CA FOUNDATION

CHANAKYA 4.0

Marathon - 1

Business Economics

Chapters 1 , 2, 3, 4, 5

By – LOVE KAUSHIK SIR



Chapter Name	Weightage
Chapter–1: Nature and Scope of Business Economics	5
Chapter–2: Theory of Demand and Supply	10
Chapter–3: Theory of Production and Cost	10
Chapter–4: Price Determination in Different Markets	15
Chapter–5: Business Cycle	5

45 marks



Chapter - 1

Nature and Scope of Business Economics

Content of the Chapter

Chapter 1: Nature and Scope of Business Economics

Unit 1: Introduction

Unit 2: Basic Problems of an Economy and Role of Price Mechanism

Meaning of Business Economics

1. Business Economics may be defined as the integration of economic theory with business practices / activities.

2. Business economics is also known as "managerial economics"

3. Joel dean defined Business Economics as the use of economic analysis to make business decisions involving the best use of an organization's scare resources.

Economics

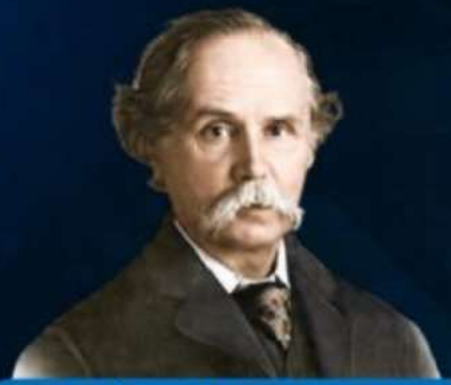
Oikonomia

- Economics comes from the Greek term for 'household.'
- Before the 19th century, it was called 'Political Economy'.
- Adam Smith's book, The Wealth of Nations (1776), is regarded as the first modern economics work. Economics is the study of wealth of Nations
- Full name of The book is 'An Inquiry into the Nature and Causes of the Wealth of Nations'

Scarcity ⇒ D > S



Adam Smith
Wealth Definition



Alfred Marshall
Welfare Definition



Paul Samuelson
Growth Definition



Robbiny

Lionel Robbinson
Scarcity Definition

Points to be Noted

1. The study of economics will enable us to develop an analytical approach that helps us in understanding and analysing a wide range of economic issues.
2. The study of economics cannot ensure that all problems will be appropriately tackled, but it would enable us to examine a problem in a right perspective.

Two

End

The fundamental facts:

(i) 'Human beings have unlimited wants'; and

(ii) 'The means to satisfy these unlimited wants are relatively scarce'

Resources

Limited

Not Absolutely

Question **An economy exists because of two basic facts i.e., _____** [PYQ]

A Human wants are limited and resources are unlimited

B Human wants are unlimited and resources are unlimited

C Human wants are unlimited and resources are scarce.

D Human wants are limited and resources are abundant



MICRO

INDIVIDUAL
UNITS

VS

MACRO

AGGREGATES
OR
TOTALITY / OVERALL

2 Parts of Economics

Subject-Matter of Economics

- Micro Economics / Slicing Theory
  - Price Theory
- Macro Economics
  - Theory of income and Employments OR Theory of Lumping OR General Equilibrium Analysis

Examples Micro-Economics OR
Price Theory

(i) Product pricing;
(ii) Consumer behaviour;
(iii) Factor pricing;
(iv) The economic conditions of a section of people;
(v) Behaviour of firm
(vi) Location of Industry

Examples of Macro Economics OR Theory of income and Employments

(i) National Income and National Output;
(ii) The general price level and interest rates;
(iii) Balance of trade and balance of payments;
(iv) External value of currency; or Foreign Exchange Rate
(v) The overall level of savings and investment; and
(vi) The level of employment and rate of economic growth.

SPAM MINT

Nature of Business Economics

1. Business Economics is a Science — Social Science
2. Pragmatic in Approach — Practical; Real world Problem
3. Business Economics is an Art
4. Based on Micro Economics — Largely; Heart
5. Incorporates elements of Macro Analysis — शामिल; Can't operate in Vaccum
6. Interdisciplinary in nature
7. Normative in nature — Should be / ought to be
8. Use of Theory of Markets and Private Enterprises

Question **Which of the following is not a correct statement?** (PYQ)

A Business Economics is a normative science

B Business Economics is an art

C Business Economics is based largely on Micro Economics

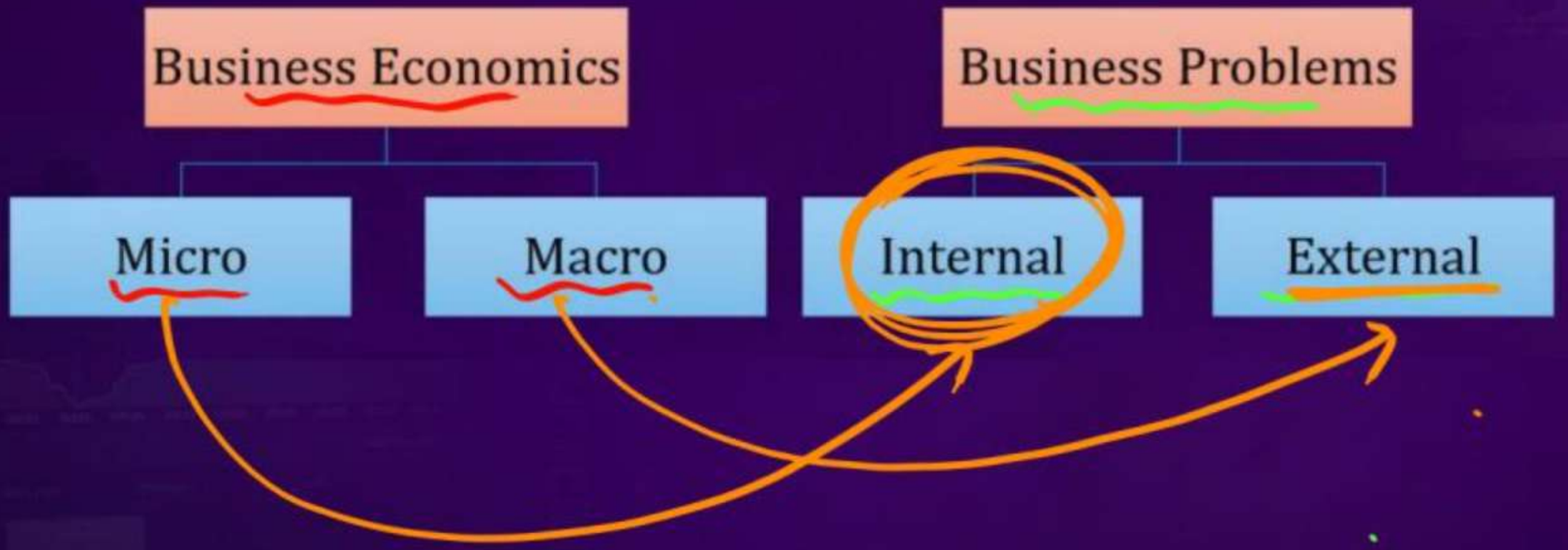
D Business Economics does not incorporate elements of Macro Economics

D



Scope of Business Economics

1. Microeconomics applied to operational or internal Issues
2. Macroeconomics applied to environmental or external issues



Question

#Q. The operational or internal issues to which economic theories can be directly applied are related with.

(A) Micro Environment | Economic

(B) Macro Environment

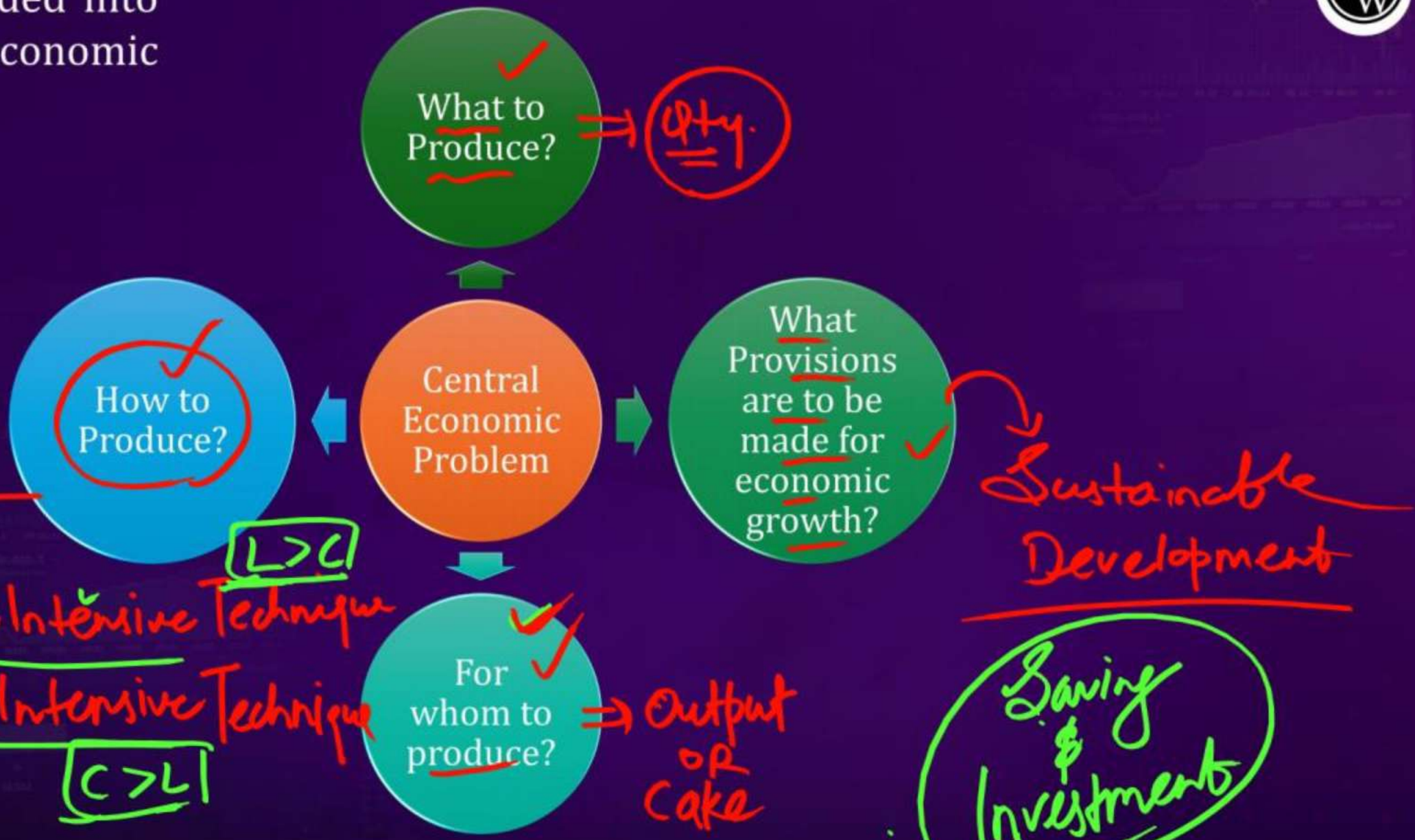
(C) Business Economics

(D) Environmental Economics



The Central Economic Problem is divided into four basic economic problems.

Scarcity



Three types of Economic Systems

Three types of economy



Capitalist Economy

USA, JAPAN, SOUTH KOREA etc.



Socialist Economy

CHINA, CUBA, NORTH KOREA etc



Mixed Economy

INDIA

Economic Systems and Its Types

Three types of economy:

(1) Capitalist Economy → Free Market Economy → Laissez – Faire → Competitive Economy – this is predominant economic system.

(2) Socialist Economy → Command → Planned Economy → Controlled Economy

(3) Mixed Economy



Capitalist Economy

factors / input

- It is Economic system in which all means of production are owned and controlled by private individuals for profit.
- Private property is the mainstay (backbone) of capitalism and profit motive is its driving force
- The government has a limited role in the management of the economic affairs under this system. Some examples of a capitalist economy may include U.S., U.K., Hong-kong, south korea, Germany, Japan, Mexico, Singapore, etc.



Features of Capitalist Economy

Price Mechanism

- Right to private property
- Freedom of enterprise → Produce, Consume
- Freedom of economic choice → Variety
- Profit motive → Driving force
- Consumer sovereignty → Consumer Supremacy → Uncrowned King
- Competition → Efficiency
- Absence of govt. interference → Limited

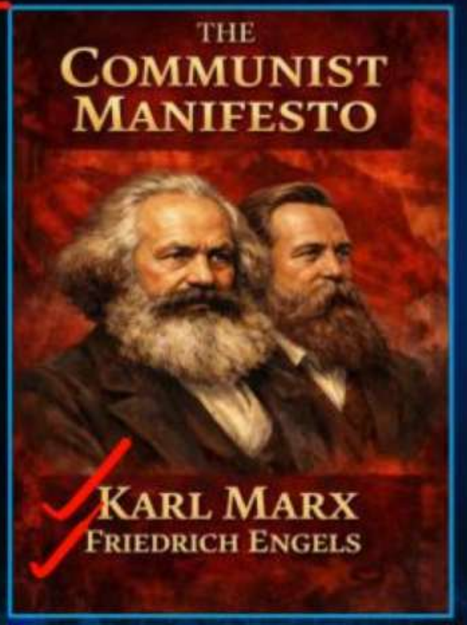
Economic growth faster

Initiative – Incentive

myth

Socialist Economy

- The concept of socialist economy was propounded by Karl Marx and Frederic Engels in their work 'The Communist Manifesto' published in 1848.
- The erstwhile U.S.S.R. was an example of socialist economy from 1917 to 1990. In today's world there is no country which is purely socialist.. Other examples include Vietnam, China and Cuba. North Korea, the world's most totalitarian state, is another example of a socialist economy.



Features of Socialistic Economy

- Collective Ownership
  - Major → govt → Social welfare
  - Small → Pvt
- Economic Planning – Central Planned Authority
- Absence of Consumer Choice
- Relatively Equal Income Distribution
- Minimum role of Price Mechanism or Market forces
- Absence of Competition

Freedom from Hunger → guaranteed

Question

#Q. Administered prices refer to:

A Prices determined by forces of demand and supply

B Prices determined by sellers in the market

C Prices determined by an external authority which is usually the government

D None of the above



Extreme form of Socialism is not Practicable.

Question

#Q. Which out of these are the feature of capitalism?

[PYQ]

(i) Profit motive
(ii) Human welfare
(iii) Work through price mechanism

A (i) And (ii)

B (ii) and (iii)

C (i) And (iii)

D All of these



The Mixed Economy

In a mixed economy, the aim is to develop a system which tries to include the best features of both the controlled economy and the market economy while excluding the demerits of both. It appreciates the advantages of private enterprise and private property with their emphasis on self-interest and profit motive.



Features of Mixed Economy

Co-existence of private and public sector

In a mixed economy, there are three sectors of industries:

- Private sector: Production and distribution in this sector are managed and controlled by private individuals and groups.
- Public sector: Industries in this sector are not primarily profit-oriented, but are set up by the State Govt. for the welfare of the community.
- Combined sector: A sector in which both the government and the private enterprises have equal access, and join hands to produce commodities and services, leading to the establishment of joint sectors.

Chapter - 2

Theory of Demand and Supply

10 marks

Chapter Overview

(1) Unit 1 : Law of Demand and Elasticity of Demand ✓

(2) Unit 2 : Theory of Consumer Behaviour ✓

(3) Unit 3 : Supply ✓

Unit - 1 : Law of Demand and Elasticity of Demand



Qty.

Desire
+
Ability
+
Willingness

Demand

Definition of Demand

- Demand refers to the Quantity of a good or service that buyers are willing and able to purchase at various prices during a given period.

Elements of Effective Demand

- Desire, means to purchase, and willingness to use those means.
- Desire alone isn't enough; it must be backed by purchasing power.

पैसा | Resource Supported ability

P Price	Q.D.
10	6
20	3
30	1

Quantity Demanded

Quantity Demand

- Quantity of a good or service that buyers are willing and able to purchase at a particular price during a given period.

Flow Concept

What Determines Demand?

(1) Price of the commodity:
(2) Price of related commodities:
(3) Disposable Income of the consumer:
(4) Tastes and preferences of buyers:
(5) Consumers' Expectations
(6) Other factors: Size of population, Age Distribution of population, The level of National Income and its Distribution, Consumer-credit facility and interest rates, Government policies and regulations

Y = 100
− Tax = 30
70

Factors Determining Demand

1. **Price of the Commodity:**
   - Inverse relationship between price and demand.

$P \uparrow D \downarrow$ $P \downarrow D \uparrow$

2. **Price of Related Commodities:**
   - Complementary goods (e.g., tea and sugar) and substitutes (e.g., tea and coffee) impact demand. Complementary goods' prices affect each other inversely; substitutes' prices have a direct relation.

Substitutes (+)

$P_Y \uparrow \longrightarrow D_X \uparrow$

$P_Y \downarrow \longrightarrow D_X \downarrow$

Complements (−)

$P_Y \uparrow \longrightarrow D_X \downarrow$

$P_Y \downarrow \longrightarrow D_X \uparrow$

3. Disposable Income:

- Increase in disposable income generally increases demand for goods.
- Normal goods' demand rises with income; inferior goods' demand falls.

Essential / Necessities → Water, Food, Medicine etc.

↑ in D will be less than proportionate ↑ in income

Y↑ < Normal D↑ = Inferior D↓

Durable Goods:

As people become richer, there is relative decline in importance of non-durable goods and increase in importance of durable goods.

Luxury / Prestige Goods

Demand ↑s beyond a certain level of income and keep rising as income ↑s.

4. Tastes and Preferences:

- Modern or fashionable goods have higher demand.
- External effects like demonstration, bandwagon, snob and veblen effects influence demand.

Key Terms

(1) 'Demonstration effect' → चिड़ | Jaleous — James Duesenberry

(2) 'Bandwagon effect' → सुर से सुर | समाज → Copy करना

(3) 'Snob Effect' → आणा बंदा → different from the लोग → Common Herd

(4) 'Veblen effect' → दिखावाजी / Expensive → Thorstein veblen → Highly Priced Status seeking People

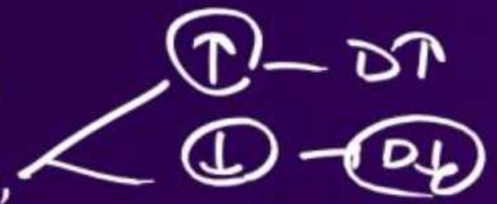
Stylish | fashionable

5. Consumers' Expectations:

- Expectations about future prices, income, and supply influence current demand.
- Positive expectations lead to higher demand; negative expectations reduce it.
- Example: Expecting a sale in the future may decrease current demand.

Other Factors:

6. Population size,
7. Age distribution,
8. National income and its distribution,
9. Consumer-credit facilities,
10. Government policies

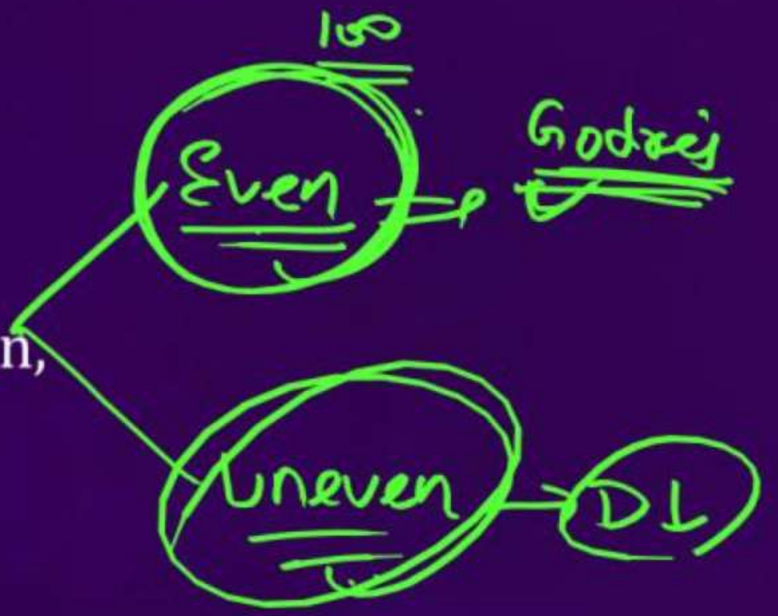


Baby → oil, Toys (DP)

Senior → walking stick
Medicine

Other Factors:

6. Population size,
7. Age distribution,
8. National income and its distribution,
9. Consumer-credit facilities,
10. Government policies

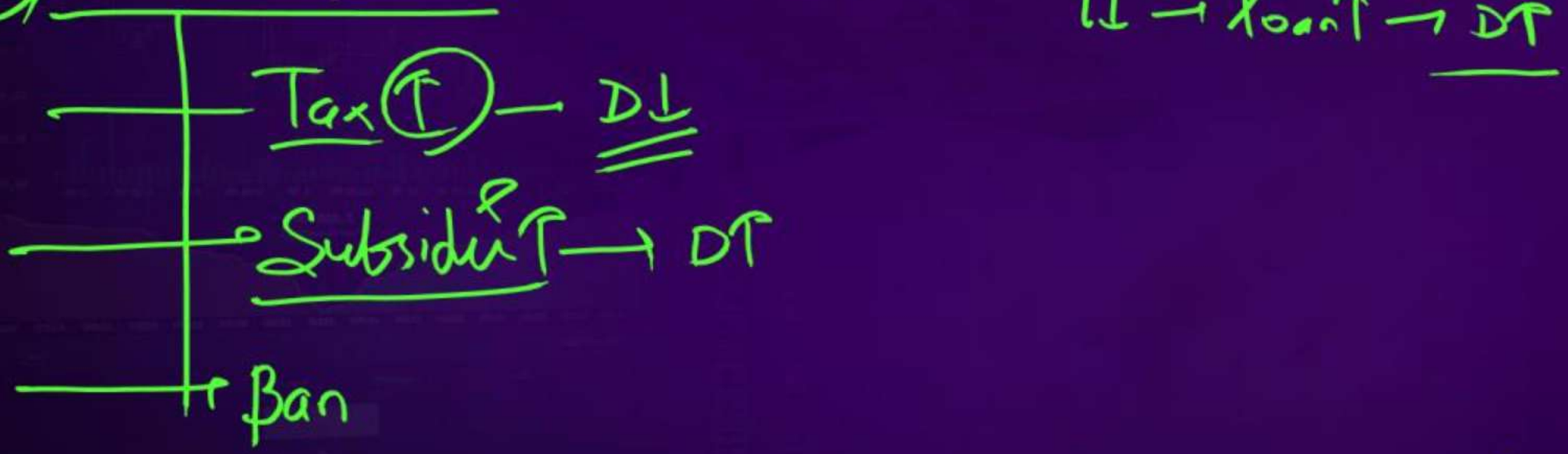


Propensity to Consume of Rich is lower than that of Poor.



Other Factors:

6. Population size,
7. Age distribution,
8. National income and its distribution,
9. Consumer-credit facilities, and Interest
10. Government policies



What Determines Demand?

