is scarcity central to the study of economics
b) What is the difference between a change in demand and a change in quantity demanded?
c) What do economists mean by market equilibrium?
d) What is the midpoint method for calculating price elasticity of demand?
e) What is meant by increasing marginal opportunity cost
f) Define monopoly market
g) What are the factors of production?

2. Answer any FOUR **4x5=20**

a) What is a production possibility frontier? how can we show economic efficiency on a PPF?
b) For each of the following pair of products steak which are compliments which are substitutes and which are unrelated-
   i. Pepsi and coke
   ii. Pran sausages and Fulkoli bread
   iii. Iphone and iPhone cases
   iv. Tea and coffee
   v. Fish and Chips

c) Rank the following goods from the lowest income elasticity of demand to highest income elasticity of demand. Briefly explain your ranking.
   i. Bread ii. Pepsi iii. Totoya cars iv. Laptop v. Salt

d) State and explain the properties of an indifference curve.
e) Suppose the government restricts the number of dairy farmers which results the supply for milk shifting to the left. Briefly explain using a demand-supply graph whether each of the following will increase or decrease.
   i. Consumer surplus
   ii. Producer surplus
   iii. Economic surplus

3. Answer Any TWO **2x10=20**

a) i. What are the key determinants of price elasticity of demand? Which determinant is the most important?
   ii. Define cross price elasticity of demand. what does it mean if cross price elasticity is negative or positive?
   iii. Define income elasticity of demand using income elasticity distinguish a normal good from an inferior good

b) Explain the basic assumptions about preferences. Define utility Show consumer's equilibrium using indifference curve.

total utility,
menginal utility
explain the law of diminishing
negative util