Remember Your Short Trick –TIPPER A CNG

(1) Price of the commodity:

(2) Price of related commodities:

(3) Disposable Income of the consumer:

(4) Tastes and preferences of buyers:

(5) Consumers' Expectations

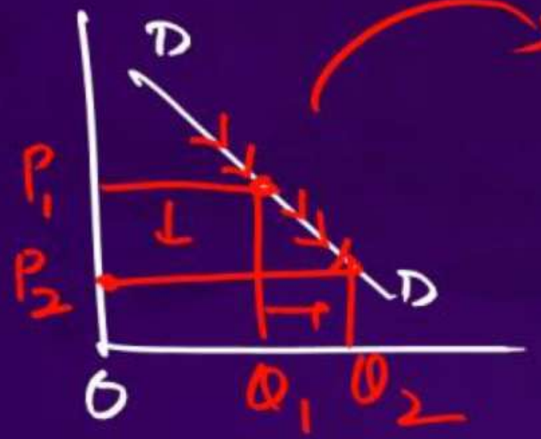
(6) Other factors: Size of population, Age Distribution of population, The level of National Income and its Distribution, Consumer-credit facility and interest rates, Government policies and regulations

Ceteris Paribus
↳ Latin phrase

Law of Demand

P↑ D↓
P↓ D↑

P	Q.D.
10	100
20	50



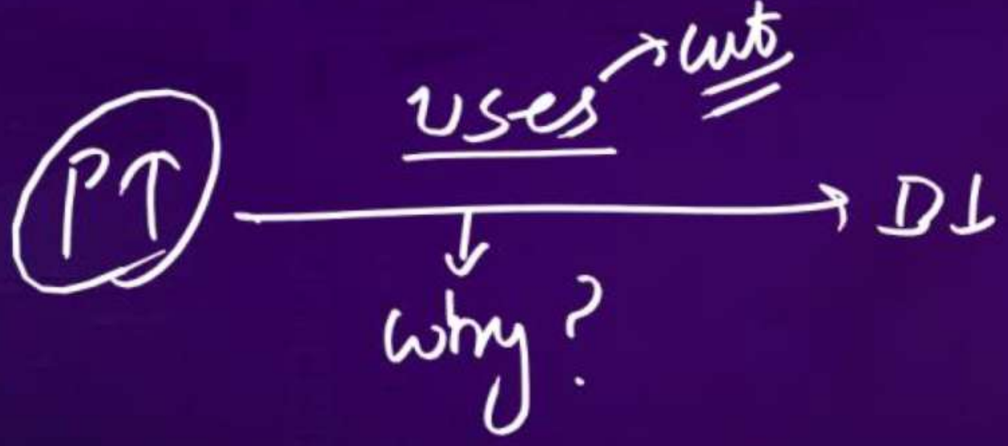
$$\text{Slope} = -\frac{\Delta P}{\Delta Q}$$

Rationale of The Law of Demand (Why Demand Curve Slopes Downward)

The various reasons for operation of Law of Demand are:

1. Price effect
2. Utility maximizing behavior of consumers
3. Arrival of new consumers
4. Different uses

Milk



Rationale of The Law of Demand (Why Demand Curve Slopes Downward)

The various reasons for operation of Law of Demand are:

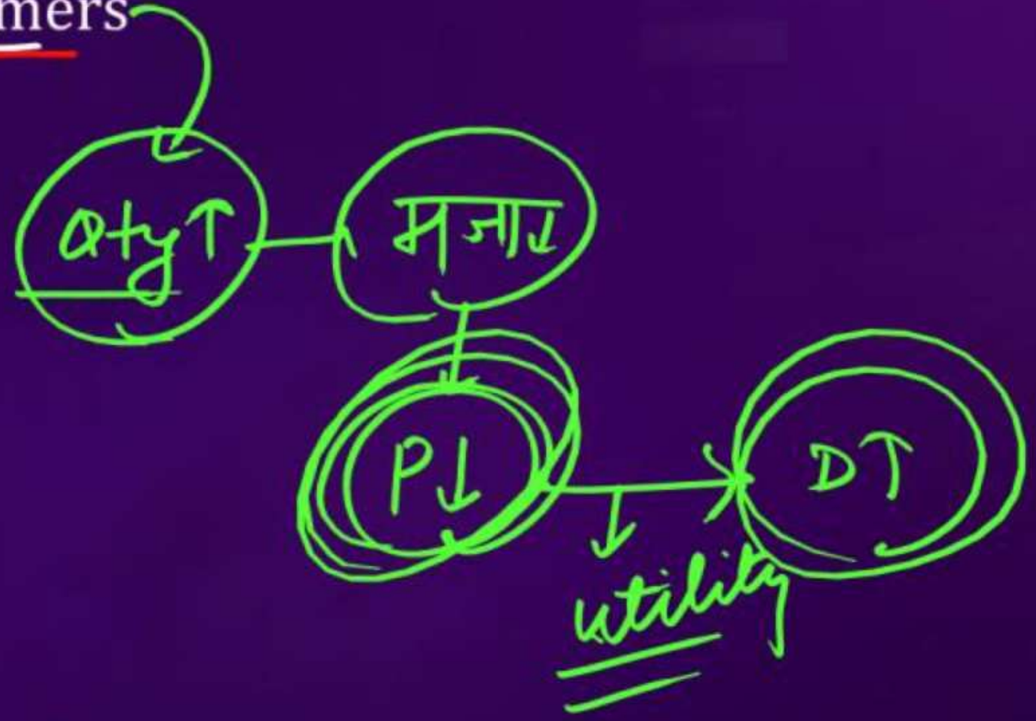
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Rationale of The Law of Demand (Why Demand Curve Slopes Downward)

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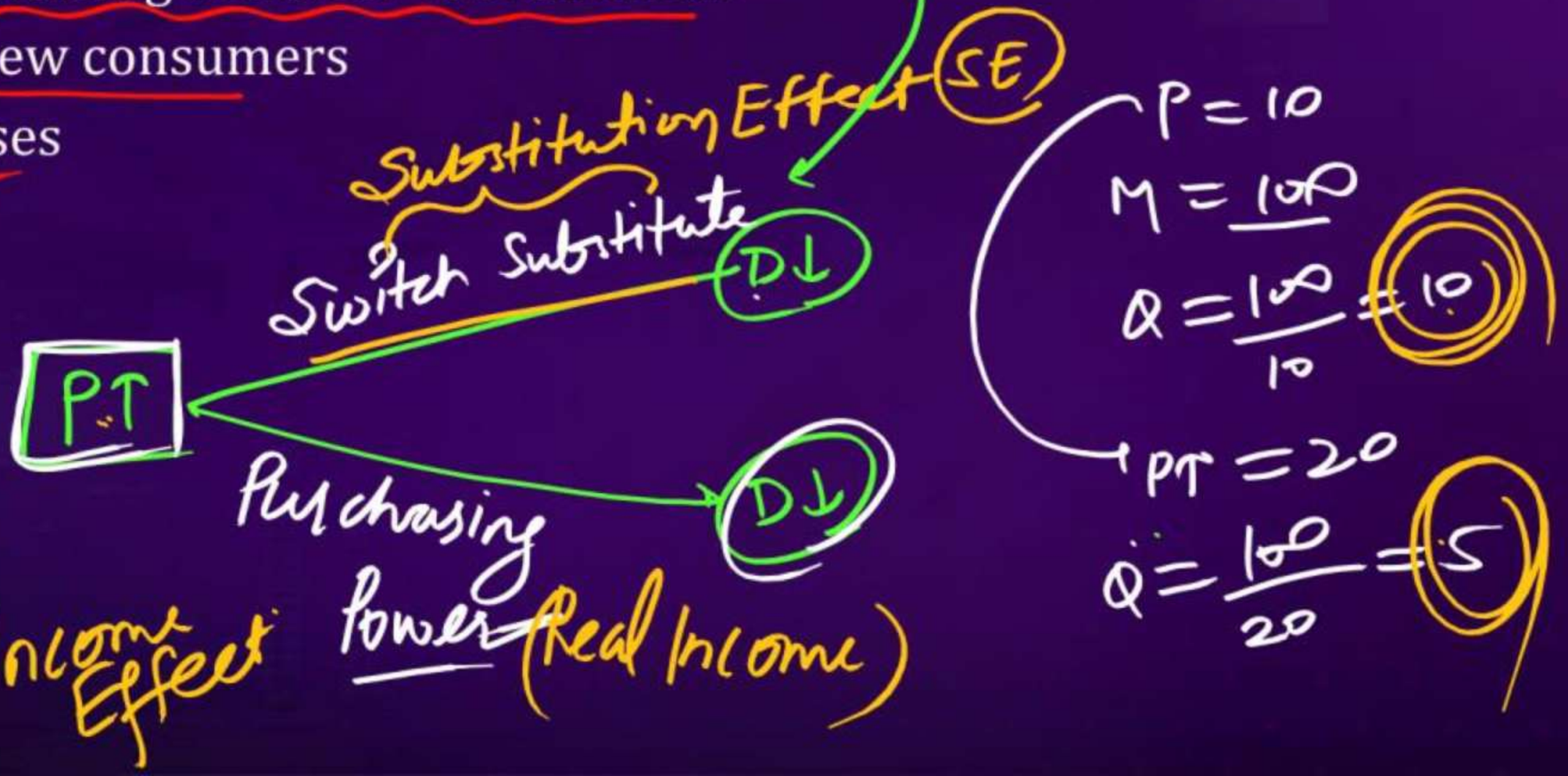
1. Price effect
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3. Arrival of new consumers
4. Different uses



Rationale of The Law of Demand (Why Demand Curve Slopes Downward)

The various reasons for operation of Law of Demand are:

1. Price effect = SE + IE
2. Utility maximizing behavior of consumers
3. Arrival of new consumers
4. Different uses



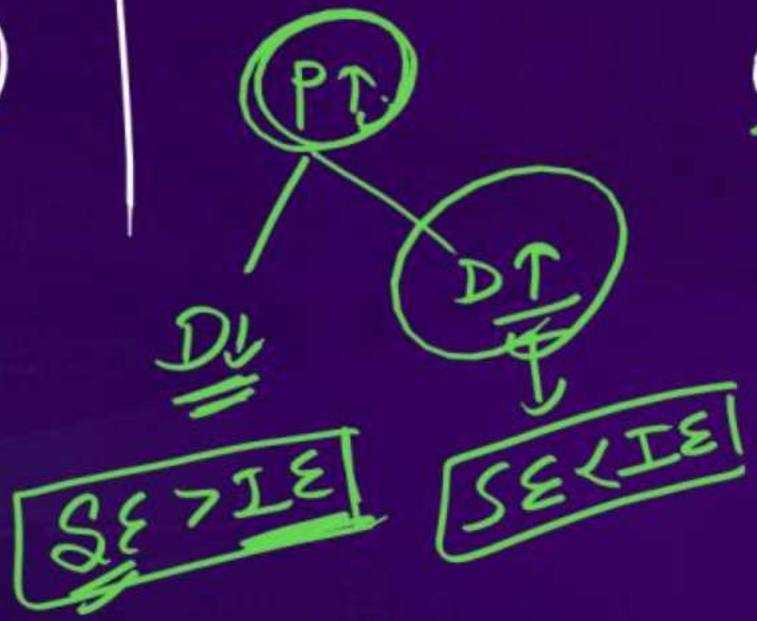
Normal good

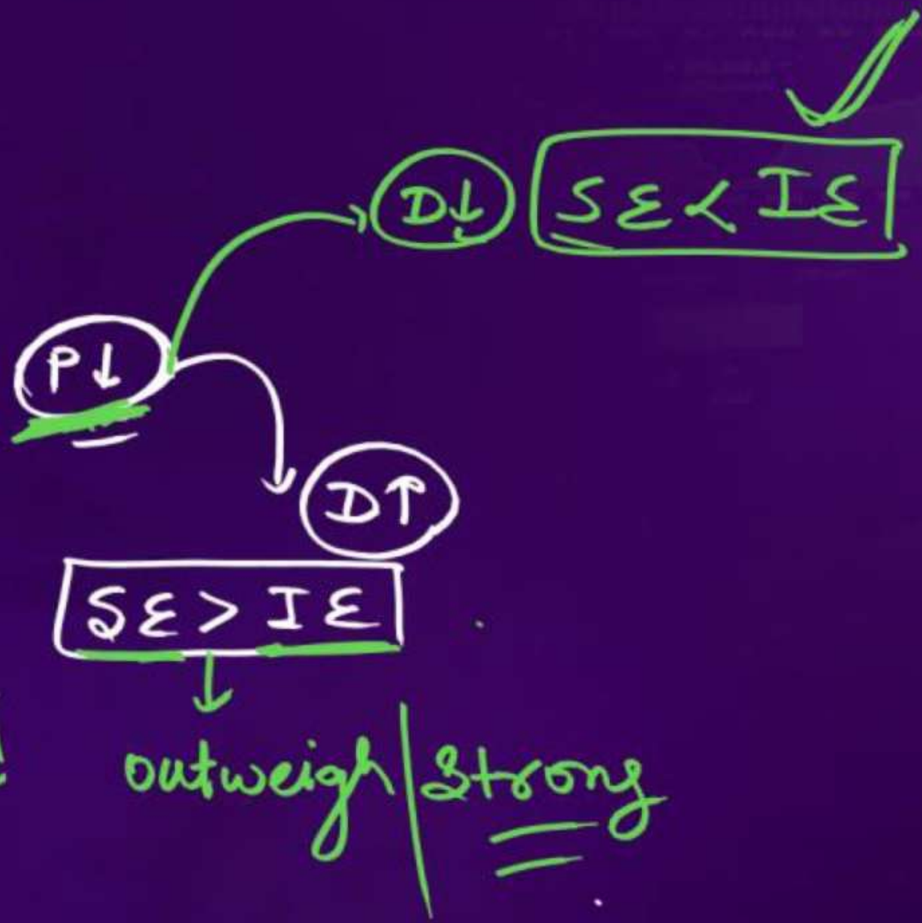
Y↑ → D↑
Y↓ → D↓

P↑ → D↓
P↓ → D↑

Inferior good

Y↑ → D↓
Y↓ → D↑





The substitution effect will be stronger when:

(a) The goods are closer substitutes

(b) There is lower cost of switching to the substitute good

(c) There is lower inconvenience while switching to the substitute good.

Question

#Q. The substitution effect will be what when the price of the product falls? (PYQ)

A Zero

B Negative

C Positive

D Lower cost



Robert Giffen

British Labour ⇒ Poor

PT DT
PL DL

YT DL
YL DT

Inferior

Meat

1 Day
x.

Bread

Lower quality

6 days

PT → DT

Giffen good

YT → DL

Giffen good

Movement Along Demand Curve

Remember Your Short Trick –TIPPER A CNG

(1) Price of the commodity:

Change in Qty. Demanded

P	Q.D.
10	100
20	50

Contraction

P	Q.D.
10	100
5	200

Expansion (PT)

(2) Price of related commodities:

(3) Disposable Income of the consumer:

(4) Tastes and preferences of buyers:

(5) Consumers' Expectations

(6) Other factors: Size of population, Age Distribution of population, The level of National Income and its Distribution, Consumer-credit facility and interest rates, Government policies and regulations



Shift in Demand Curve



Remember Your Short Trick –TIPPER A CNG

(1) Price of the commodity:

(2) Price of related commodities:

(3) Disposable Income of the consumer:

(4) Tastes and preferences of buyers:

(5) Consumers' Expectations

(6) Other factors: Size of population, Age Distribution of population, The level of National Income and its Distribution, Consumer-credit facility and interest rates, Government policies and regulations

Change in DD

P	Q.D.
10	100
10	150

Increase

P	Q.D.
10	100
10	50

decrease

QUIZ!

Question

#Q. Movement along the same demand curve represents:

(June 2023)

A Change in demand

B Change in Quantity demand

C Increase in demand

D Decrease in demand



Question

#Q. Match items of column I with items of column II and select the correct answer.

Column I	Column II
(A) decrease in demand	(i) downward movement along the demand curve
(B) extension in demand	(ii) rightward shift in demand curve
(C) increase in demand	(iii) leftward shift in demand curve
(D) contraction in demand	(iv) Upward movement along the demand curve

A. A-(iv), B-(ii), C-(i), D-(iii)

B. A- (iii), B-(i), C-(ii), D-(iv)

C. A-(i), B-(iii), C-(ii), D-(iv)

D. None of These



Topic : Price Elasticity of Demand

Topic : Elasticity of Demand

Elasticity of demand refers to the responsiveness of quantity demanded of a commodity to a change in any determinant of demand.

Topic : Price Elasticity of Demand

E_p or E_d

- Price elasticity of demand measure the responsiveness of quantity demanded of a commodity to a change in Price assuming all the other factors as constant.

$$E_P = \frac{\%\ \text{Change in Demand}}{\%\ \text{Change in Price}}$$

(1) Availability of Substitutes

Few

Water, Salt

↓

Less Elastic Demand

↓

Inelastic Demand

Many

Cold-Drinks

↓

More Elastic Demand

↓

Elastic Demand



(2) Nature of a need that a Commodity satisfies

Essential goods OR Necessities

Oxygen, Food, Water Salt

↓

Less elastic demand

Luxury Items → Car, AC

↓

More elastic demand

(3) Number of Uses to which a commodity can be put

Few

Butter, Petrol

↓

Less elastic demand

Many

Electricity, Milk

↓

Relatively More Elastic Demand

(4) Position of a commodity in Consumer's Budget

Small Part

Button, Matchbox, Needle

↓

Less Elastic Demand

Significant portion | High Part

Luxury Items

↓

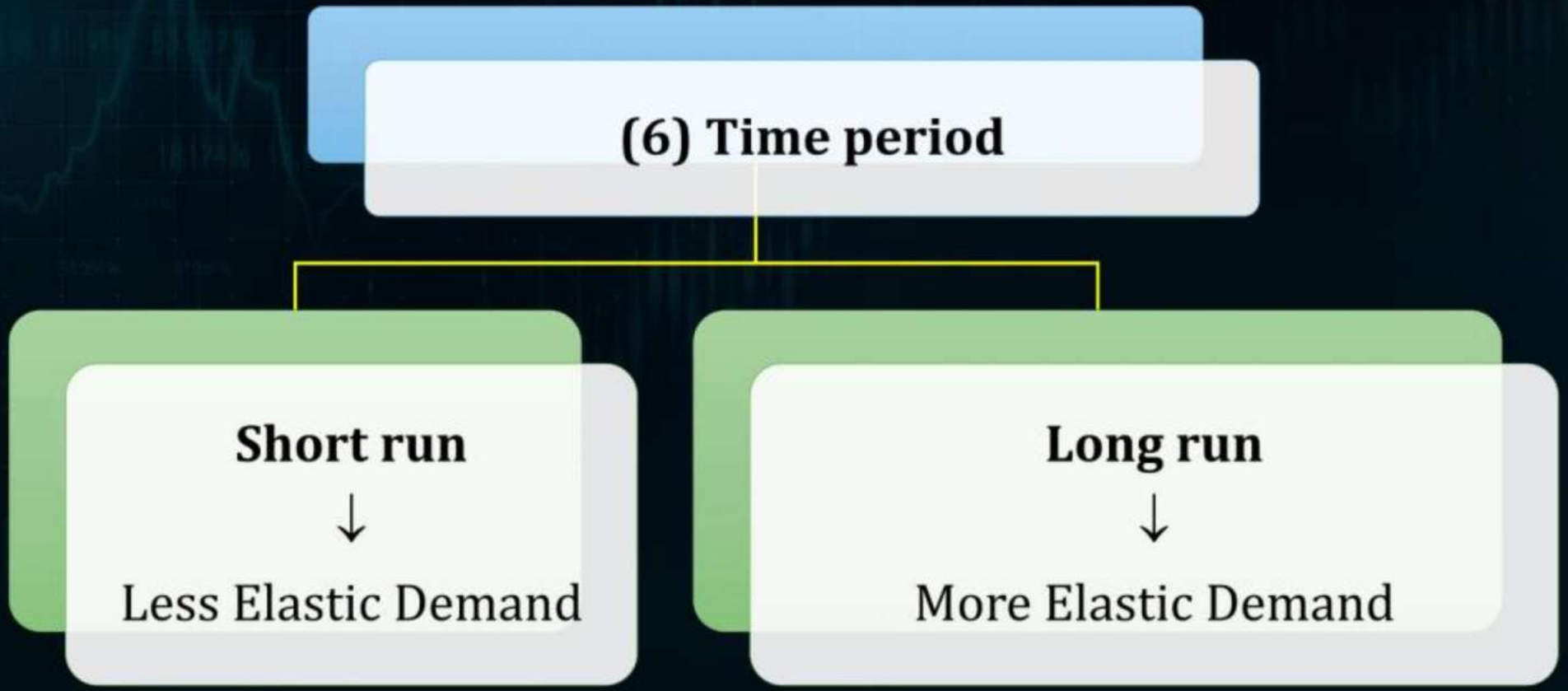
More Elastic Demand

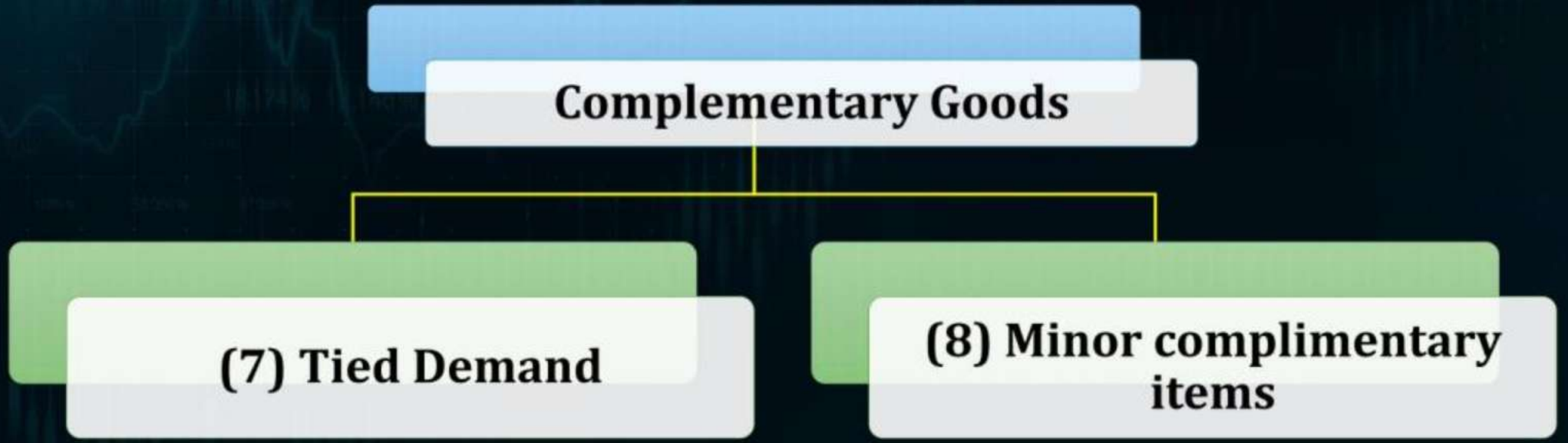
(5) Consumer Habit → **Inelastic Demand**

- Drunker → Alcohol
- Chain Smoker → Cigarette

नशा मुक्ति केन्द्र




(6) Time period
Short run
↓
Less Elastic Demand
Long run
↓
More Elastic Demand


Complementary Goods
(7) Tied Demand
(8) Minor complimentary items

Tied Demand → Case of Complimentary goods

→ Inelastic Demand

Printer → Ink [Cartridge]

Car → Fuel


(9) Price Range
→
Middle Price Range → Elastic
Too Expensive or High Price Range
↓
Inelastic
Low Price Range
↓
Inelastic



Topic : Short Memory Trick

P	U	N	C	H
Price Range	No. of Use	Nature of Commodity	Minor Complimentary	Habit

B	S	T	T
Consumer's Budget	Availability of Substitutes	Time Period	Tied Demand

Determinants of Price E_p

Topic: Degrees/Types of E_p

(1) $E_p = 1 \Rightarrow$ Unitary Elastic Demand

(2) $E_p > 1 \Rightarrow$ More than unitary Elastic Demand or Elastic Demand

(3) $E_p < 1 \Rightarrow$ Less than unitary Elastic Demand or Inelastic Demand

(4) $E_p = 0 \Rightarrow$ Perfectly Inelastic Demand

(5) $E_p = \infty \Rightarrow$ Perfectly elastic Demand



Topic : Methods of Measuring E_p

(1) Percentage / Proportionate Method
(2) Mid-Point / Arc Elasticity Method
(3) Point elasticity Method
(4) Total Outlay / Expenditure Method

Topic : Percentage Method

$$E_p = \frac{\text{Percentge change in quantity demanded}}{\text{Percentge change in } price} = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$$

$$= \frac{1}{\text{Slope}} \times \frac{P}{Q}$$

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

$E_p \uparrow$ Slope $\downarrow$

Topic : Mid-point Method OR Arc-Elasticity Method

$$E_p = -\frac{\Delta Q}{\Delta P} \times \frac{P_1 + P_2}{Q_1 + Q_2}$$

$$= \frac{Q_1 - Q_2}{P_1 - P_2} \times \frac{P_1 + P_2}{Q_1 + Q_2}$$

$$= \frac{Q_2 - Q_1}{P_2 - P_1} \times \frac{P_1 + P_2}{Q_1 + Q_2}$$

Topic : Methods of Measuring E_p

(1) Percentage / Proportionate Method
(2) Mid-Point / Arc Elasticity Method
(3) Point elasticity Method
(4) Total Outlay / Expenditure Method

Topic : Point Elasticity of Demand

The point elasticity of demand is the price elasticity of demand at a particular point on the demand curve.

The concept of point elasticity is used for measuring price elasticity where the change in price is infinitesimal. | Negligible

Topic : Price Elasticity of Demand

Point Elasticity method

Derivative Method

This is to be applied in solving questions when Demand equation is given

$$Ep = -\frac{dq}{dp} \times \frac{P}{Q}$$

Graphic / Geometric Method

This is used in Case of Diagram of straight line demand curve

Question

#Q. Given the demand function, $Q = 10 - 2P$. Calculate Ep when Price is ₹ 2.

$$Q = 10 - 2(2)$$
$$= 6$$

$$\varepsilon_p = -\frac{dq}{dp} \times \frac{P}{Q}$$

$$= -2 \times \frac{2}{6_3}$$

$$= -0.67$$

Topic : Geometric Method

➢ As per this Method, as we Move downward on the Straight line Demand-Curve , the Ep falls.

$$E_p = \frac{\text{lower Segment of Demand–Curve}}{\text{Upper Segment of Demand–Curve}}$$



Topic : Methods of Measuring E_p

(1) Percentage / Proportionate Method

(2) Mid-Point / Arc Elasticity Method

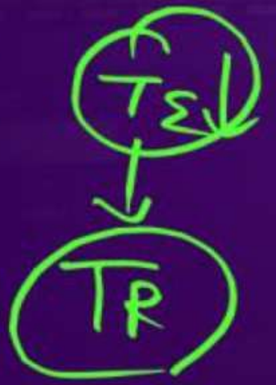
(3) Point elasticity Method

(4) Total Outlay / Expenditure Method (Page 2.32)

Topic : Total Outlay / Expenditure Method of E_p

① P↑ TE↓ / P↓ TE↑ ⇒ $E_p > 1$

$E_p > 1$ ⇒ P↑



② P↑ TE↑ / P↓ TE↓ ⇒ $E_p < 1$

③ TE → Constant ⇒ $E_p = 1$

Question

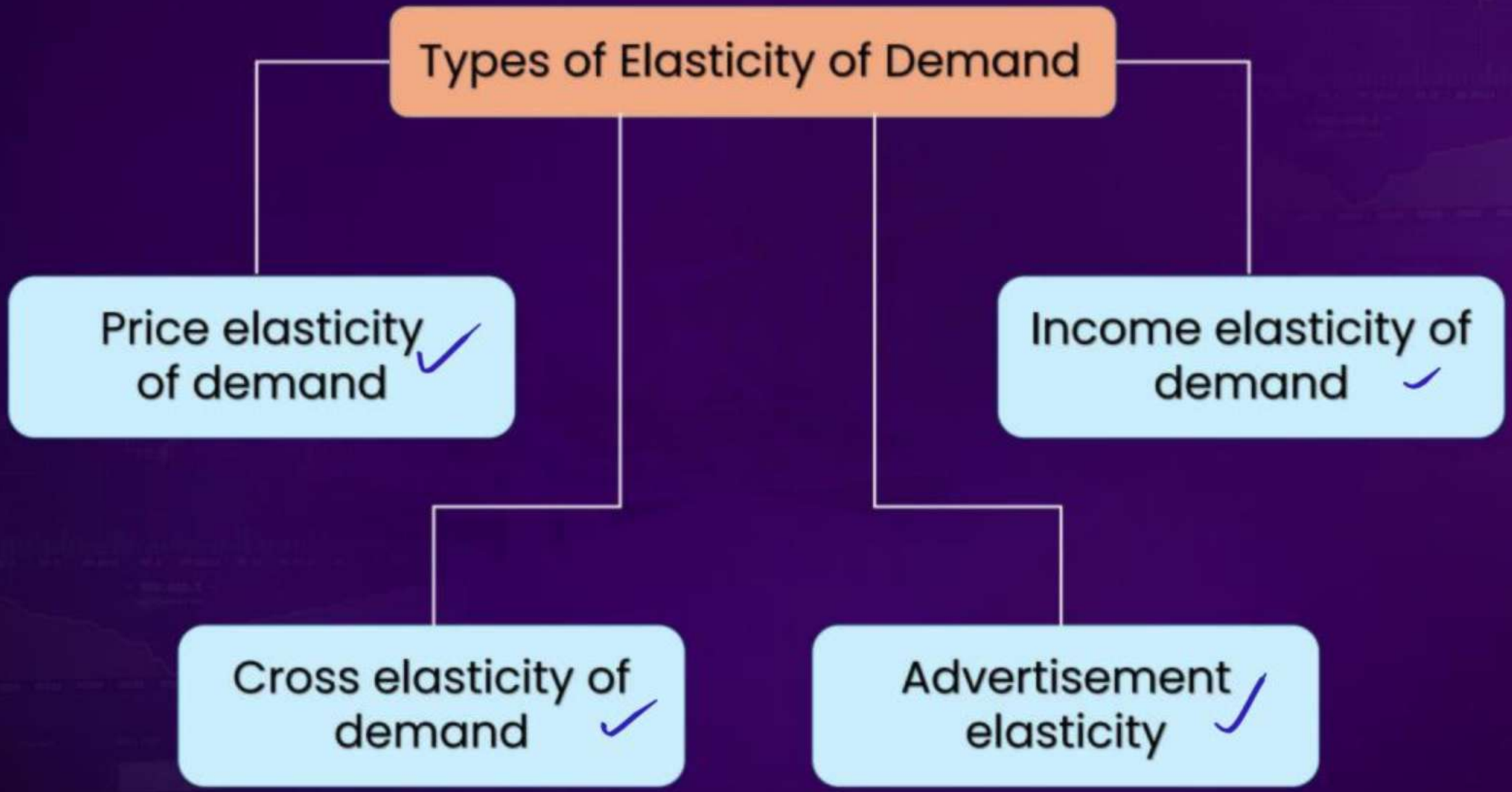
#Q. 'No matter what the price of coffee is, Arjun always spend a total of exactly 100 per week on coffee. The statement implies that:

A Arjun is very fond of coffee and therefore he has an inelastic demand for coffee

B Arjun has elastic demand for coffee

C Arjun's demand for coffee is relatively less elastic

D Arjun's demand for coffee is unit elastic ✓


Types of Elasticity of Demand
Price elasticity of demand
Income elasticity of demand
Cross elasticity of demand
Advertisement elasticity

Topic : Advertisement Elasticity of Demand

$$E_a = \frac{\%\ \Delta \text{ in } Q.D}{\%\ \Delta\ A.E}$$

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

Topic : Advertisement Elasticity of Demand

Advertisement elasticity of sales or promotional elasticity of demand is the responsiveness of a good's demand to changes in the firm's spending on advertising.

The advertising elasticity of demand measures the percentage change in demand that occurs given a one percent change in advertising expenditure.

Advertising elasticity measures the effectiveness of an advertisement campaign in bringing about new sales.

Advertising elasticity of demand is typically positive. Higher the value of advertising elasticity greater will be the responsiveness of demand to change in advertisement.

Types of Elasticity of Demand

- Price elasticity of demand (E_p)
- Income elasticity of demand (E_i)
- Cross elasticity of demand (E_c)
- Advertisement elasticity (E_a)

Methods of Calculating Income Elasticity of Demand (E_i)

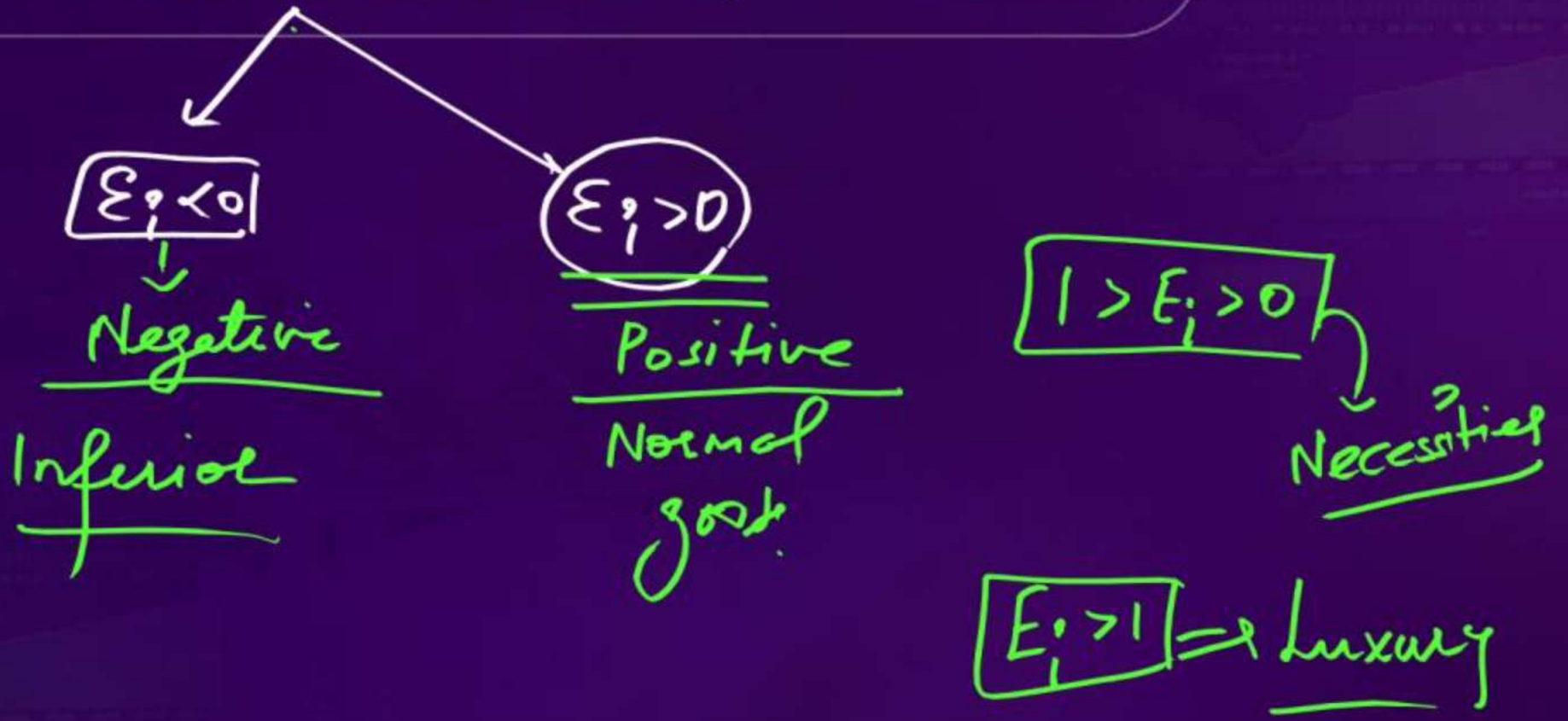
- Percentage method
- Mid-point method OR Arc elasticity method
- Proportionate method

$$\varepsilon_i = \frac{Q_2 - Q_1}{Y_2 - Y_1} \times \frac{Y_1 + Y_2}{Q_1 + Q_2}$$

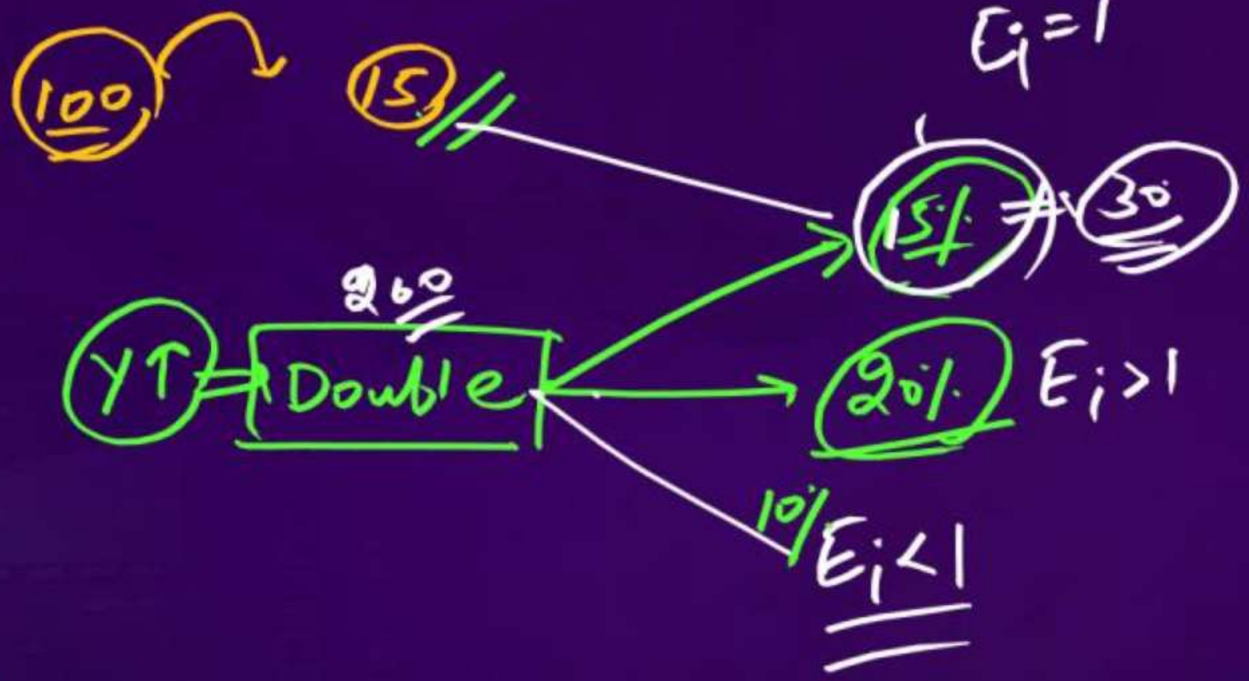
Topic : Income Elasticity of Demand

$$E_i = \frac{\text{Percentge change in demand}}{\text{Percentge change in income}} = \frac{\Delta Q}{\Delta Y} \times \frac{Y}{Q}$$

Topic: Value of Income Elasticity of Demand



Proportionate method of measuring income elasticity of demand



Proportionate method of measuring income elasticity of demand

There is a useful relationship between income elasticity for a good and the proportion of income spent on it.

This is described in the following three points:

1. If the proportion of income spent on a good remains the same as income increases, then income elasticity for that good is equal to one.

2. If the proportion of income spent on a good increase as income increases, then the income elasticity for that good is greater than one. The demand for such goods increase faster than the rate of increase in income.

3. If the proportion of income spent on a good decrease as income rises, then income elasticity for the good is positive but less than one. The demand for income-inelastic goods rises, but substantially slowly compared to the rate of increase in income.
   Necessities such as food and medicines tend to be income- inelastic

Question #Q. For all _____ goods, the income elasticity is positive.

A Normal

B Inferior $E_i < 0$

C Luxury $E_i > 1$

D All of the above

Question

#Q. Suppose potatoes have (-) 0.4 as income elasticity. We can say from the data given that:

A Potatoes are inferior goods

B Potatoes are superior goods

C Potatoes are necessities

D There is a need to increase the income of consumers so that they can purchase potatoes

Types of Elasticity of Demand

- Price elasticity of demand
- Income elasticity of demand
- Cross elasticity of demand
- Advertisement elasticity

E_c

$$= \frac{\% \Delta Q D_x}{\% \Delta P_y}$$

$$= \frac{\Delta Q_x}{\Delta P_y} \times \frac{P_y}{Q_x}$$

Topic: Cross-Price Elasticity of Demand

In the case of the cross-price elasticity of demand, the sign (plus or minus) is very important.

It tells us whether the two goods are complements or substitutes.



Question

#Q. When two goods are complementary, the cross elasticity between them is:

(May2025)

A Infinite

B Positive and large

C Zero

D Negative

D

Unit 2 : Theory of Consumer Behavior



Topic : WANT

- In economics, the term 'want' refers to a wish, desire or motive to use or own goods & services that give satisfaction.





Topic : Nature of Human Wants

- Wants are unlimited in number. All wants cannot be satisfied.
- Wants differ in intensity/feel, Some wants are urgent, others are less intensely felt / less urgent
- Each want is satiable (able to be met/capable to being satisfied)
- Wants are competitive. Multiple Wants compete with each other for satisfaction because resources are scarce in relation to wants.
- Wants are complementary. Such wants can be satisfied only by using more than one good or group of goods.
- A particular want may be satisfied in alternative/many ways.

Topic : Nature of Human Wants

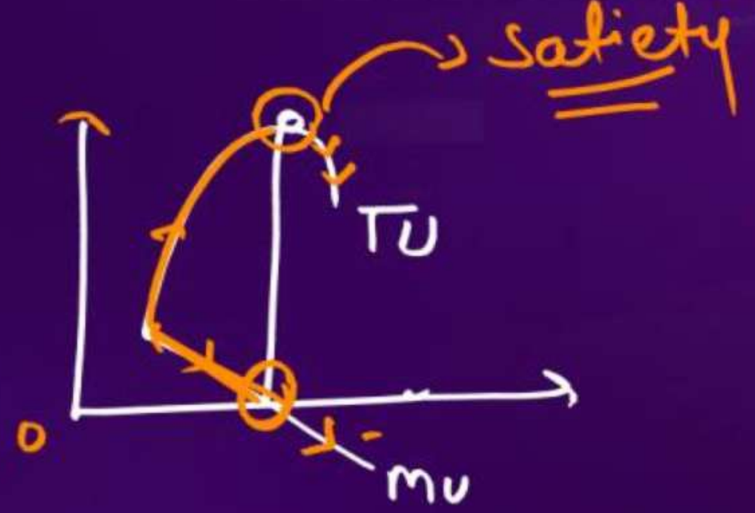
- Wants are subjective (differ from person to person) and relative (vary with time and place).
- Some wants recur/repeat (will have to buy again and again like food) whereas others do not occur again and again like durable goods.
- Wants may become habits and customs
- Wants are affected by income, taste, fashion, advertisements and social norms and customs.
- Wants arise from multiple causes such as physical and psychological instincts , social obligations and individual's economic and social status.

Topic : Meaning of Utility

- It refers to the want satisfying power of a commodity.
- It is measured in terms of utile/utils.

Qty.	MU	T.U
1	10	10
2	8	18
3	6	24
4	0	24
5	-2	22

QT → MU ↓



Topic : Utility v/s Usefulness

- Utility is not the same thing as usefulness
- Utility is a psychological concept
- From the economic standpoint, even harmful/unuseful things like liquor, may be said to have utility because people want them. Thus, in Economics, the concept of utility is different from usefulness.

Topic : Law of diminishing MU

According to Marshall , this law says that as a consumer takes more units of a good, the extra satisfaction that he derives from an extra unit of a good goes on falling. → MU

It is to be noted that it is the marginal utility and not the total utility which declines with the increase in the consumption of a good.

Assumptions of The law of diminishing marginal utility –

(i) The different units consumed should be identical in all respects. The habit, taste, treatment and income of the consumer also remain unchanged.

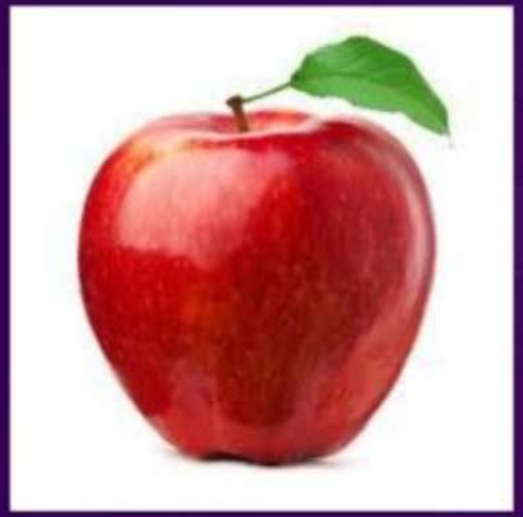
(ii) The different units consumed should consist of standard units. If a thirsty man is given water by successive spoonful, the utility of second spoonful may conceivably be greater than the utility of the first.

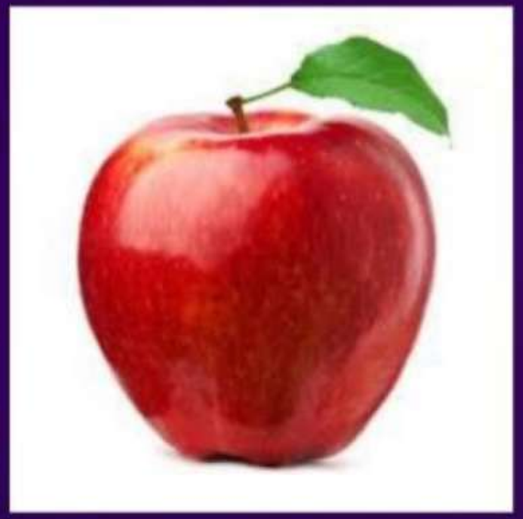
(iii) There should be no time gap or interval between the consumption of one unit and another unit i.e. there should be continuous consumption.

(iv) The law may not apply to articles like gold, cash where a greater quantity may increase the lust for it.

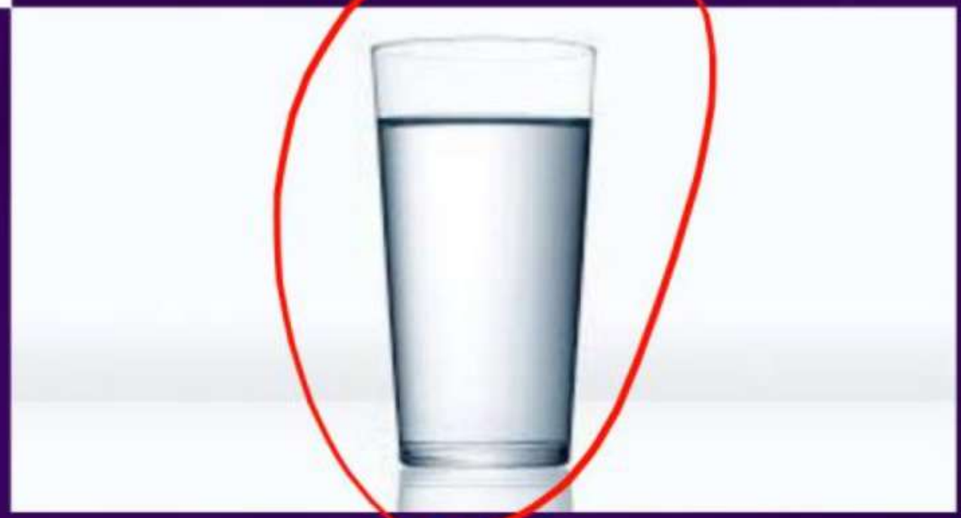
(v) The shape of the utility curve may be affected by the presence or absence of articles which are substitutes or complements.










2000
600
1400
Consumer Surplus

Marshall defined the concept of consumer surplus as the "excess of the price which a consumer would be willing to pay rather than go without a thing over that which he actually does pay", is called consumers surplus."

It is a measure of welfare that people gain from consuming goods and services.

Consumer surplus = what a consumer is ready to pay – what he actually pays

= MU — P

Question #Q. Ram wanted to purchase an Apple tab at ₹ 12,000/-. Actual price in the market (MRP) is ₹ 11,000/- and discount was given at 20%. Also there is an additional cash discount of ₹ 300. Find consumers surplus. [June 2024]

A 3200

B 3500 ✓

C 1000

D 3300

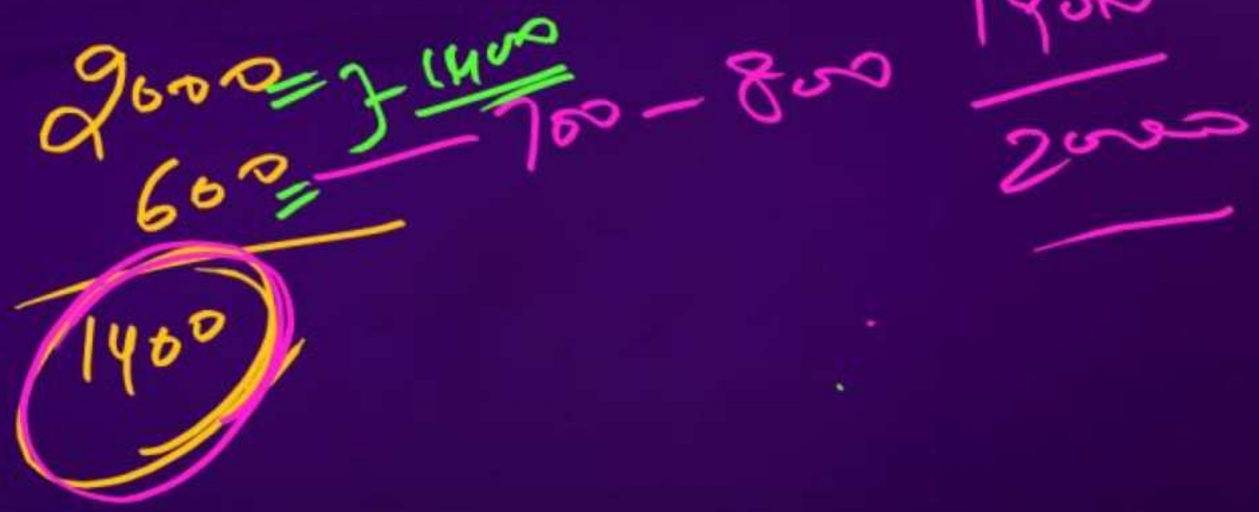
12000 → willingness

11000
−2200
8800
−300
8500 ✓



Topic : Applications of Consumer Surplus

(1) Consumer surplus is very important to a business firm to reflect on the amount of consumer surplus enjoyed by different segments of their customers because consumers who perceive large surplus are more likely to repeat their purchases.



Topic : Applications of Consumer Surplus

(2) Understanding the nature and extent of surplus can help business managers make better decisions about setting prices. If a business can identify groups of consumers with different elasticity of demand within their market and the market segments which are willing and able to pay higher prices for the same products, then firms can profitably use price discrimination.

(3) Large scale investment decisions involve cost benefit analysis which takes into account the extent of consumer surplus which the projects may fetch.

Topic : Applications of Consumer Surplus

(4) Knowledge of consumer surplus is also important when a firm considers raising its product prices, Customers who enjoyed only a small amount of surplus may no longer be willing to buy products at higher prices. Firms making such decisions should expect to make fewer sales if they increase prices.

(5) Consumer surplus usually acts as a guide to finance ministers when they decide on the products on which taxes have to be imposed and the extent to which a commodity tax has to be raised. It is always desirable to impose taxes or increase the rates of taxes on commodities yielding high consumer surplus because the loss of welfare to citizens will be minimal.

Topic : Limitations of Consumer Surplus

(1) Consumer surplus cannot be measured precisely because it is difficult to measure the marginal utilities of different units of a commodity consumed by a person.

(2) In the case of necessaries, the marginal utilities of the earlier units are infinitely large. In such case the consumer surplus is always infinite. ✓

(3) The consumer surplus derived from a commodity is affected by the availability of substitutes.

(4) There is no simple rule for deriving the utility scale of articles like prestige goods (e.g., diamonds).

Topic : Limitations of Consumer Surplus

(5) Consumer surplus cannot be measured in terms of money because the marginal utility of money changes as purchases are made and the consumer's stock of money diminishes. **(Marshall assumed that the marginal utility of money remains constant. But this assumption is unrealistic).**

(6) The concept can be accepted only if it is assumed that utility can be measured in terms of money or otherwise. Many modern economists believe that this cannot be done.

Consumer Equilibrium

Single good

$$MU = P$$

Two goods

$$\frac{MU_X}{P_X} = \frac{MU_Y}{P_Y} = MU_M$$

Utility Approach

Cardinal Utility Approach

OR

MU Analysis

(given by Alfred Marshall)

Utility can be expressed in numbers / Numerically

Ordinal Utility Approach

OR

IC Analysis

OR

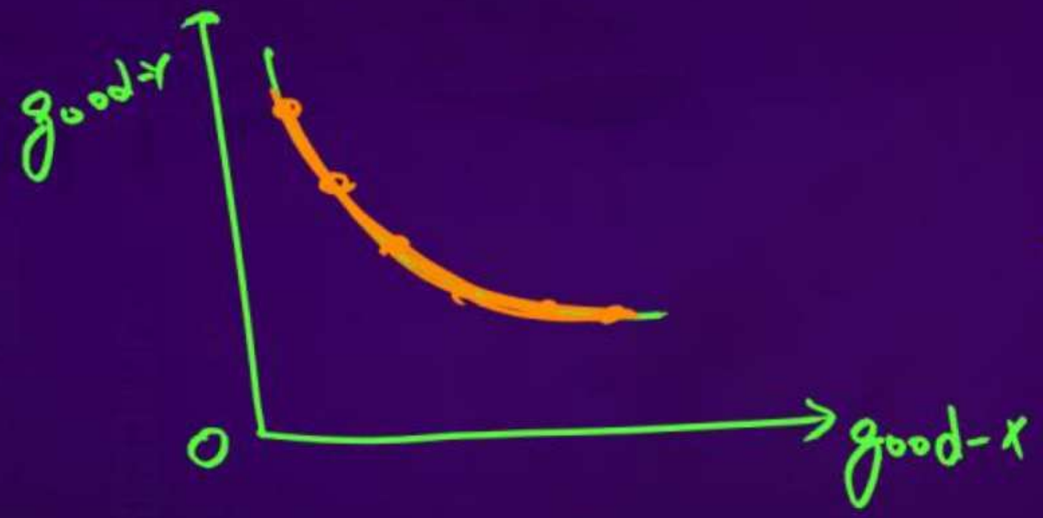
Consumer preference approach

(given by Hicks and Allen)

Utility cannot expressed in numbers utility can be Ranked

Topic : Indifference Curve

- An indifference curve is a curve which shows all those combinations of **two goods** which give same satisfaction to the consumer. A consumer remains indifferent among the combinations.
- An Indifference curve is also called **iso-utility curve** or **equal utility curve.**



Topic : Properties of IC

1. Indifference curves **slope downward to the right**
2. Indifference curves are **always convex to the origin (due to DMRS)**
3. Indifference curves **can never intersect each other**
4. A **higher indifference curve** represents a **higher level of satisfaction**
5. Indifference curve **will not touch either axes**



Topic : Properties of IC

1. Indifference curves **slope downward to the right**

Topic : Properties of IC

2. Indifference curves are **always convex to the origin** (due to DMRS)

Topic : Shape of IC Depends on MRS

(1) If MRS is falling i.e., DMRS — convex to origin



(2) If MRS is rising — Concave



(3) If MRS is constant — Straight Line

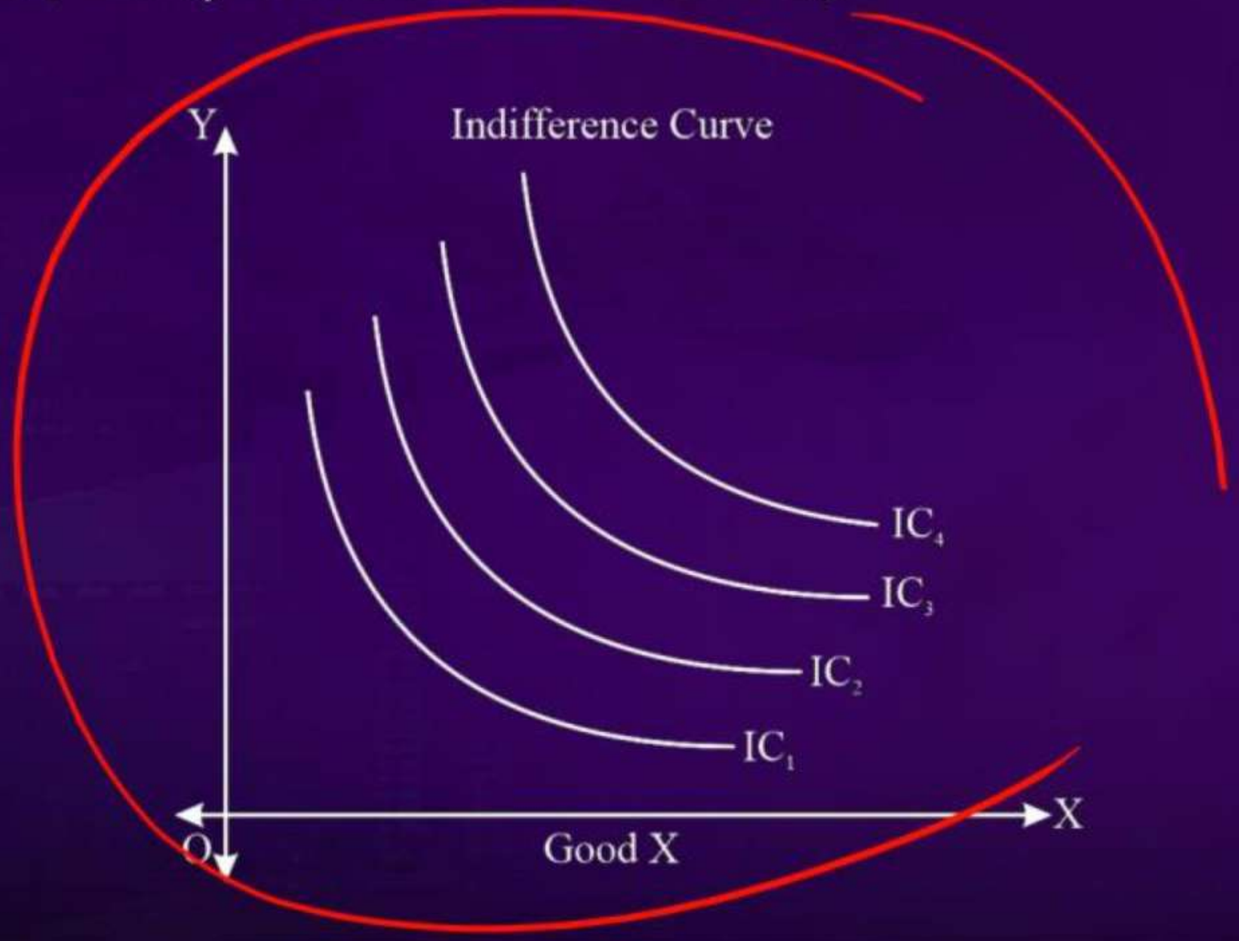


Topic : Properties of IC

3. A **higher indifference curve** represents **a higher level of satisfaction**

Topic : Indifference Map

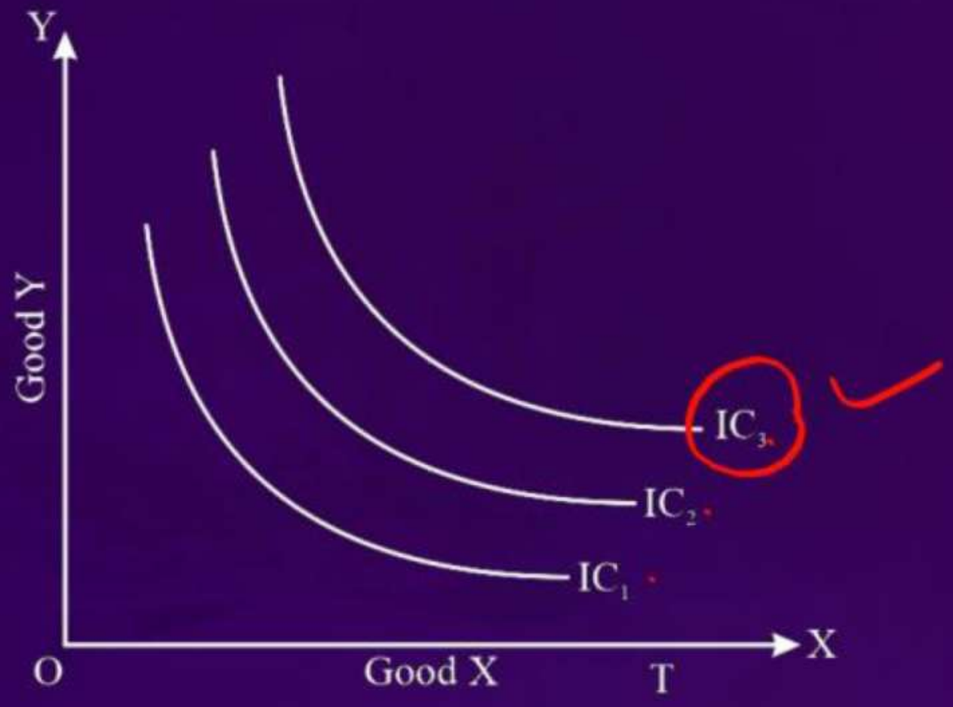
- Indifference map collection/set of many indifference curves in a single diagram. (family of indifference curves)



Question

#Q. With reference to the following indifference map, which of the following curve represents highest satisfaction level?

[JAN 2025]



A IC3

B IC2

C IC1

D All the curves represents same satisfaction level

Topic : Properties of IC

4. Indifference curves **can never intersect each other**

Topic : Properties of IC

5. Indifference curve **never touch either axes**

Indifference Curve in case of

Perfect Substitute Goods

- Downward Sloping
- Straight Line
- MRS is constant



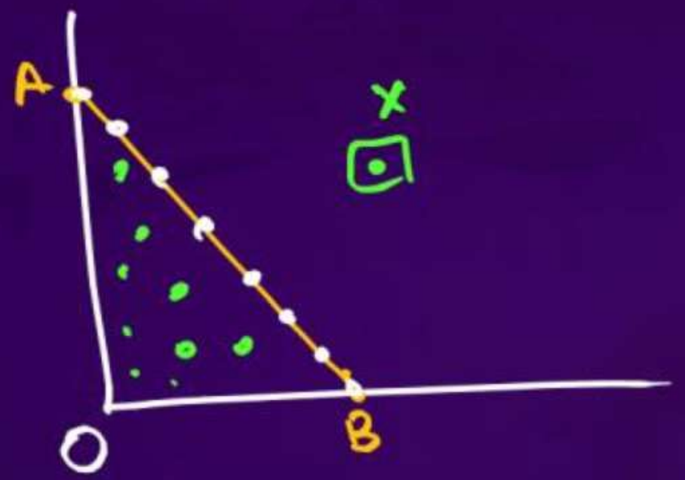
Perfect Complementary Goods

- L-shaped
- Convex to origin
- Right angle bent



- A budget line or price line shows all the combinations of two goods which the consumer can buy by spending his given money income on the two goods at their given prices.

- All those combinations/ bundles which are within the reach of the consumer (assuming that he spends all his money income) will lie on the budget line.

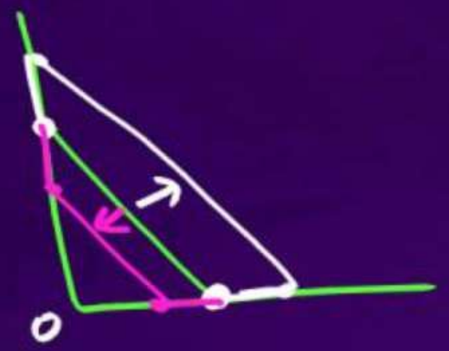


$$\text{Slope} = -\frac{P_x}{P_y}$$

$$\text{Equation} = \boxed{P_x \cdot X + P_y \cdot Y = M}$$

The budget line will shift when there is:

- A change in the prices of one or both products
- A change in the level of nominal income of the consumer
- A change in both income and relative prices



$\frac{P_x}{P_y}$

Question #Q. A relative price is

A Price expressed in terms of money

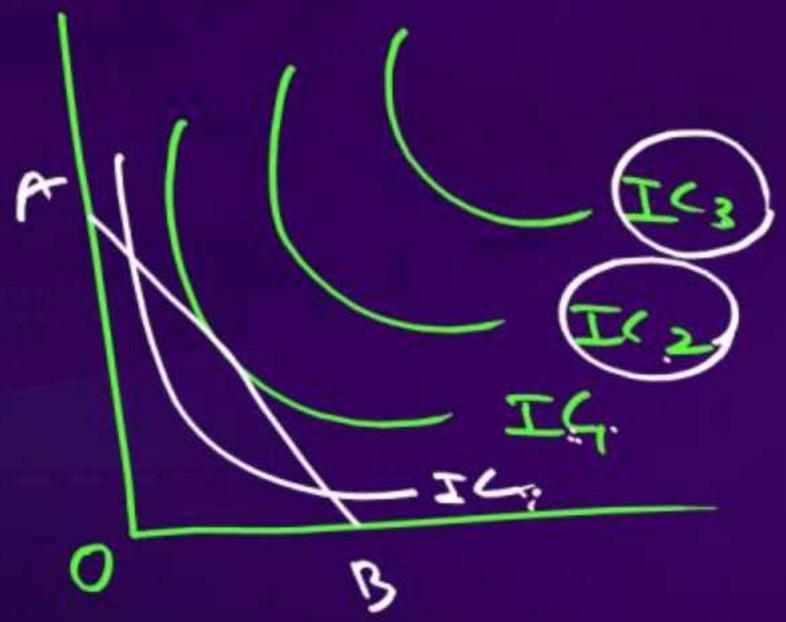
B What you get paid for babysitting your cousin

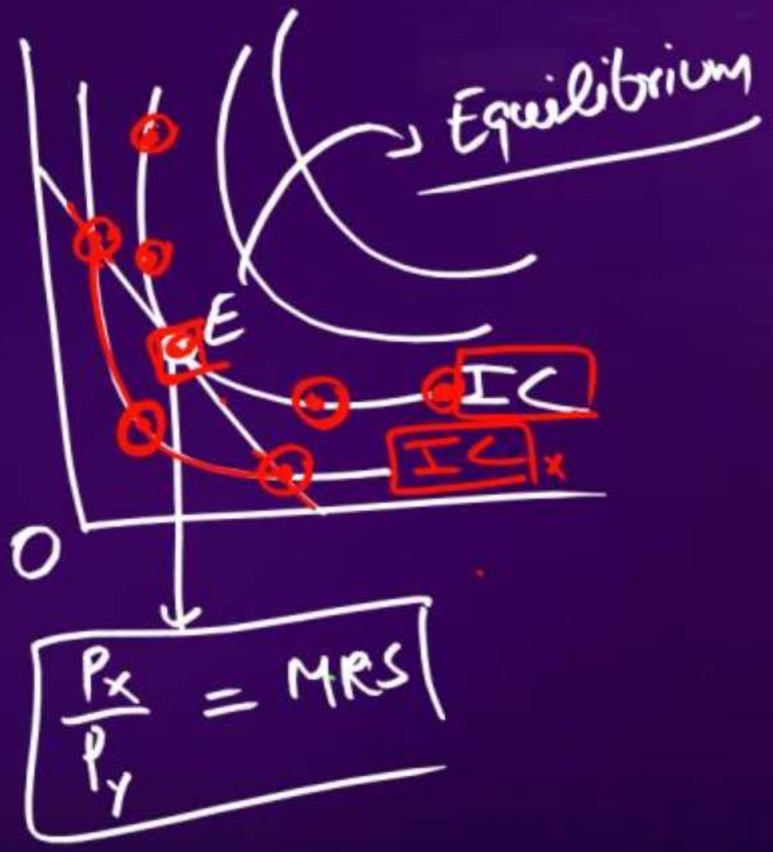
C The ratio of one money price to another

D Equal to a money price

A consumer's optimal choice or consumer's equilibrium should satisfy two criteria:

- It will be a point on his budget line; and
- It will lie on the highest indifference curve possible





Unit 3 : Supply
Price Elasticity of Supply (E_s)

Topic : Supply

- Supply → Seller point of view
- Supply is not sale.
- 'Supply' refers to amount/quantity of a commodity that producers are
  - **willing** and
  - **able to offer** for sale
  - at various **prices**
  - during a given period of **time.**

P	D.S
10	100
20	200
30	300

Topic : Quantity Supplied

'Quantity Supplied' refers to amount/quantity of a commodity that producers are

- **willing** and
- **able to offer** for sale
- at a particular **prices**
- during a given period of **time.**

It is a flow concept

Topic : Determinants of Supply

ONE NSG PPP

(i) Price of the good:
(ii) Prices of related goods:
(iii) Prices of factors of production:
(iv) State of technology:
(v) Government Policy:
(vi) Nature of competition and size of industry :
(vii) Expectations:
(viii) Number of sellers:

Other Factors: Industrial and foreign policies, goals of the firm, infrastructural facilities, natural factors such as weather, floods, earthquake and man-made factors such as war, Labour strikes, communal riots etc.

Topic : Determinants of Supply

1. **Price of the good**
   Price Increases → **profit margin of seller increases** → **Supply Increases** & vice versa
2. **Price of related goods**
   If a farmer produces and sells wheat and mushroom. If **price of wheat rises, farmer may shift his land to wheat production** away from mushroom (decreasing supply of mushroom).
3. **Prices of factors of production**
   Rise in price of factors of production → increase in cost of production → profit margin decreases → **supply decreases**
4. **State of technology**
   Use of **advanced technology like automation** → low cost → **supply increases**
   invention and innovations tends to make it possible to produce more with the same resources.

Topic : Determinants of Supply

5. **Government Policy**
   - **Increase in Taxes** → production cost rises → supply **decrease**
   - **Increase in Subsidy** → production cost falls → supply **increase**
   - **Restrictions** → **import quota** or **rationing** of input → production **fall** → supply **decrease**

6. **Nature of competition and size of industry**
   Competition increase → **More supply** and vice versa.
   monopolized condition – less supply

7. **Expectations**
   An **increase in anticipated/expected future price** → **reduces its supply today/current**

8. **Number of sellers**
   No. of sellers rise → Market supply increases

Topic : Determinants of Supply

9. Other Factors

- Government's industrial and foreign **policies**
- **Goals** of the firm,
- Infrastructural **facilities**
- **Natural factors** → weather, floods, earthquake
- **Man-made factors** → war, labour strikes, communal riots etc.

Topic : Determinants of Supply

ONE NSG PPP

(i) Price of the good:
(ii) Prices of related goods:
(iii) Prices of factors of production:
(iv) State of technology:
(v) Government Policy:
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(vii) Expectations:
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Other Factors: Industrial and foreign policies, goals of the firm, infrastructural facilities, natural factors such as weather, floods, earthquake and man-made factors such as war, Labour strikes, communal riots etc.



Determinants of Supply

- **O** — Other Factors
- **N** — Nature of Competition
- **P** — Price of Own Good
- **N** — No. of Sellers
- **S** — State of Technology
- **P** — Price of Related Good
- **E** — Expectation
- **G** — Govt. Policy
- **P** — Price of Factor of Production

Determinants of Supply

Topic : Change in Quantity Supplied

(i) Price of the good:

Jab only Price of own good ki vajah se Supply me Change Aaye to us change ko hum change in Quantity Supplied Kahenge.

(ii) Prices of related goods:
(iii) Prices of factors of production:
(iv) State of technology:
(v) Government Policy:
(vi) Nature of competition and size of industry :
(vii) Expectations:
(viii) Number of sellers:

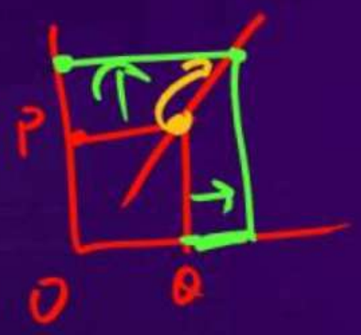
Other Factors: Industrial and foreign policies, goals of the firm, infrastructural facilities, natural factors such as weather, floods, earthquake and man-made factors such as war, labour strikes, communal riots etc.

Change in Quantity Supplied OR Movement along Supply Curve

Increase in Quantity Supplied

Expansion of Supply
OR
Upward Movement

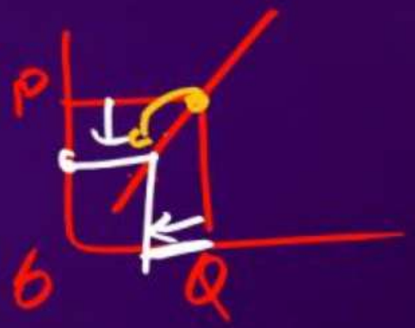
P	Q.S.
10	100
20	200



Decrease in Quantity Supplied

Contraction of Supply
OR
Downward Movement

P	Q.S.
10	100
5	50



Topic : Change in Supply

(i) Price of the good:

Agar Price of own good ko chhodkar kisi Aur vajah [Factors other than Price of own good] se supply me change Aaye to uss change ko hum 'change in supply' Kahenge.

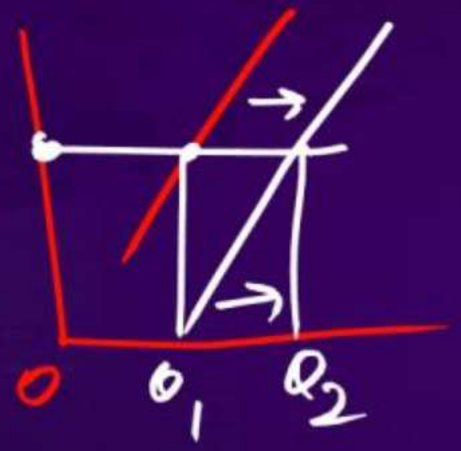
(ii) Prices of related goods:
(iii) Prices of factors of production:
(iv) State of technology:
(v) Government Policy:
(vi) Nature of competition and size of industry :
(vii) Expectations:
(viii) Number of sellers:

Other Factors: Industrial and foreign policies, goals of the firm, infrastructural facilities, etc.

Change in Supply OR Shift in Supply-Curve

Increase in Supply
OR
Rightward Shift

P	Q·S
10	100
10	200



Decrease in Supply
OR
Leftward Shift

P	Q·S
10	100
10	50



Topic : Law of Supply

P ↑ S ↑

- Other things remaining constant, **as price rises,** the quantity of a good produced and offered for sale will **increase** and vice versa.
- The behaviour of supply is affected by the time taken into consideration-
  - In **short run → not easy to increase supply.**
  - In **long run →** can be **easily adjusted** in response to changes in price.

$$\text{Slope of SS-curve} = \frac{\Delta P}{\Delta Q}$$

Topic : Law of Supply

The law of supply is known to be correct in a large number of cases.

There is an exception however.

If we take the supply of labour at very high wages, we may find that the supply of labour has decreased instead of increasing. Thus, the behaviour of supply depends upon the phenomenon considered and the degree of possible adjustment in supply.

Price elasticity of supply

It refers to the **responsiveness of quantity supplied** of a good **to** a **change in its price.**

Methods of measuring Elasticity of supply

- Percentage Method
- Point Method
- Arc Method or Mid-point method

Equation

$$E_s = \frac{\text{Percentge change in } qty.supplied}{\text{Percentge change in } price}$$

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

$$= \frac{1}{\text{Slope}} \times \frac{P}{Q}$$

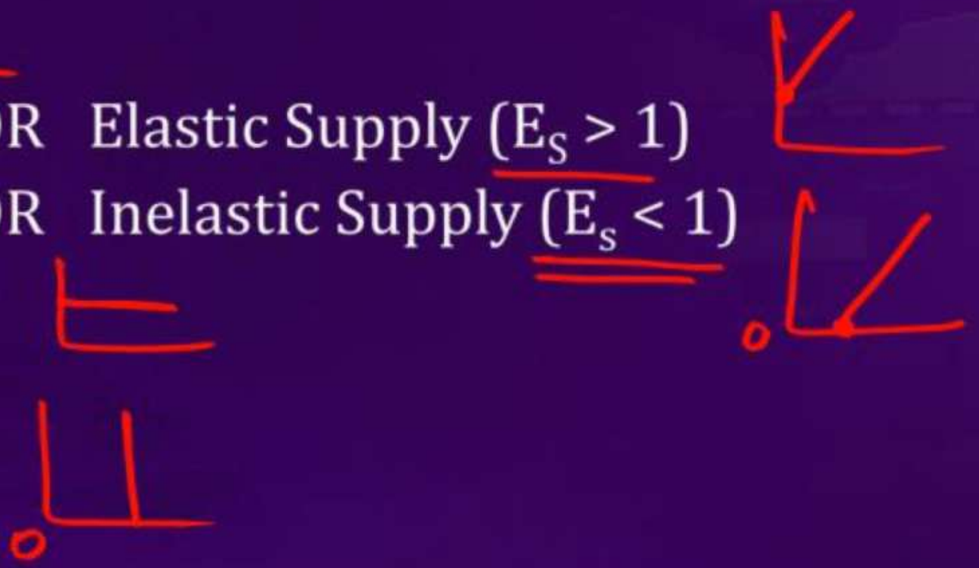
$$\frac{dQ}{dP} \times \frac{P}{Q}$$

$$\frac{Q2 - Q1}{Q2 + Q1} \times \frac{P2 + P1}{P2 - P1}$$

$$\frac{\Delta Q}{\Delta P} \times \frac{P_1 + P_2}{Q_1 + Q_2}$$

Topic : Types of Supply elasticity

1. Unit elastic Supply [$E_s = 1$]
2. More than unit elastic supply OR Elastic Supply ($E_S > 1$)
3. Less than unit elastic Supply OR Inelastic Supply ($E_s < 1$)
4. Perfectly elastic Supply [$E_S = \infty$]
5. Perfectly inelastic Supply [$E_S = 0$]




Binding





Topic : Determinants of Elasticity of Supply

1	If Increase in Production → substantial cost increase → Profit decrease	Inelastic Supply
	If Increase in Production → negligible rise in cost or constant cost	Elastic Supply
	Complex production process → require long process time to produce (Eg- aircraft, cruise ship takes more time as compared to motor bikes)	Inelastic Supply
2	If after increase in price → short time period	Inelastic Supply
	If after increase in price → long time period → firms can build new plants or new firms may be able to enter in the market	Elastic Supply
3	More no. of producers → More competition when Fewer barriers of entry → More competition	Elastic Supply
4	Not working on full capacity → spare capacity	

Topic : Determinants of Elasticity of Supply

5	Key raw material → easily and cheaply available	**Elastic Supply**
	Procuring resources is difficult or costly	**Inelastic Supply**
6	Raw material and finished goods → easily and cheaply stored → have adequate stock	**Elastic Supply**
7	Sellers expect → rise in future price	**Inelastic Supply**
8	Inputs → Short in supply → require longer delivery period → highly specialized nature	**Inelastic Supply**
9	Labour → highly skilled → scarce → require long longer training period	**Inelastic Supply**
10	Capital and labour → occupationally mobile	**Elastic Supply**
	Products continuously produced	
	Products infrequently produced	**Inelastic Supply**

Question

#Q. Highly Perishable. commodities during very short period will have _____.

A Perfectly elastic curve

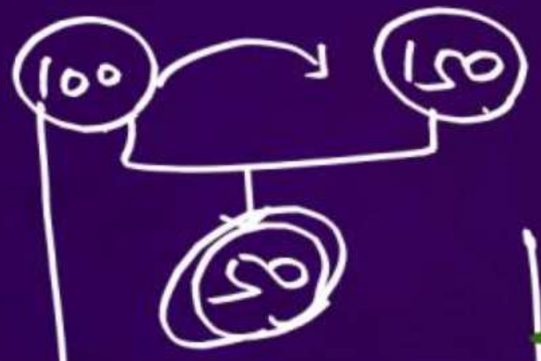
B Perfectly inelastic curve ✓

C Elastic

D Inelastic

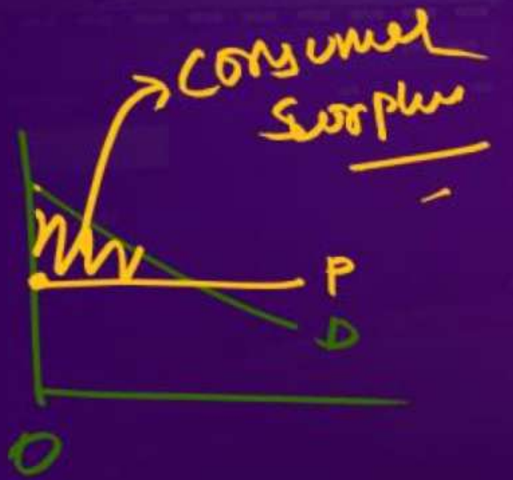


Producer Surplus



Cost

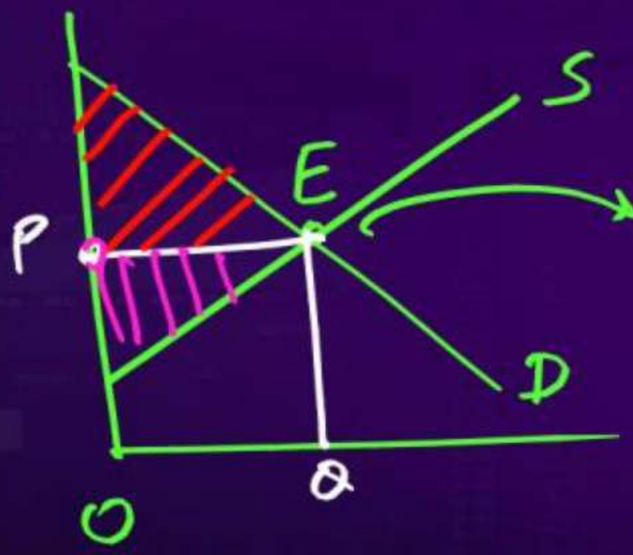




Price (₹)	Quantity Demanded	Quantity Supplied	Impact on Price
5	100	500	Downward
4	200	400	Downward
3	300	300	Equilibrium
2	400	200	Upward
1	500	100	Upward

Excess supply
Surplus

Excess DD
Shortage



Market Equilibrium
OR
Social Efficiency

Total Surplus = C.S. + P.S

Chapter - 3

Theory of Production and Cost

Chapter-3

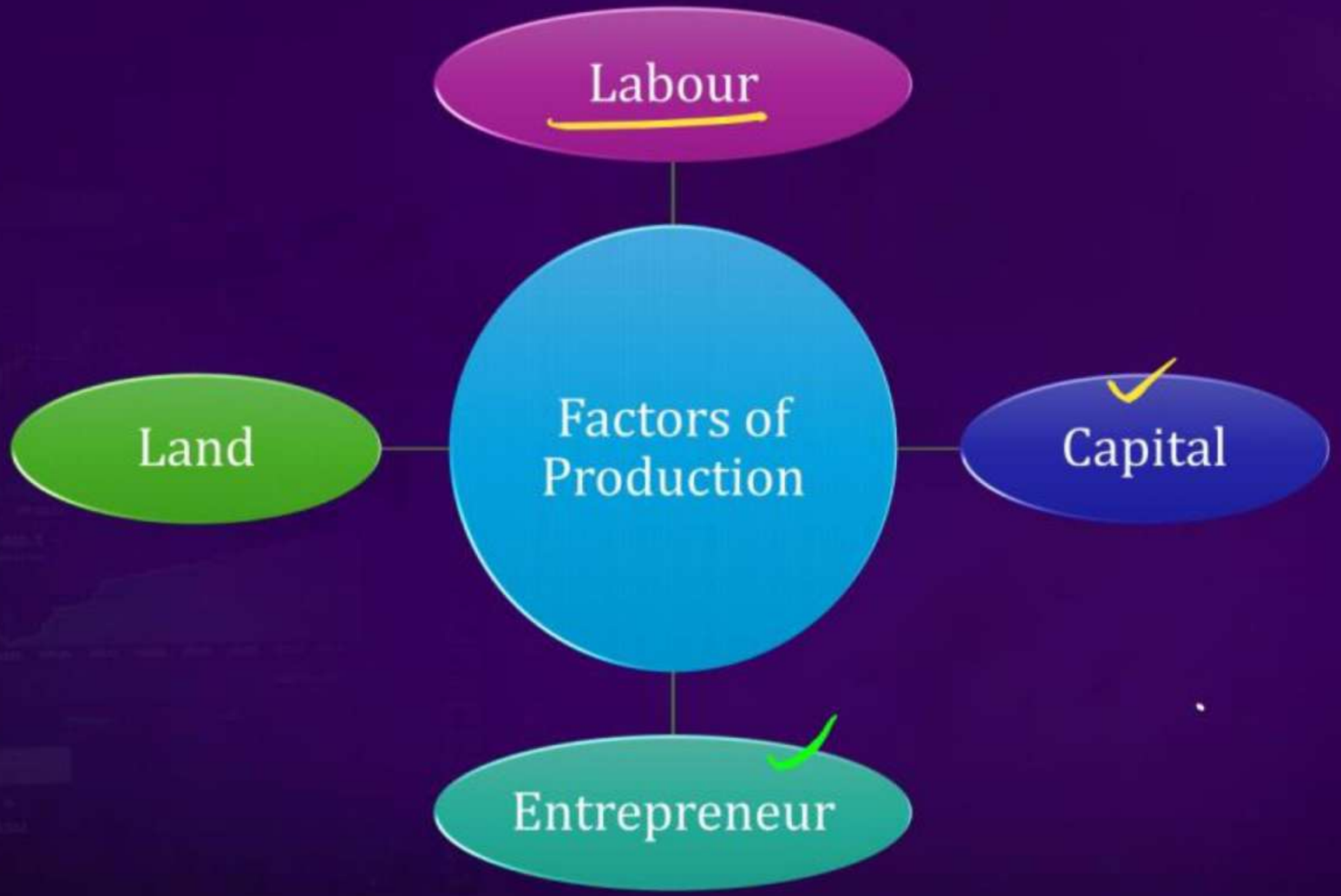
Unit – 1

Theory of Production ✓

Unit – 2

Theory of Cost ✓

Factors of Production



Land

(i) Land is a free gift of nature:

(ii) Land is permanent and has indestructible powers:

(iii) Land is a passive factor: **Give effort**

(iv) Land is immobile: **Not Shiftable**

(v) Land has multiple uses:

(vi) Land is heterogeneous: **(differ in fertility and situation)**

(vii) Supply of land is fixed

Supply of Land is Perfectly Inelastic from overall Economy's Point of View.

Land is relatively elastic from the point of view of a firm / individual

Characteristics of labour

(1) Human Effort:
(2) Labour is perishable:
(3) Labour is an active factor:
(4) Labour is inseparable from the labourer:
(5) Labour power differs from labourer to labourer:
(6) All labour may not be productive:
(7) Labour has poor bargaining power:
(8) Labour is mobile:
(9) Choice between hours of labour and hours of leisure:
(10) There is no rapid adjustment of supply of labour to the demand for it

Capital is part of wealth which is used in production.

Capital is produced mean of production by man.



Types of Capital

(1) Fixed capital
(2) Circulating capital
(3) Real capital
(4) Human capital
(5) Tangible capital vs intangible capital
(6) Individual capital
(7) Social Capital

(a) Fixed capital is that which exist in durable shape and renders a series of services. For example - tools, machines, etc.

(b) Circulating capital is a single use capital and is not available for further use. For example - seeds, fuel, raw materials, etc.

(c) Real (tangible) capital refers to physical goods such as building, plant, machines, etc.

(d) Human capital refers to human skill and ability.

(e) Tangible capital can be perceived by senses whereas intangible capital is in the form of certain rights and benefits which cannot be perceived by senses. For example, copyrights, goodwill, patent rights, etc.

(f) Individual capital is personal property owned by individuals or group of individuals.

(g) Social Capital is what belongs to the society as a whole in the form of roads, bridges, etc.

Stages of Capital Formation

Investment

(1) Savings:

(2) Mobilisation of savings:

(3) Investment:

अन्तिम

Question #Q. Circulating capital means _____ [June 2024]

A Capital is durable source which gives returns for a specific period

B Interest generated from capital and reinvested to earn more interest

C Capital performs its production function in single use and not used further

D Used for series of services over a period of time



Entrepreneur

He is also known as oraganiser / manager / risk-taker.



Functions of Entrepreneur

(1) Initiating business enterprise and resource co-ordination

(2) Risk bearing or uncertainty bearing

(3) Innovations – **Most Important Function**

Schumpeter

Enterprise's Objectives

(1) Organic objectives: **Survival, growth, Expansion, Fitness of Employees**
(2) Economic objectives: **Profit**
(3) Social objectives: **Society**
(4) Human objectives: **Employees**
(5) National objectives: **Towards Nation**

Question

#Q. According to _____ innovations introduced by an entrepreneur give rise to profits.

A Prof. F.H. Knight –

B Prof. Joseph A. Schumpeter

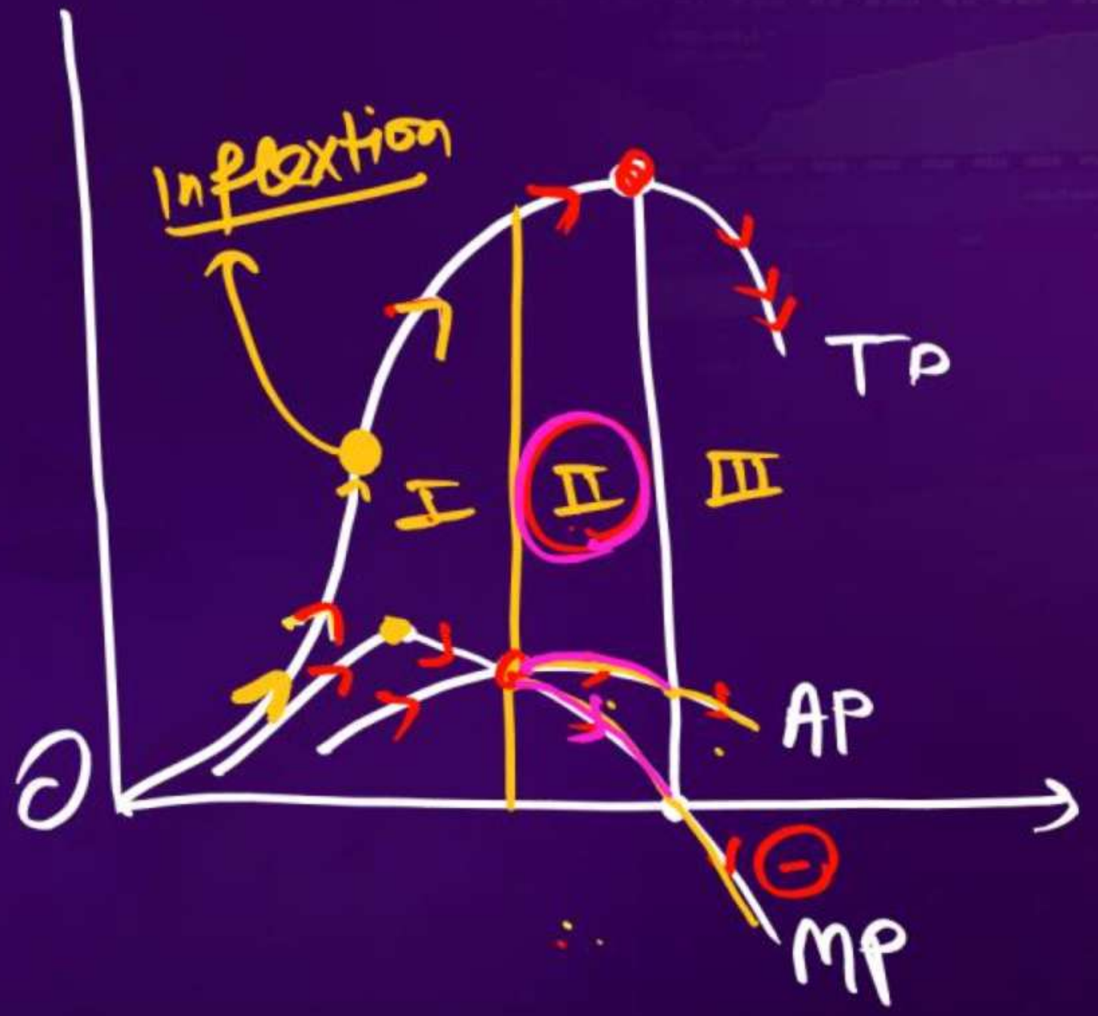
C Prof. Paul Samuelson

D Dr. Alfred Marshall



Three Stages of Production under Short run production Function and Law of variable proportion

STAGE	TP	MP	AP
Stage I	Increases at an increasing rate and then increases at decreasing rate	Increases and reaches at maximum point.	Increases and reaches its maximum point.
Stage II	Increases at diminishing rate and reaches its maximum point	Decreases and becomes zero	After reaching its maximum point beings to decreases
Stage III	Begins to fall.	Becomes Negative	Continues to diminish



Stage 2 : Stage of Operation

Stage 1 and Stage 3 : Stage of Absurdity OR Non-sense

Question

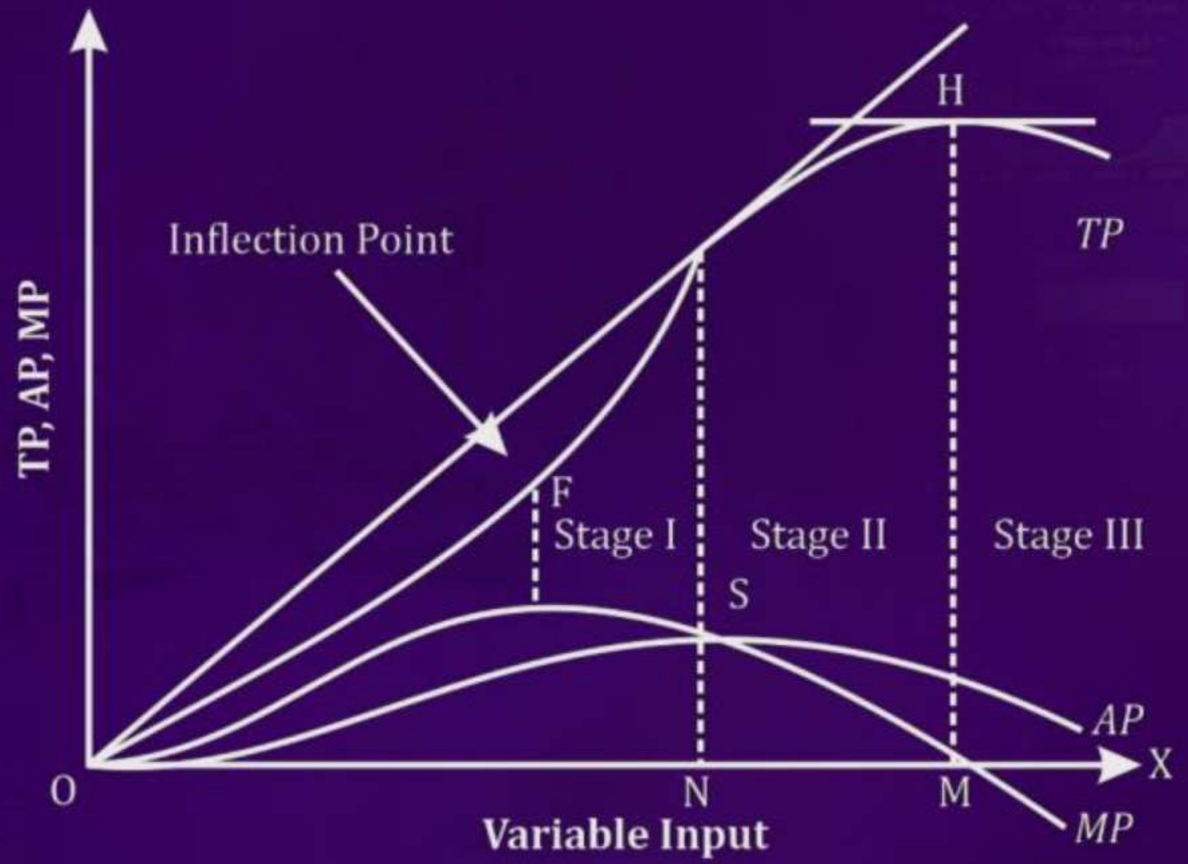
#Q. A rational producer will produce in the stage in which marginal product is positive and: [PYQ]

A. MP > AP

B. MP = AP

C. MP < AP

D. MP is zero





Variable factor → MPL

Labour

Inputs

Law of Returns to Scale → Long-run

	Input↑		Output↑	
I	50%↑	=	50%↑ ⇒ CRS	→ Linear Homogeneous Prod^{n} func^{n}
II	> 50%↑	>	40%↑ ⇒ DRS	✓
III	< 50%↑	<	90%↑ ⇒ IRS	

Question

#Q. If decreasing returns to scale are present, then if all inputs are increased by 10% then:

A. Output will also decrease by 10%

B. Output will increased by 10% ⇒ CRS

C. Output will increased by less than 10% [CI]

D. Output will increased by more than 10% ⇒ IRS



Cobb-Douglas Production Function

$$Q = K.L^{a}.C^{1-a}$$

$$Q = k \cdot L^{a} \cdot C^{1-a}$$

$$\left(\frac{3}{4}\right)^{a} + \left(\frac{1}{4}\right)^{a} = 1$$

CRS

$$Q = K.L^a.C^b$$

$Q = k.l^a.C^b$

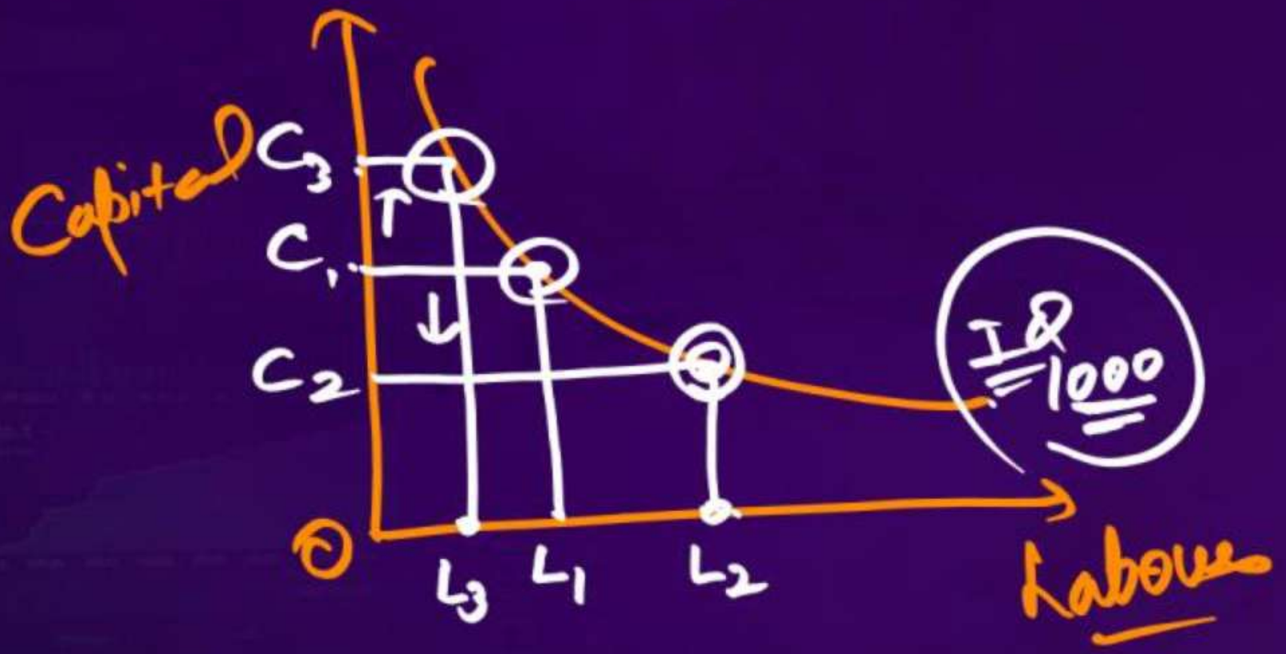
$a + b = 1 \Rightarrow$ CRS

$a + b > 1 \Rightarrow$ IRS

$a + b < 1 \Rightarrow$ DRS

Isoquants

Isoquants – equal-product curves, production indifference curves or iso-product curves.



Isoquants

An isoquant represents all those combinations of inputs which can produce the same level of output.



Properties of Isoquants

(1) Negatively sloped

(2) Convex to the origin due to diminishing MRTS

(3) Curve on right represents a higher level of output

(4) Non intersecting





Iso-Cost Line

- Iso-cost line, - Equal-Cost Line or budget line or budget constraint line,



$$\text{Slope} = -\frac{P_L}{P_C} = -\frac{w}{r}$$

Question #Q. An Isoquant is _____ to an Iso-cost line at equilibrium point.

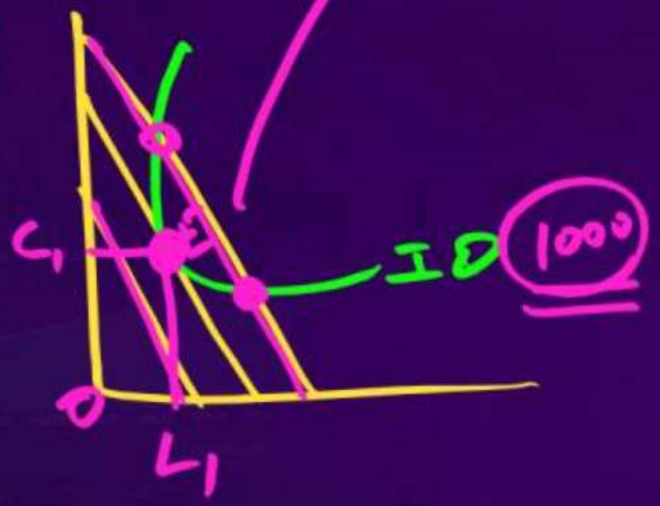
[CA CPT May 2007]

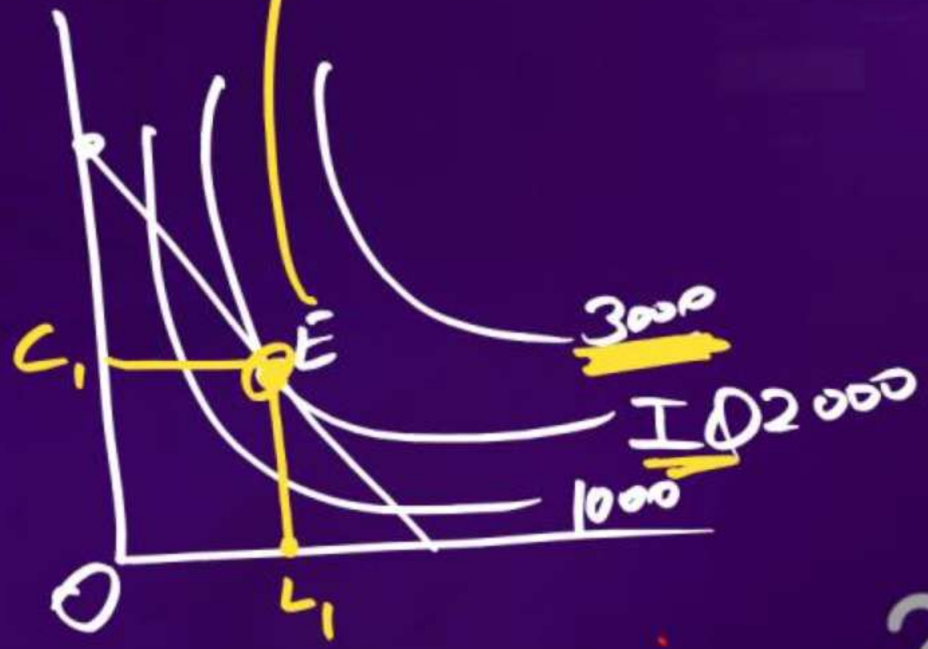
A Convex

B Concave

C Tangent

D Perpendicular







Production

① Time Period

- Short
- Long

② Production function

③ Law of variable Proportion

④ Law of Returns to Scale

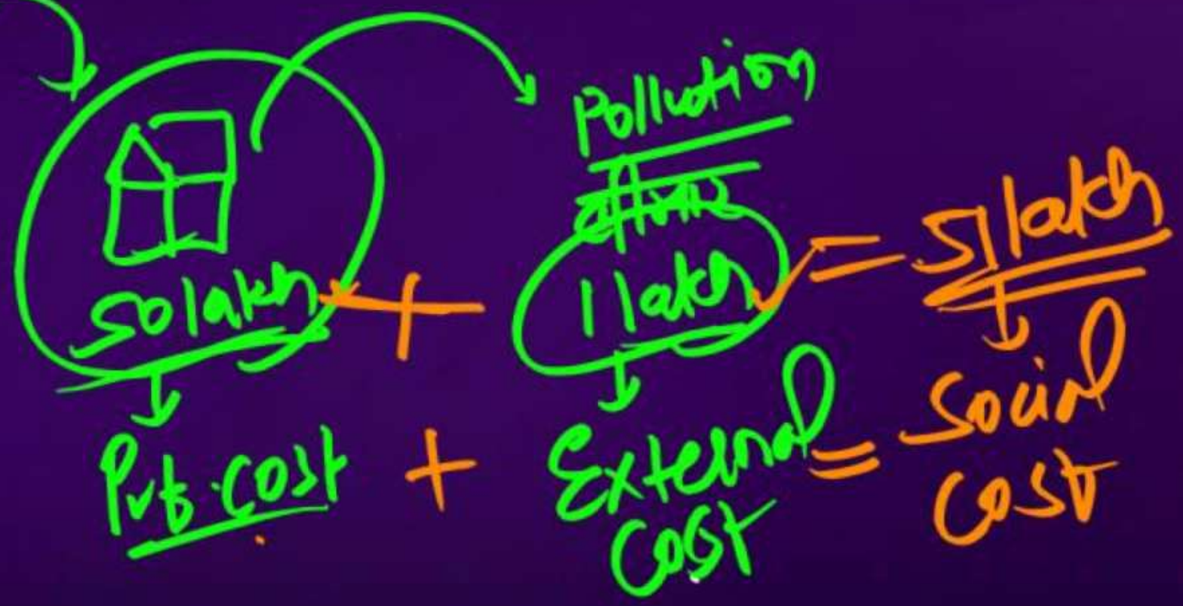
⑤ Production optimisation

change in scale


COSTS

Types of Cost

(1) Accounting Costs and Economic costs
(2) Outlay costs and Opportunity costs
(3) Direct or Traceable costs and Indirect or Non-Traceable costs
(4) Incremental costs and Sunk costs
(5) Historical costs and Replacement costs
(6) Private costs and Social costs
(7) Fixed and Variable costs



Topic : Accounting Cost and Implicit cost

- **Accounting Cost/Explicit Cost** relate to those costs which involve cash payments by the entrepreneur of the firm.
- Accountant record these in the financial statements of the firm.
- **Implicit Cost** : Cost of self-supplied factors of owner.

101

Question

#Q. _____ are already incurred once and for all, and cannot be recovered.

[JAN 2025]

A Sunk costs

B Historical cost

C Private costs

D Social costs

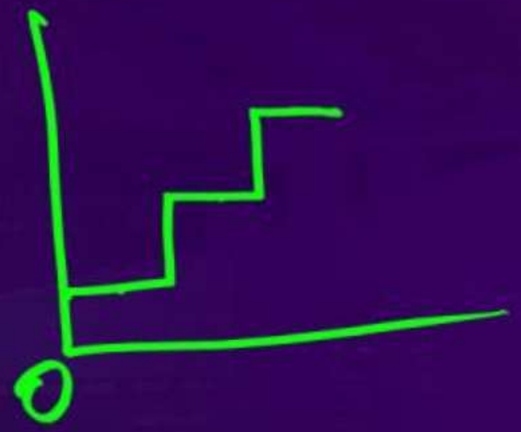


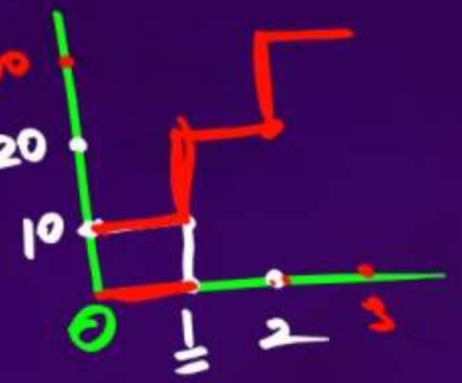
- Fixed cost is a function of capacity and variable cost is a function of output.
- If the firm closes down for some time in the short run but remains in business, fixed cost cannot be avoided (inescapable)
- Shut down costs are costs which will continue even after operations are suspended. Eg- cost for storing of old machines which cannot be sold in market.



Stair – Step Variable Cost

Some costs which may increase in a stair-step fashion, i.e., they remain fixed over certain range of output; but suddenly jump to new higher level when output goes beyond a given limit.

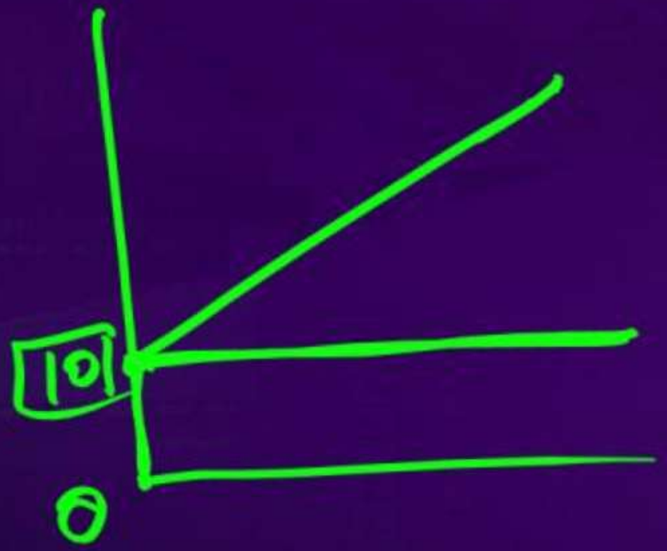


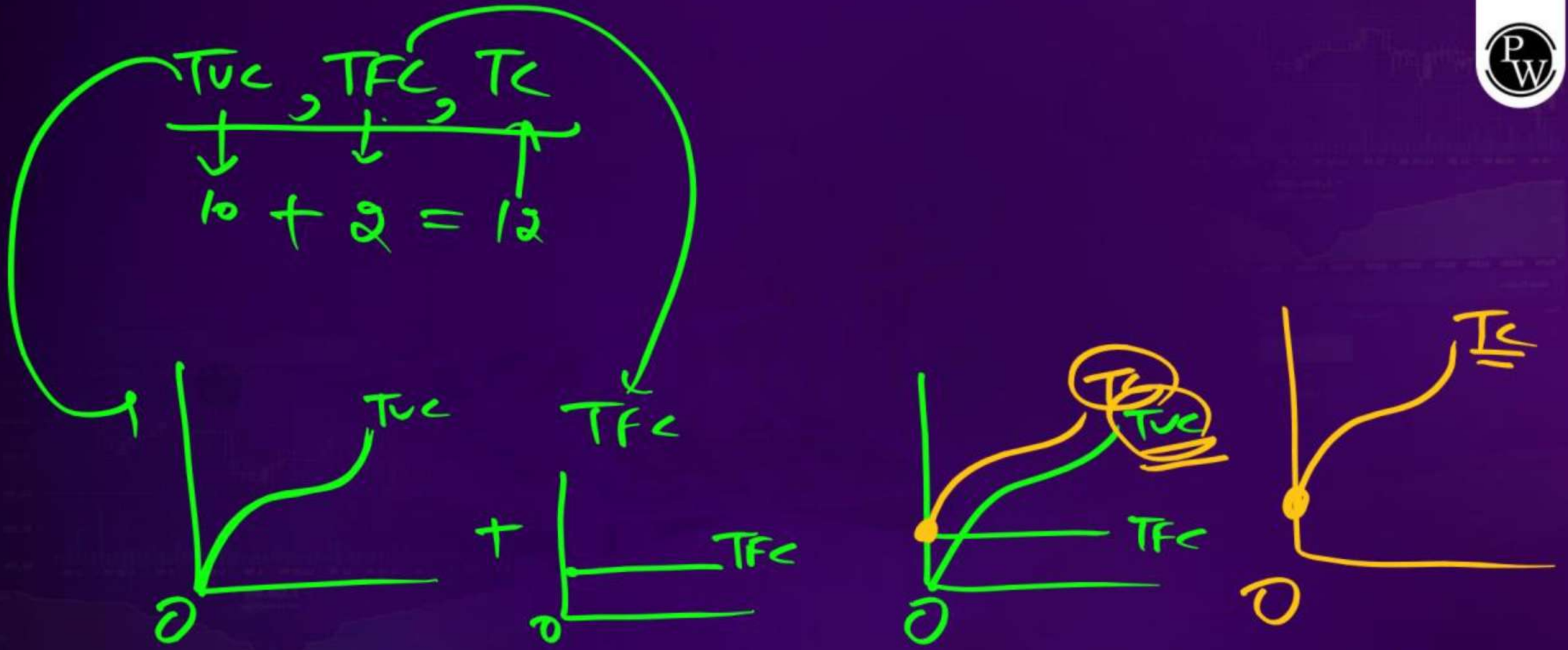


Semi – Variable Cost

Some costs which are neither perfectly variable, nor absolutely fixed in relation to the changes in the size of output.

Eg.: Electricity charges, Postpaid Phone Bill etc.




TVC
TFC
TC
10 + 2 = 12
TVC
TFC
+
TFC
TC

Formulae List

TC $= TFC + TVC = AC \times Q$

TFC $= TC - TVC = AFC \times Q$

TVC $= TC - TFC = AVC \times Q = \Sigma MC$

AC $= ATC = AVC + AFC = \frac{TC}{Q}$

AFC $= AC - AVC = \frac{TFC}{Q}$

AVC $= AC - AFC = \frac{TVC}{Q}$

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

$= \frac{\Delta TC}{\Delta Q}$

$= \frac{\Delta TVC}{\Delta Q} = TVC_n - TVC_{n-1}$

TC

TFC

TVC

AC

AFC

AVC

MC



Rectangular Hyperbola

$$AFC = \frac{TFC}{Q}$$

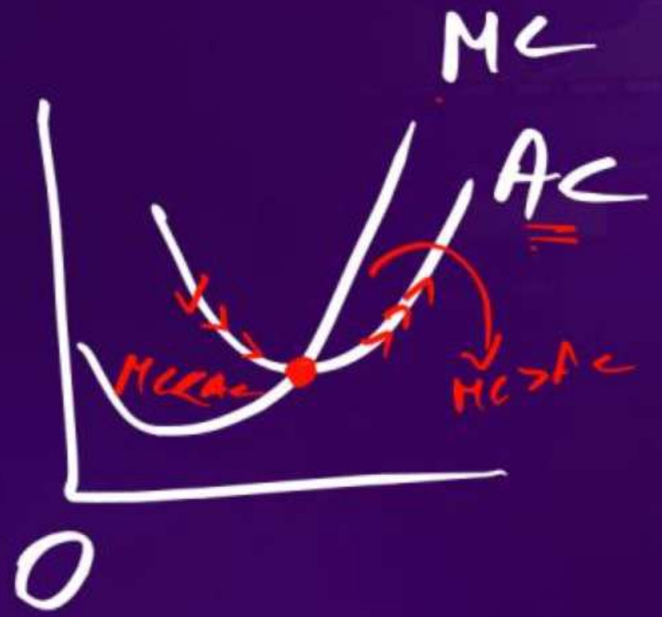
(1) MC – Curve cuts AC Curve at its minimum point

OR

When MC = AC, AC is minimum

(2) When MC < AC, AC Falls

(3) When MC > AC, AC rises.



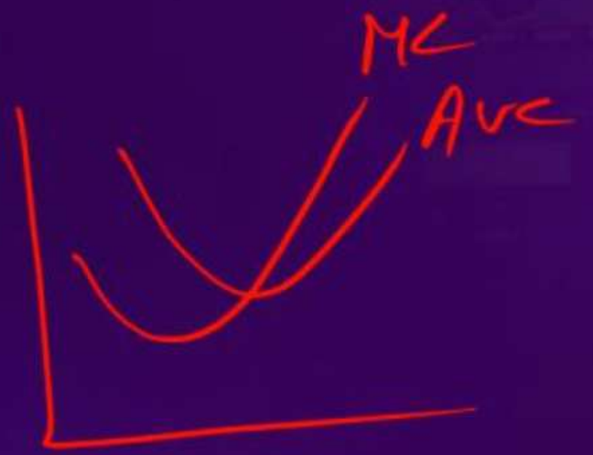
(1) MC – Curve cuts AVC Curve at its minimum point

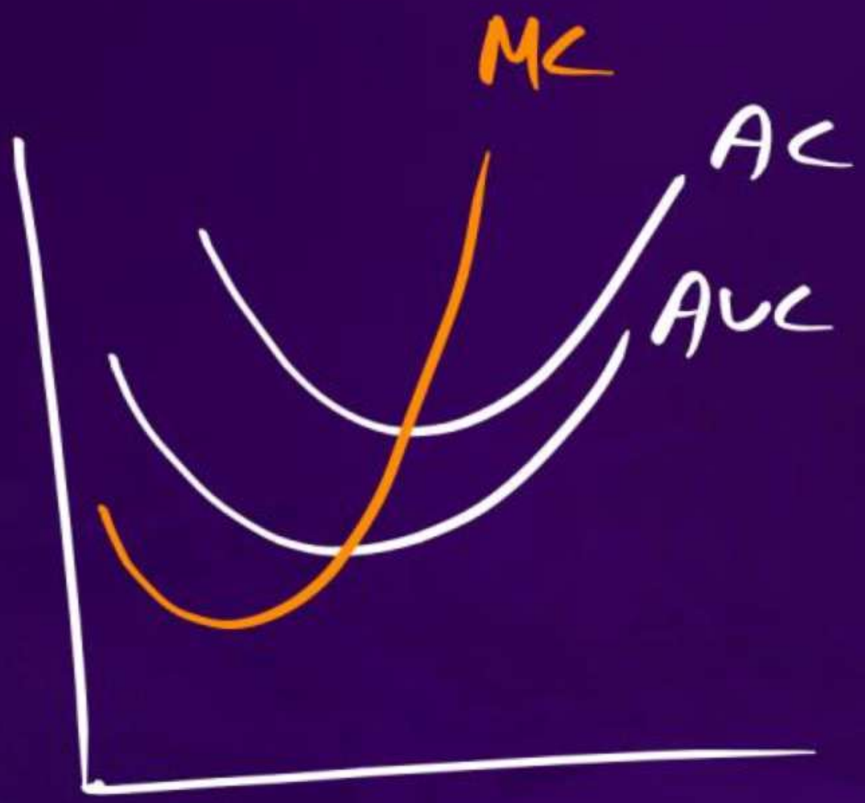
OR

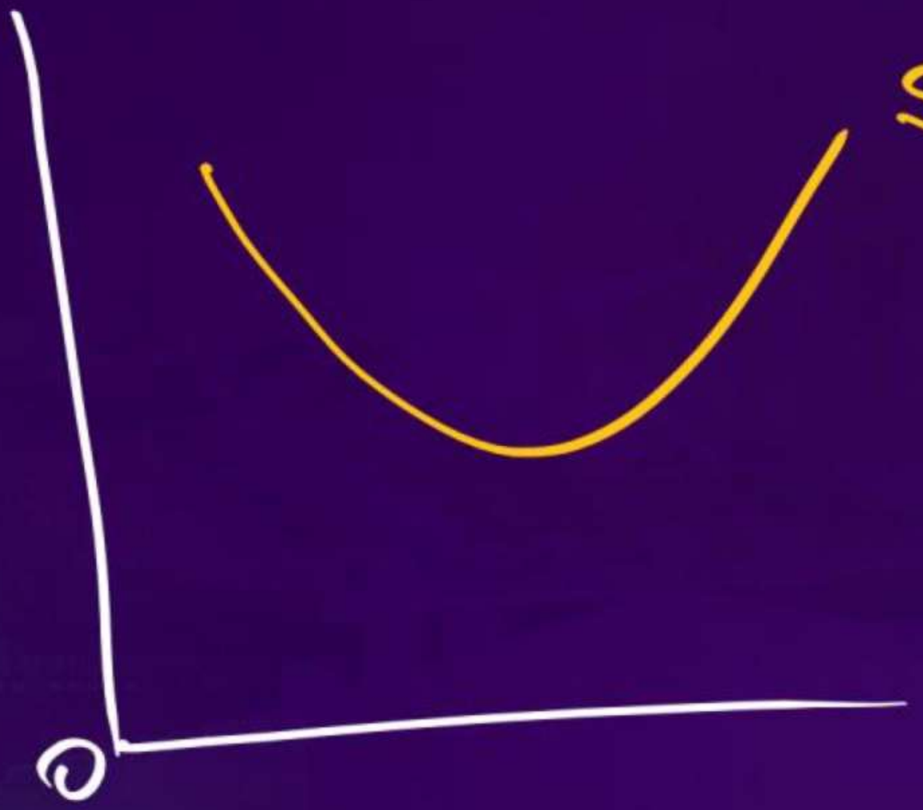
When MC = AVC, AVC is minimum

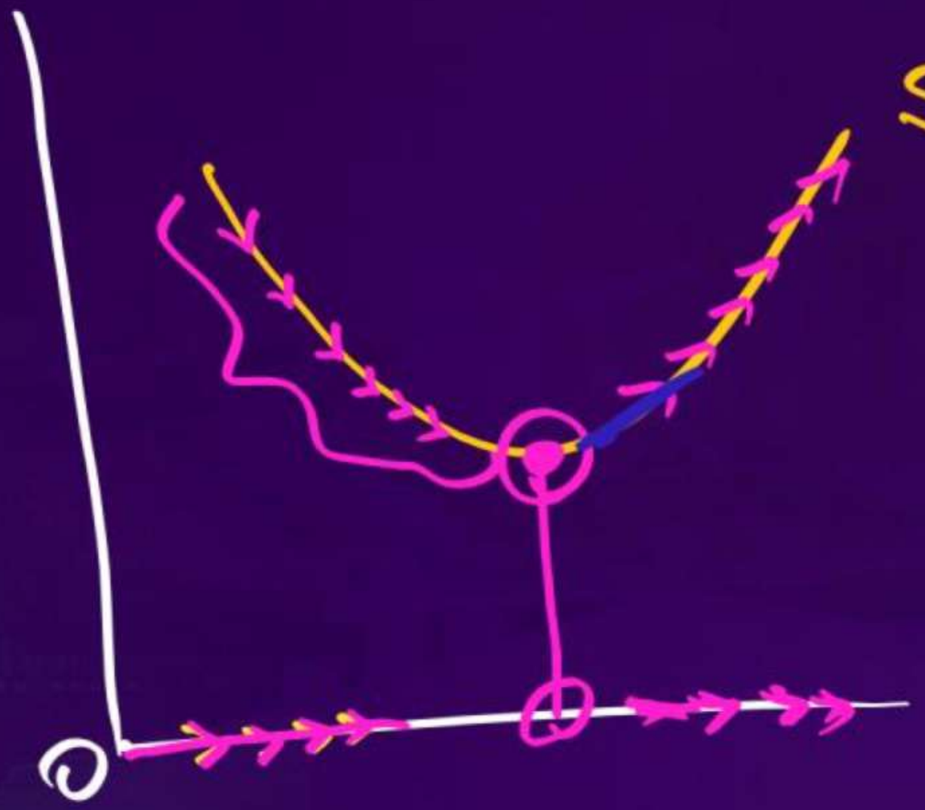
(2) When MC < AVC, AVC Falls

(3) When MC > AVC, AVC rises.




MC
AC
AVC


SAC
Plant Curve



SAC

Plant Curve


1
2
3
4
5
6
7
LAC
OR
Planning
Curve
OR
Boat
OR
Envelope
Curve

When LAC is rising (+ve Slope)

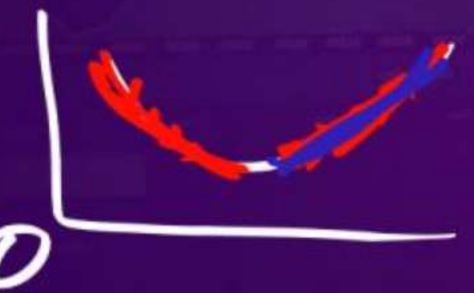
(1) LAC is tangent to rising Portion of SAC. → Over - utilisation

(2) There is DRS (Dis-Economies of Scale) when LAC curve rises (positive Slope)

When LAC is falling (–ve Slope)

(1) LAC is tangent to the falling portion of SAC → Under – Utilisation

(2) There is IRS (Economies of Scale) when LAC curve falls (–ve Slope)



$Q_T \rightarrow LAC\downarrow \Rightarrow$ Economies of Scale

$Q_T \rightarrow LAC\uparrow \Rightarrow$ Diseconomies of Scale

Question

#Q. Planning curve is related to which of the following?

A. Short run average cost curve → Plant Curve

B. Long run average cost curve (B)

C. Average variable cost

D. Average total cost



Chapter - 4

Price Determination in Different Markets

Topics to be Covered

1. Unit – 1 : Meaning and Types of Markets
2. Unit – 2 : Determination of Prices
3. Unit – 3 : Price Output Determination under Different Market Forms

Price → Value in Exchange or Exchange Value or Economic value

As per Ricardo, exchange value means command over commodities in general or power in exchange over ~~patchable~~ commodities in general.

Purchasable

Value in use is different from value in exchange.

Value in use refers to the usefulness or utility. It is the attribute which a thing may have to satisfy human wants.

In Economics, we are only concerned with **exchange value.** Considerations such as sentimental value mean little in a market economy. Sentimental value is subjective and reflects an exaggerated judgment about the worth of a commodity.

For example, If a person says to his best friend that I like your car and if you give it to me then I will be lifetime obliged to you. In this case, lifetime obligation is a sentimental value and has no meaning as against monetary consideration.

Meaning of Market

A market is a **collection of buyers and sellers** with the **potential/possibility to trade.**

We can define the market simply as all those **buyers and sellers** who influence price.

A market **need not be formal** or does not require a particular place.

Eg- 2nd hand goods are often sold through online platform.

Elements of Markets:

(1) Buyers and **sellers;**

(2) A **product** or service;

(3) Bargaining for a price;

(4) Knowledge about market conditions; and

(5) One price for a product / service at a given time.

Types Market

Markets can be classified on the basis of

1. Area
2. Time
3. Nature of transaction
4. Regulation
5. Volume of business and
6. Types of competition

Marshall → Time Element

Classification of Market

In Economics, Generally the classification of markets is made on the basis of

Area	Time	Nature of Transaction	Regulation	Volume of Business	Types of Competition
1. Local Market	1. Very Short Period/market period	1. Spot Market	1. Regulated Market	1. Trader Wholesale Market	Perfectly Competitive
2. Regional Market	2. Short Period	2. Future Market	2. Unregulated Market	2. Retail Market → Ultimate Consumer	Imperfectly Competitive
3. National Market	3. Long Period				
4. International Market	4. Very Long / Secular				

Revenue ⟹ Sales

Qty	P	TR	MR	AR
1	10	10	10	10
2	10	20	10	10
3	10	30	10	10
4	10	40	10	10

$$AR = \frac{TR}{Q} = \underset{\text{Price}}{P}$$

$$MR = \frac{\Delta TR}{\Delta Q}$$

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

$$TR = \Sigma MR$$

$$= P \times Q$$

$$= AR \times Q$$

Nature of Competition

Perfect Competition
OR
Perfectly Competitive Market
Constant Price → Q↑

Imperfect Competition
↓
P↓ → Q↑

$AR = P$ (Price)

$P = AC \Rightarrow$ Normal Profit

$P > AC \Rightarrow$ Abnormal Profit / Supernormal Profit

$P < AC \Rightarrow$ Loss

Question #Q. When AR = ₹ 10 and AC = ₹ 8 the firm makes _____.

[CA CPT May 2007]

P > AC

A Normal profit

B Net profit

C Gross profit

D Super normal profit (D)



$$MR = AR\left(\frac{e-1}{e}\right)$$

$e = 1 \Rightarrow MR = 0 \Rightarrow$ TR Maximum

$e > 1 \Rightarrow MR > 0 \Rightarrow$ TR ↑

$e < 1 \Rightarrow MR < 0 \Rightarrow$ TR fall

Question #Q. When $e > 1$ then MR is

A Zero

B Negative

C Positive ✓

D One



Question #Q. When e = 1 then MR is

A Positive

B Zero

C One

D Negative



Question #Q. When $e < 1$ then MR is

A Negative

B Zero

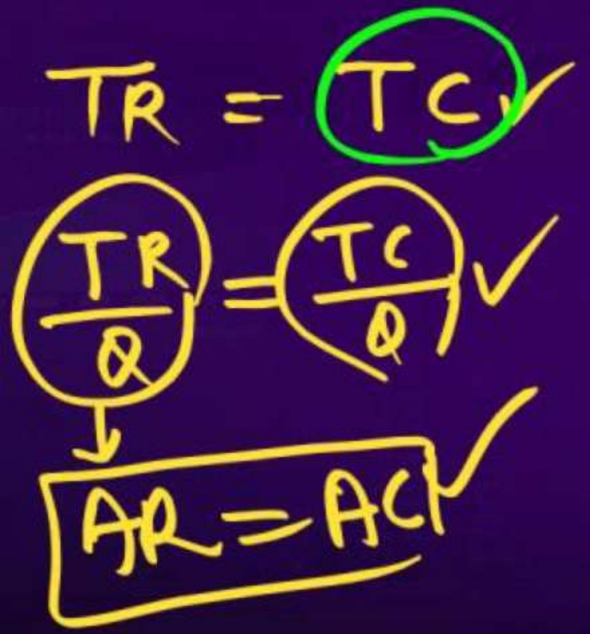
C Positive

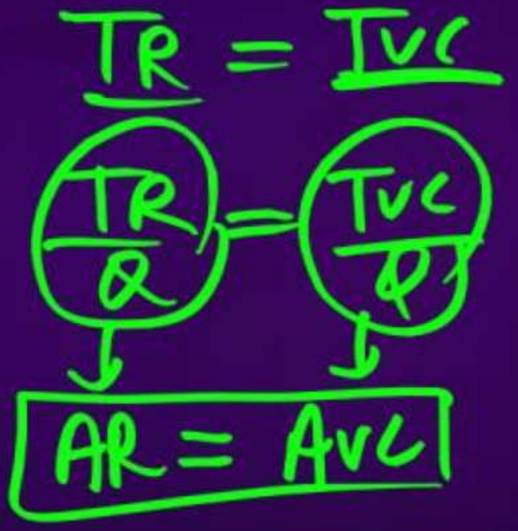
D One



Shut down point

- Price = AVC (Price = AR)
- TR = TVC
- Total loss = TFC
- Shutting down is **temporary** and does not mean going out of business





Question #Q. A firm encounters its "Shutdown Point" when:

ATC = P

A. Average total cost equals price at the profit-maximizing level of output

B. Average variable cost equals price at the profit-maximizing level of output

C. Average fixed cost equals price at the profit-maximizing level of output

D. Marginal cost equals price at the profit-maximizing level of output



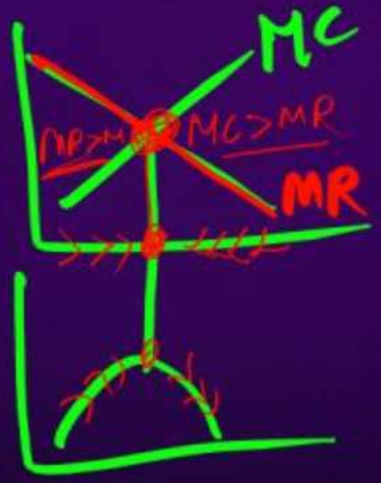
Behavioral Principles

Principle 1

- A firm should **not produce** at all if its total revenue's are not enough to cover **total variable costs**
- When AR = AVC → Shutdown Point

Principle 2

- A firm will **maximize profits** (or minimize losses) by expanding output to the level where **MR = MC**



Unit – 2

Determination of Prices

Question

#Q. It is assumed in economic theory that

A. decision making within the firm is usually undertaken by managers, but never by the owners

B. the ultimate goal of the firm is to maximise profits, regardless of firm size or type of business organization.

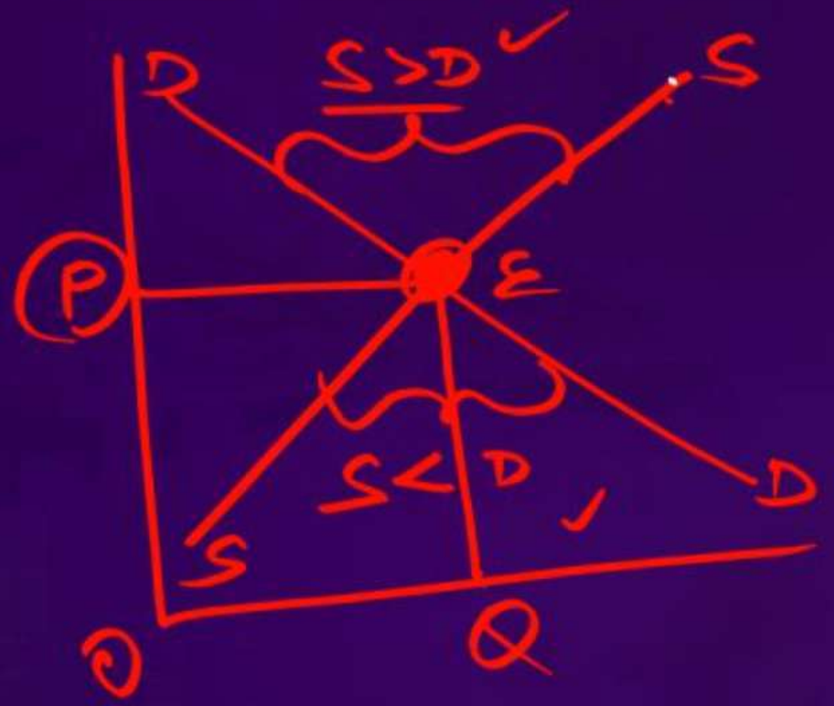
C. as the firm's size increases, so do its goals

D. the basic decision making unit of any firm is its owners

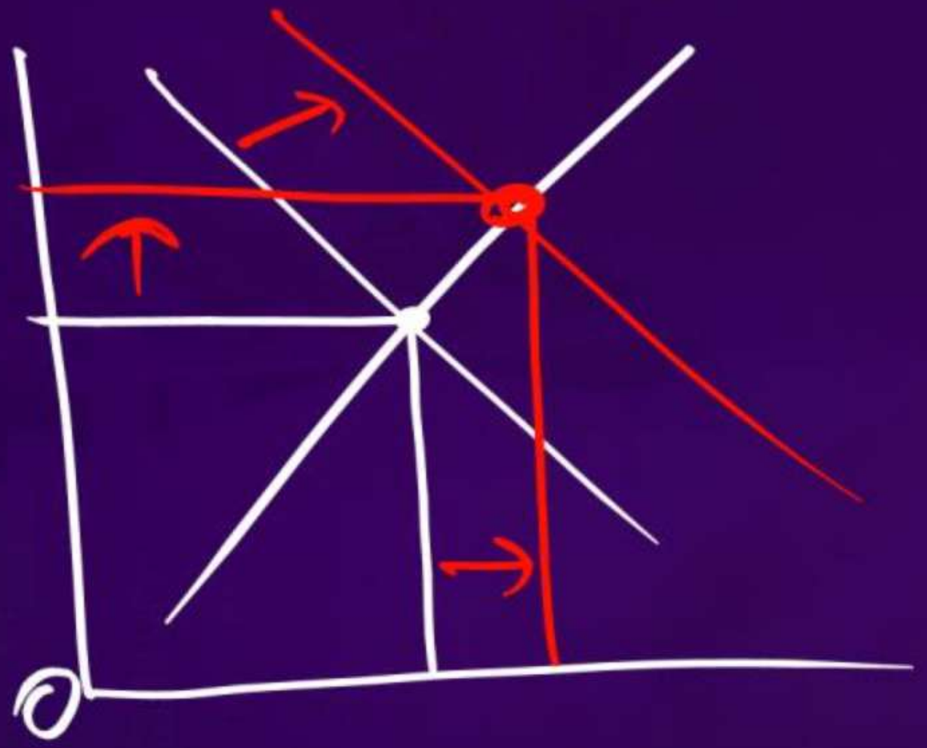


Market Equilibrium

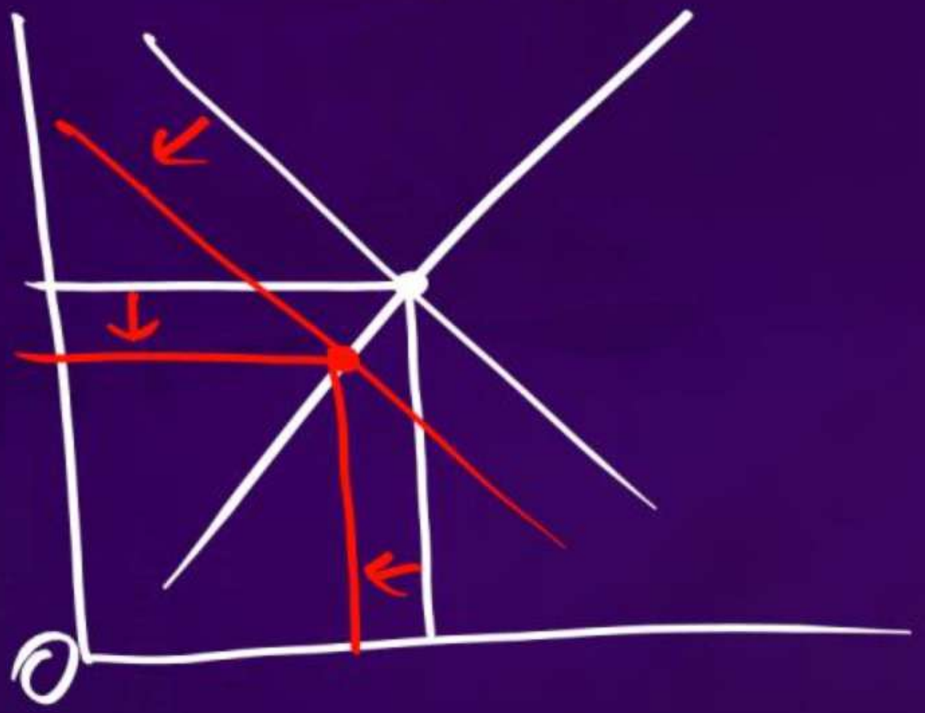
Demand = Supply



	Situation	Effect on	
		Equilibrium Price	Equilibrium Quantity
1	Increase in Demand	P↑	Q↑
	Decrease in Demand	P↓	Q↓



	Situation	Effect on	
		Equilibrium Price	Equilibrium Quantity
	Increase in Demand	P↑	Q↑
2	Decrease in Demand	P↓	Q↓



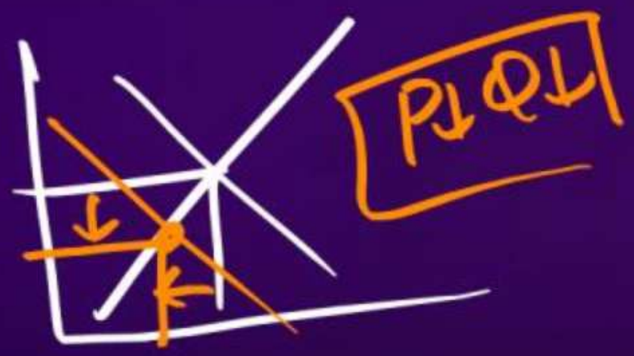
Question #Q. With a given supply curve, a decrease in demand causes

A An overall decrease in price but an increase in equilibrium quantity

B An overall increase in price but a decrease in equilibrium quantity

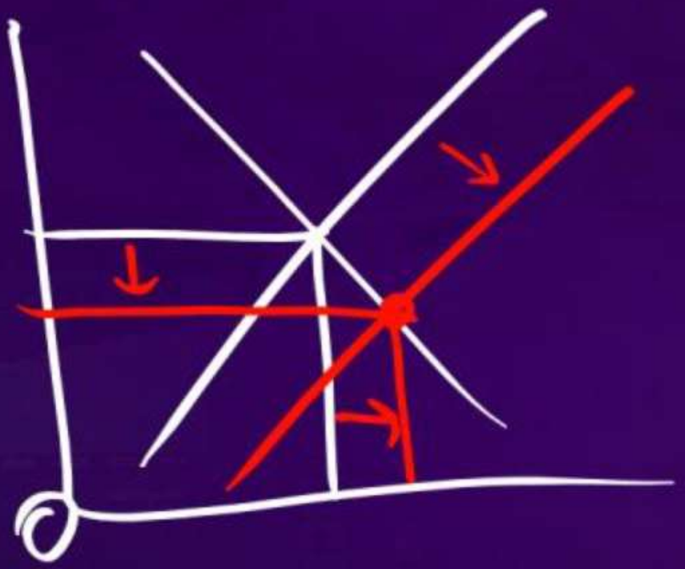
C An overall decrease in price and a decrease in equilibrium quantity ✓

D No change in overall price but a reduction in equilibrium quantity

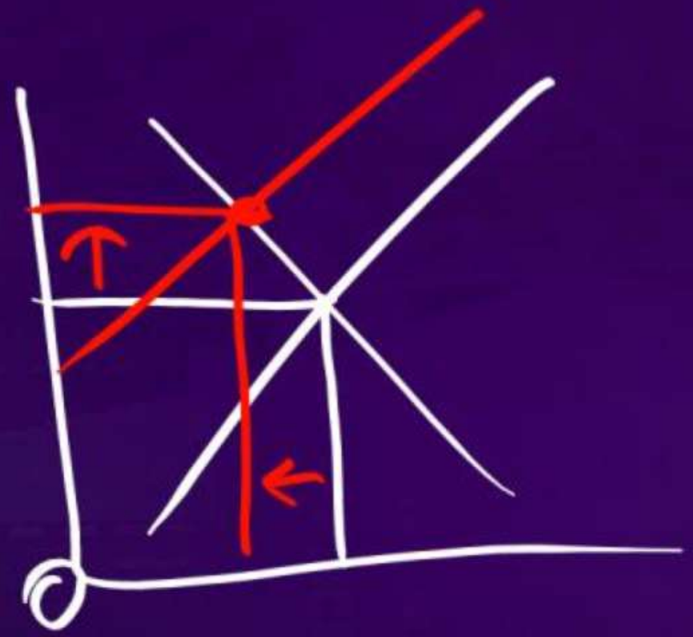




	Situation	Effect on	
		Equilibrium Price	Equilibrium Quantity
3	Increase in Supply	P↓	Q↑
4	Decrease in Supply	P↑	Q↓

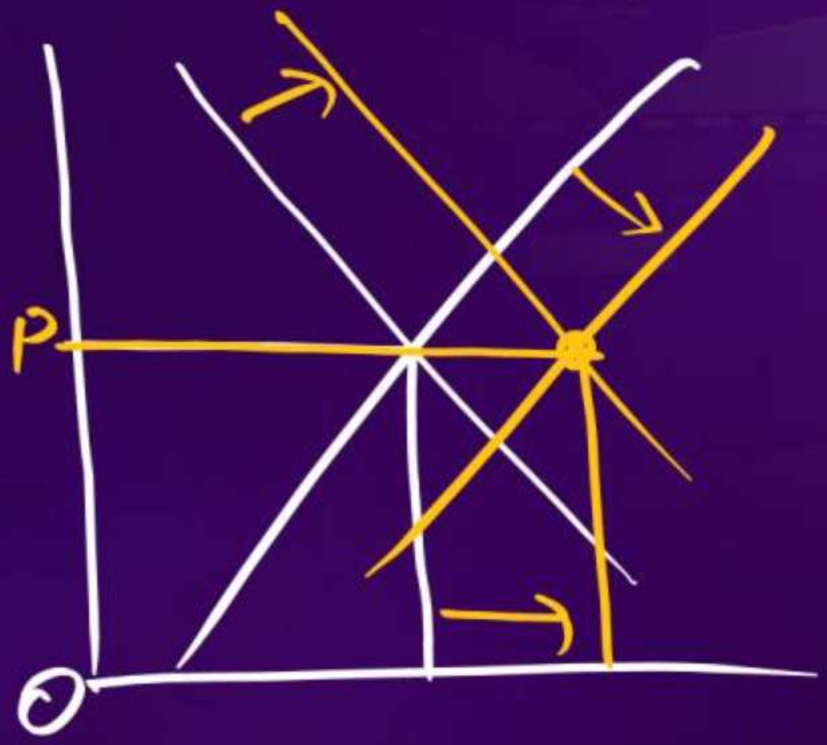


	Situation	Effect on	
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3	Increase in Supply	P↓	Q↑
4	Decrease in Supply	P↑	Q↓



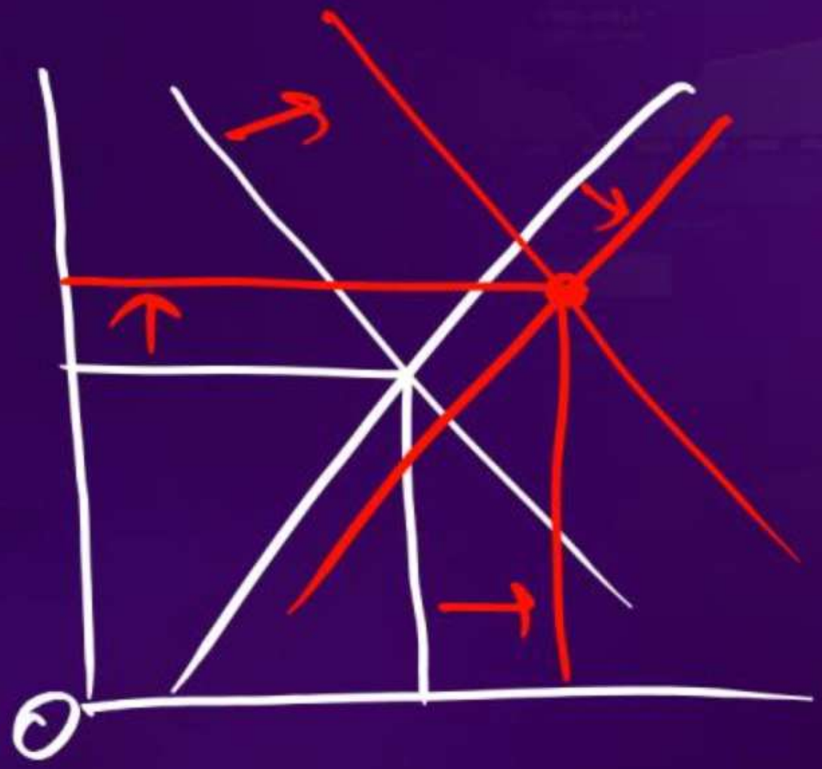
	Situation	Effect on	
		Equilibrium Price	Equilibrium Quantity
1	Increase in Demand is equal to Increase Supply D↑ = S↑	Remain Same	Q↑
2	Increase in demand is greater than Increase in Supply ↑D > ↑S	P↑	Q↑
3	Increase in Demand is less than Increase in Supply ↑D < ↑S	P↓	Q↑

D↑ = S↑



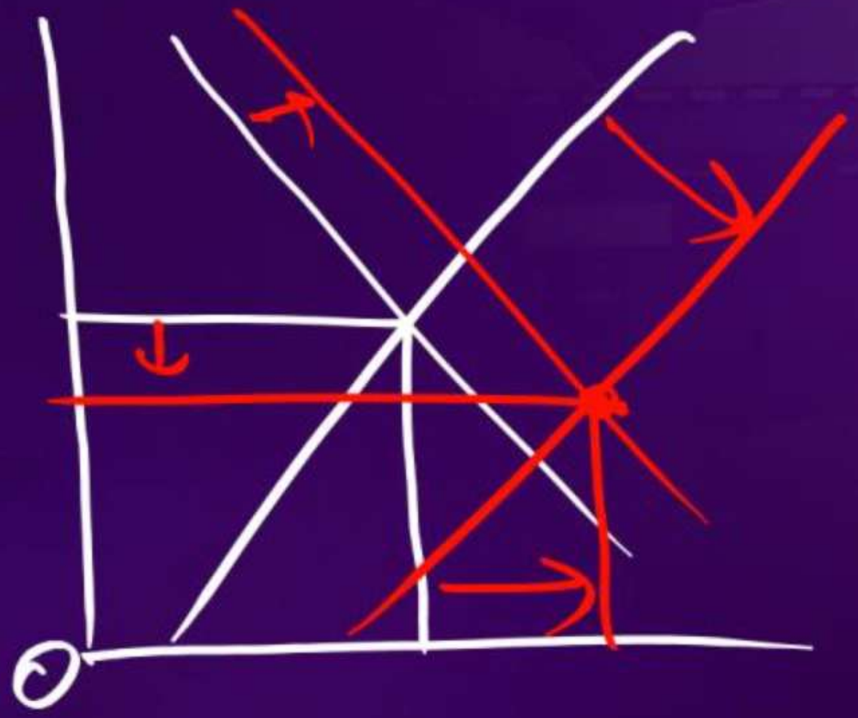
	Situation	Effect on	
		Equilibrium Price	Equilibrium Quantity
1	Increase in Demand is equal to Increase Supply D↑ = S↑	Remain Same	Q↑
2	Increase in demand is greater than Increase in Supply ↑D > ↑S	P↑	Q↑
3	Increase in Demand is less than Increase in Supply ↑D < ↑S	P↓	Q↑

D↑ > S↑



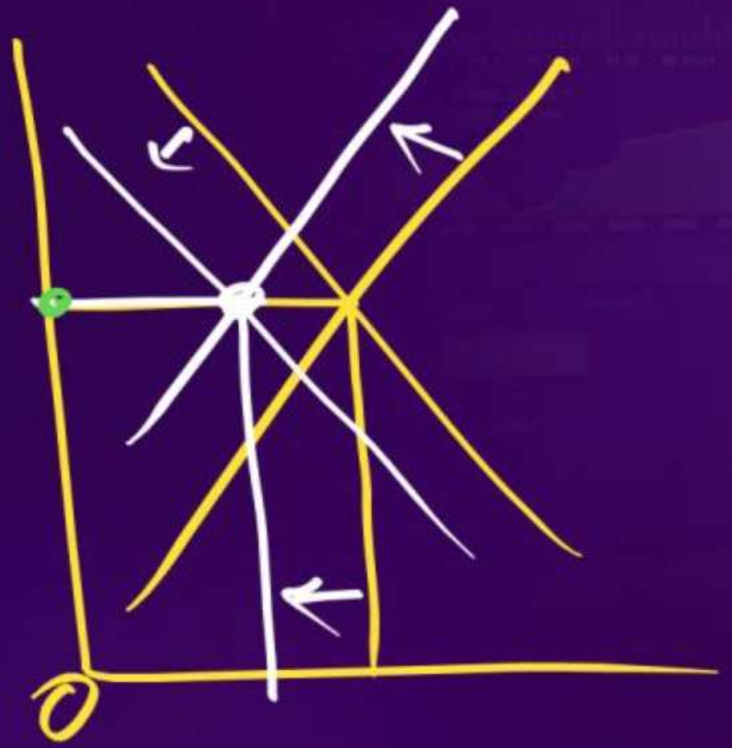
	Situation	Effect on	
		Equilibrium Price	Equilibrium Quantity
1	Increase in Demand is equal to Increase Supply D↑ = S↑	Remain Same	Q↑
2	Increase in demand is greater than Increase in Supply ↑D > ↑S	P↑	Q↑
3	Increase in Demand is less than Increase in Supply ↑D < ↑S	P↓	Q↑

D↑ < S↑



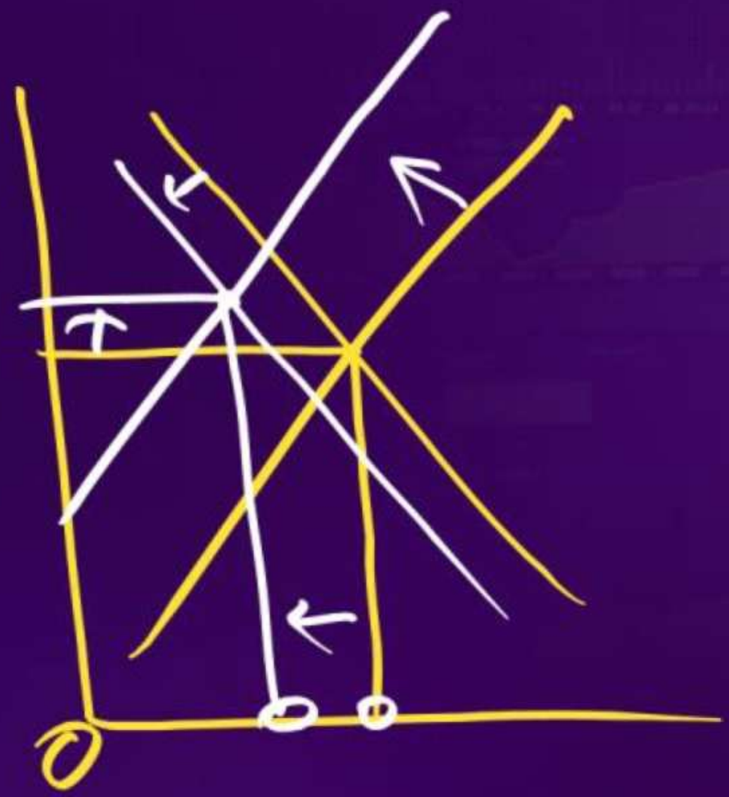
	Situation	Effect on	
		Equilibrium Price	Equilibrium Quantity
4	Decrease in Demand is equal to Decrease in Supply D↓ = S↓	Remain Same	Q↓
5	Decrease in Demand is less than Decrease in Supply D↓ < S↓	P↑	Q↓
6	Decrease in Demand is greater than Decrease in Supply D↓ > S↓	P↓	Q↓

D↓ = S↓



	Situation	Effect on	
		Equilibrium Price	Equilibrium Quantity
4	Decrease in Demand is equal to Decrease in Supply D↓ = S↓	Remain Same	Q↓
5	Decrease in Demand is less than Decrease in Supply D↓ < S↓	P↑	Q↓
6	Decrease in Demand is greater than Decrease in Supply D↓ > S↓	P↓	Q↓

D↓ & S↓



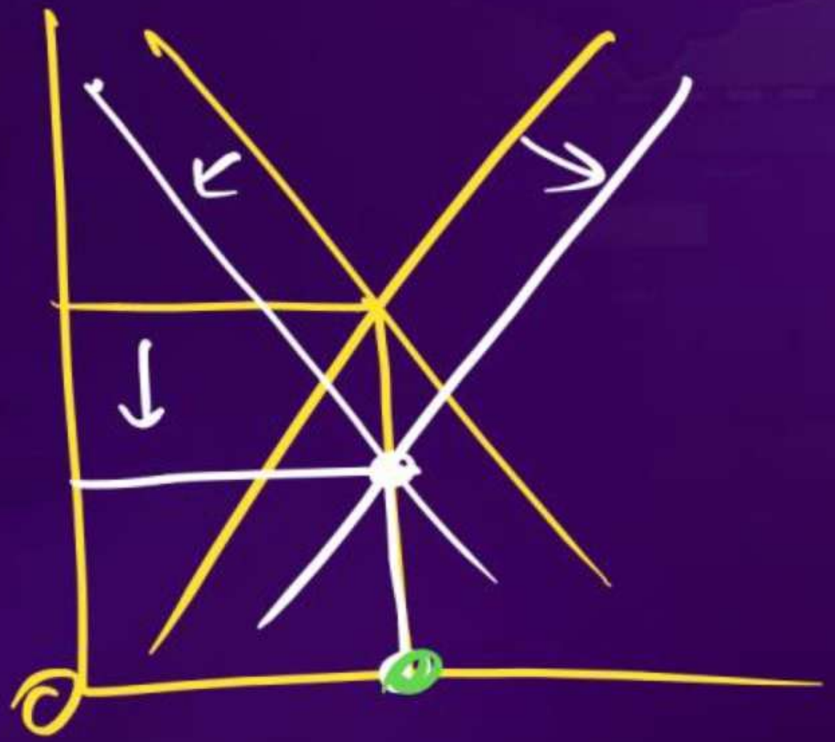
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5	Decrease in Demand is less than Decrease in Supply D↓ < S↓	P↑	Q↓
6	Decrease in Demand is greater than Decrease in Supply D↓ > S↓	P↓	Q↓

D↓ > S↓



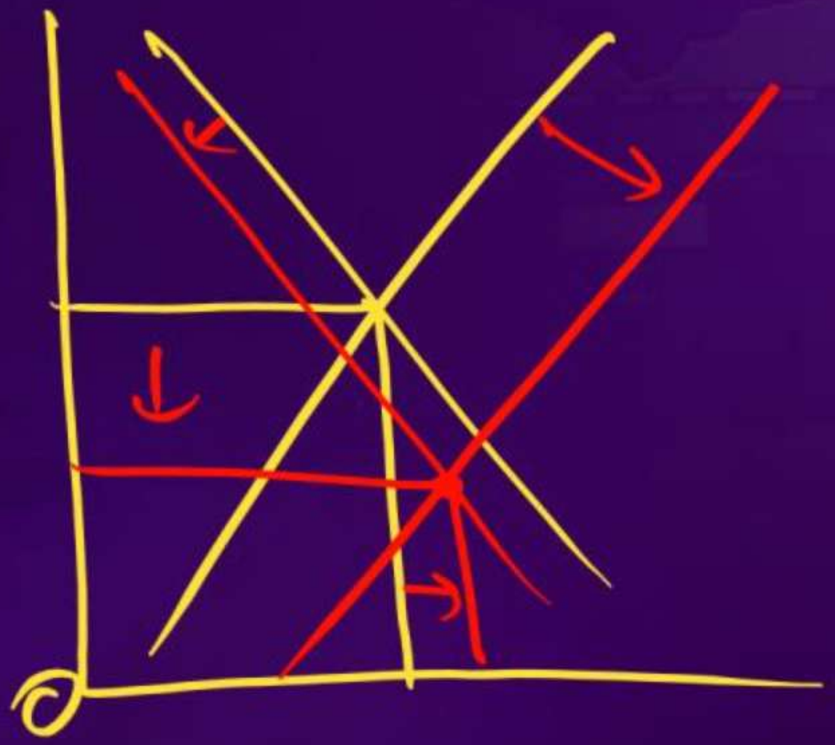
	Situation	Effect on	
		Equilibrium Price	Equilibrium Quantity
7	Increase in Supply is equal to ↓ demand ↑S = ↓D	P↓	Remain Same
8	Increase in Supply is greater than ↓ in demand ↑S > ↓D	P↓	Q↑ QT
9	Increase in Supply is less than ↓ in demand ↑S < ↓D	P↓	Q↓

S↑ = D↓



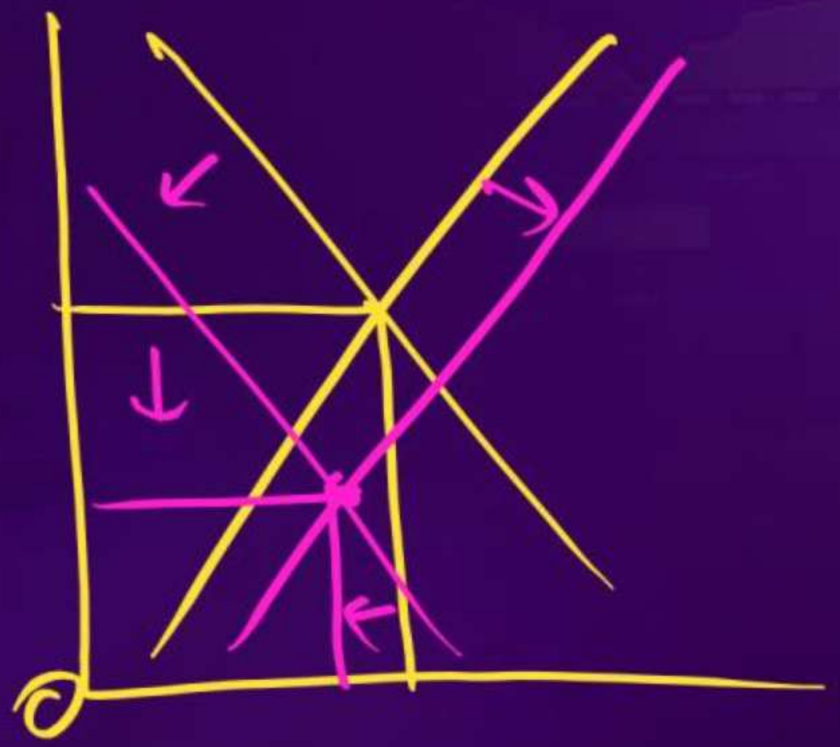
	Situation	Effect on	
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8	Increase in Supply is greater than ↓ in demand ↑S > ↓D	P↓	Q↓ QT
9	Increase in Supply is less than ↓ in demand ↑S < ↓D	P↓	Q↓

S↑ > D↓



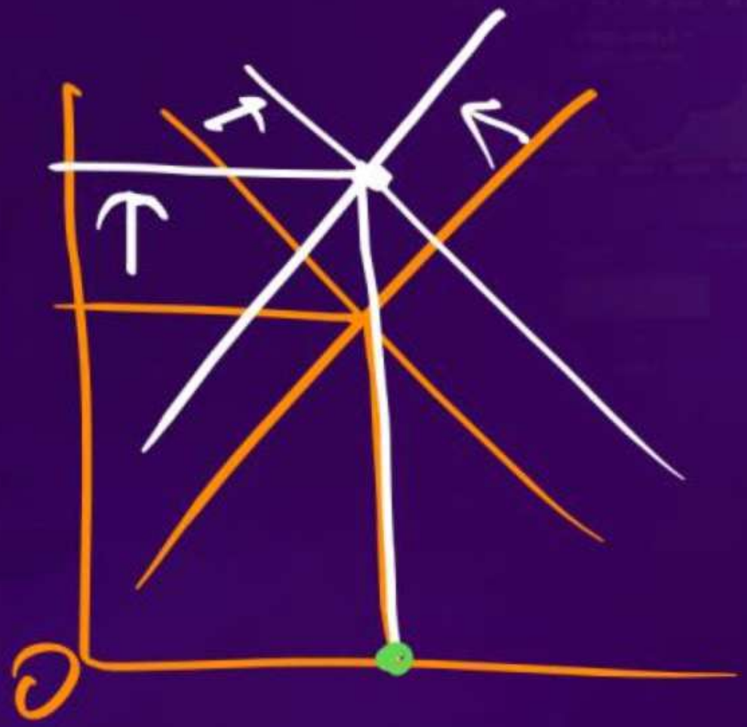
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9	Increase in Supply is less than ↓ in demand ↑S < ↓D	P↓	Q↓

↑S < ↓D



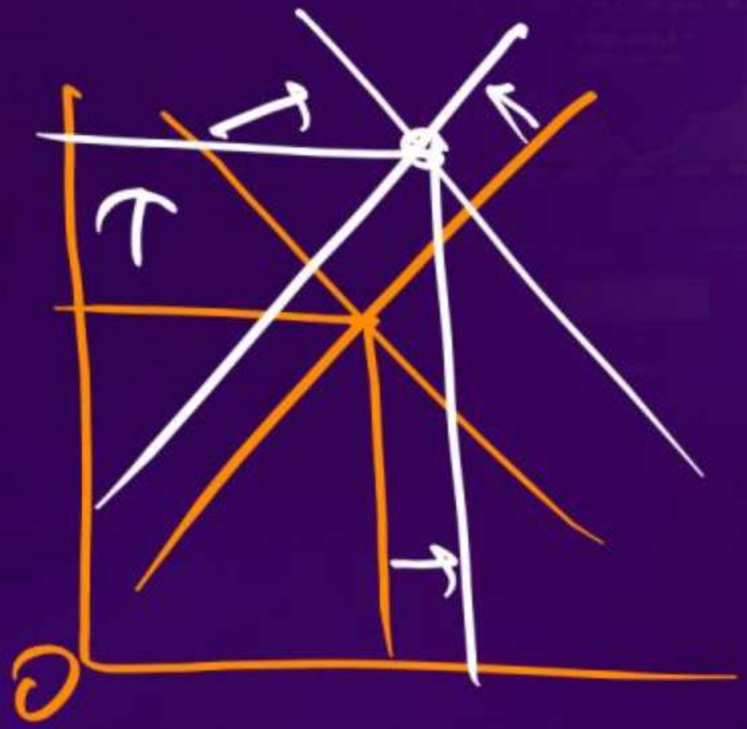
	Situation	Effect on	
		Equilibrium Price	Equilibrium Quantity
10	Decrease in Supply is equal to ↑ in demand ↓S = ↑D	P↑	Remain Same
11	Decrease in Supply is less than ↑ in demand ↓S < ↑D	P↑	Q↑
12	Decrease in Supply is greater than ↑ in demand ↓S > ↑D	P↑	Q↓

S↓ = P↑



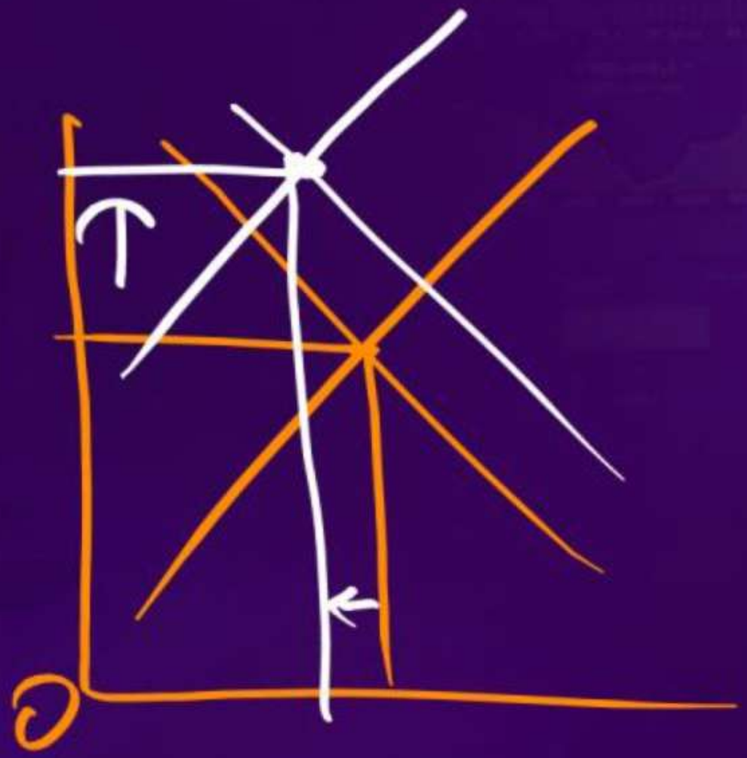
	Situation	Effect on	
		Equilibrium Price	Equilibrium Quantity
10	Decrease in Supply is equal to ↑ in demand ↓S = ↑D	P↑	Remain Same
11	Decrease in Supply is less than ↑ in demand ↓S < ↑D	P↑	Q↑
12	Decrease in Supply is greater than ↑ in demand ↓S > ↑D	P↑	Q↓

S↓ ⇒ P↑



	Situation	Effect on	
		Equilibrium Price	Equilibrium Quantity
10	Decrease in Supply is equal to ↑ in demand ↓S = ↑D	P↑	Remain Same
11	Decrease in Supply is less than ↑ in demand ↓S < ↑D	P↑	Q↑
12	Decrease in Supply is greater than ↑ in demand ↓S > ↑D	P↑	Q↓

S↓ > D↑



- When **both demand and Supply Increase and** no other info given, then **Equilibrium Quantity Increases,** but effect on Equilibrium Price cannot be confirmed.
- Similarly, when **both demand and supply decrease,** and no other info given then **Equilibrium Quantity Decreases,** but effect on Equilibrium Price cannot be confirmed.

- When **demand increases and supply decreases then Equilibrium Price rises** but effect on Equilibrium Quantity cannot be confirmed.
- When **demand decreases and Supply increases then Equilibrium Price falls** but effect on Equilibrium Quantity cannot be confirmed.

Question #Q. If supply increases in a greater proportion than demand

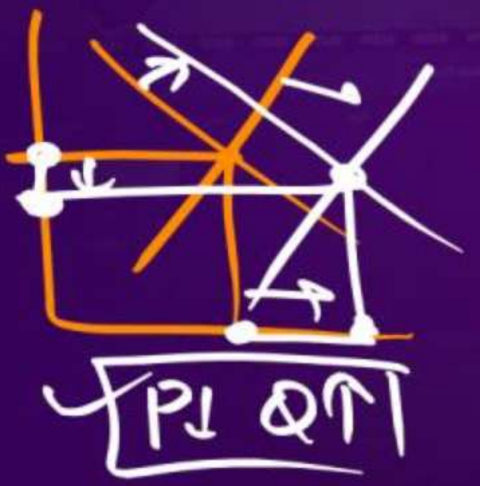
ST > DT

A. The new equilibrium price and quantity will be greater than the original equilibrium price and quantity

B. The new equilibrium price will be greater than the original equilibrium price but equilibrium quantity will be higher

C. The new equilibrium price and quantity will be lower than the original equilibrium price and quantity

D. The new equilibrium price will be lower than the original equilibrium and the new equilibrium quantity will be higher ✓ D





Unit – 3

Price Output Determination under Different Market Forms

Forms of Market

- **Perfection Competition**
- **Imperfect Competition**
  - (1) Monopoly or Monopolistic Market
  - (2) Monopolistic Competition
  - (3) Oligopoly

Mono + Poly = Monopoly

↓ ↓ ↓

Single **Firm** **a seller alone**

Market = Industry = Collection of all firms

Monopoly → a single firm is industry / Market

Monopoly

The word "Monopoly means "alone to sell".

Monopoly is a situation in which there is a single seller of a product which has no close substitute.

Pure monopoly is never found in practice. However, in public utilities such as transport, water and electricity, we generally find a monopoly form of market.

Features of Monopoly Market

1. **Single seller of the product:**
   (a) In a monopoly market, there is only one firm producing or supplying a product.
   (b) This single firm constitutes the industry and as such there is no distinction between firm and industry in a monopolistic market.
   (c) Monopoly is characterized by an **absence of competition.**
2. **Barriers to Entry:** In a monopoly market, there are strong barriers to entry. The barriers to entry could be economic, institutional, legal or artificial.

Price Elasticity

↓

Less No. of Close Substitute

$E_p < 1$


Demand
Cross Elasticity (E_c)
Complimentary
Neither Complimentary Nor-Substitutes
Substitutes

Features of Monopoly Market

3 No close-substitutes:

(a) A monopoly firm has full control over the market supply of a product or service. A monopolist is a price maker and not a price taker.

(b) The monopolist generally sells a product which has no close substitutes. In such a case, the cross elasticity of demand for the monopolist's product and any other product is zero or very small.

(c) The price elasticity of demand for monopolist's product is also less than one. As a result, the monopolist faces a steep downward sloping demand curve.

Features of Monopoly Market

4 **Market power:** A monopoly firm has market power i.e. it has the ability to charge a price above marginal cost and earn a positive profit.

$P > MC$

Question

#Q. Who can create Monopoly?

A. Govt.

B. Scarce Resource

C. Goodwill

D. Patent Right

E. cartel | group



How do Monopolies Arise?

BLOCKED Entry

Fundamental cause of monopoly is 'barriers to entry', i.e. other Firms cannot enter the market. Some reasons for occurrence and continuation of Monopoly are-

1. Strategic Control over scarce resources, inputs or technology by a Single Firm

2. Developing or acquiring control over a unique product that is difficult or costly for other Companies to copy.
3. Patents and Copyrights given by Government to protect Intellectual Property Rights and to encourage innovation.
4. Governments granting exclusive rights to produce and sell a good or a service.

How do Monopolies Arise?

5. Substantial Goodwill enjoyed by a Firm for a considerably long period, which create difficult barriers to entry like whatsApp
6. Natural Monopoly due to very large economies of scale Suppose, a Single Firm is able to produce the industry's whole output at a lower unit cost than two or more Firms could. In such case, it is often wasteful (for Consumers and the economy) to have more than one such Supplier because of the high costs of duplicating the infrastructure, e.g. Telephone Service, Natural Gas Supply, Electrical Power Distribution, etc.
7. Stringent Legal and Regulatory Requirements that effectively discourage entry of New Firms without being specifically prohibited.

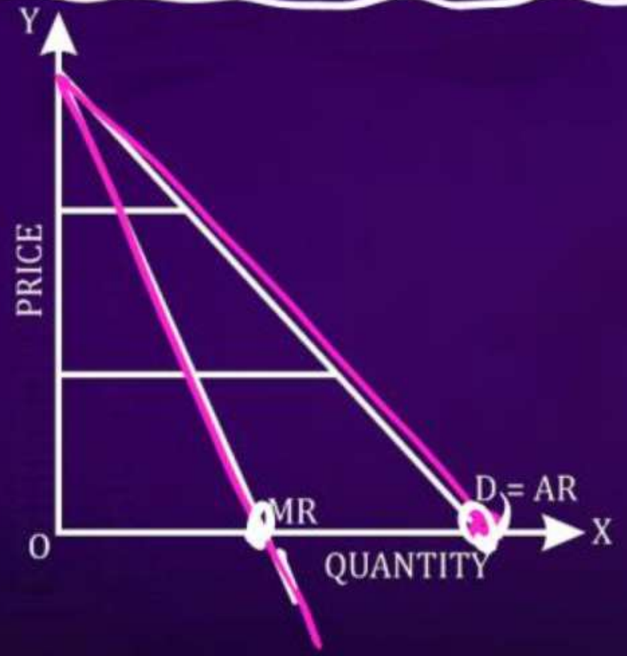
How do Monopolies Arise?

8. Very high start-up costs required to enter the market in a modest way and requirement of extraordinarily costly and sophisticated technical know-how, may discourage new Firms from entering the market.
9. Use of Anti-Competitive Practices or Predatory Tactics, (e.g. Limit Pricing or Predatory Pricing) intended to do away with existing or potential competition.
10. Business Combinations or Cartels where former Competitors co-operate on pricing or market share.

(Note: Cartel is illegal in most countries)

AR & MR under Monopoly

1. Both AR and MR are negatively sloped (downward sloping) curves.
2. The slope of the MR curve is twice that of the AR curve. MR curve lies half-way between the AR curve and the Y axis. i.e., it cuts the horizontal line between Y axis and AR into two equal parts.
3. AR cannot be zero, but MR can be zero or even negative.





Price Discrimination

It is a practice of charging different Prices from different buyers for Same Product.

Types of Monopolies

Simple monopoly	Discriminating monopoly
Charge Same Price from all Buyers Google, WhatsApp, Postal Charge	Electricity – Residential – Low Price – Commercial – High Price

Objectives of Price Discrimination

a. To earn maximum profit
b. To dispose off surplus stock
c. To enjoy economies of scale → $Q \uparrow \rightarrow AC \downarrow$
d. To capture foreign markets and dumping
e. To secure equity through pricing

By (S)

Conditions for Price Discrimination

(a) **Full control over supply:** Price discrimination is applicable only in monopoly situation, there is full control over the supply, where there are no rivals firms.

(b) **Division of market into two or more sub-markets:**

(c) **Different price elasticity under different markets:**

less Elastic DD → high Price

More Elastic DD → low price

(d) **No possibility to resale:** It should not be possible for the buyers of low-priced market to resell the product to the buyers of the high priced market.



Prof. Pigou classified the 3 Degrees Price Discrimination

(1) 1st Degree → → Consumer Surplus ↓ wipe off

(2) 2nd Degree → - Qty. based

(3) 3rd Degree →

↓

Location

Customer Segment

Question

#Q. Natural Monopoly arises when

A There is enormous goodwill enjoyed by a firm

B There are stringent legal and regulatory requirement

C There are very large Economies of Scale

D There are Business Combinations and Cartels



Question #Q. Price discrimination is related to

A Time

B Size of the purchase

C Income

D Any of the above



→ Normal Profit ⟹ $P = AC$ or $AR = AC$

→ Positive Economic Profit
OR
Supernormal / Abnormal Profit
} $P > AC$

→ Losses OR Negative Economic Profit ↘

$P < AC$

MONOPOLY

Short-Run

(1) Normal Profit (P = AC)

(2) Loss (P < AC)

(3) Super Normal Profit (P > AC)

Long-Run

Super Normal Profit P > AC

Why?

BLOCKED ENTRY

Equilibrium of Firm

A Situation where a firm is doing its best → Maximising Profit

OR

Minimizing Losses

Equilibrium of Firm → Two Conditions

Monopoly

1st Order Condition: MR = MC

2nd Order Condition:

MC Curve must cut MR curve from below

OR

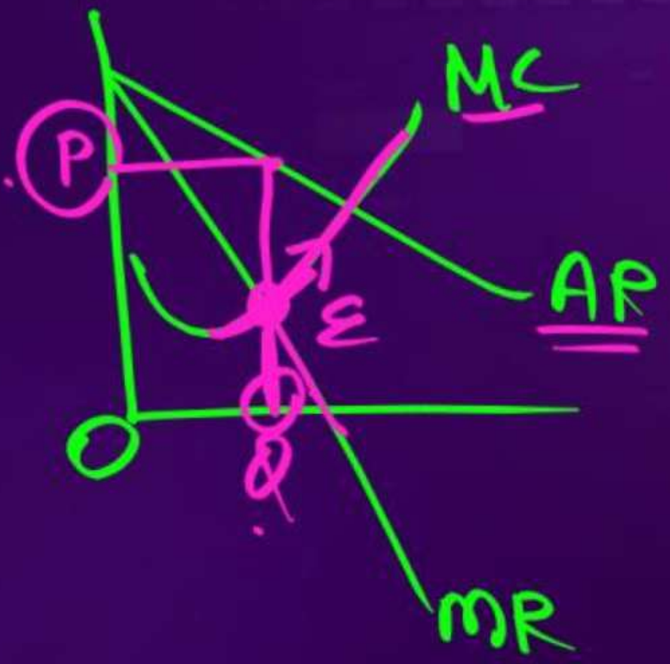
MC must be rising after MR = MC

OR

MC > MR after MR = MC

OR

MC should have a positive slope



Equilibrium of Firm → Two Conditions

1st Order Condition : MR = MC

2nd Order Condition:

MC Curve must cut MR curve from below

OR

MC must be rising after MR = MC

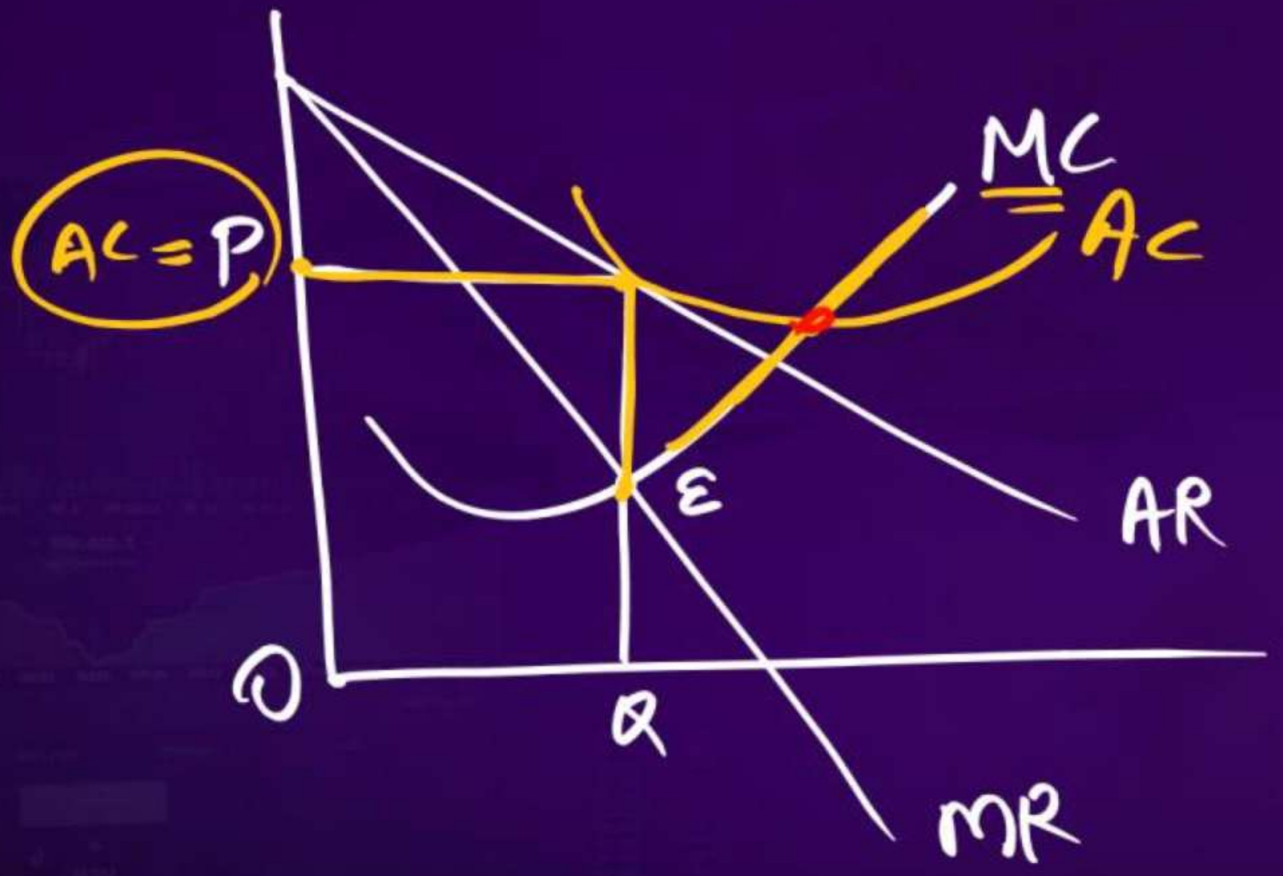
OR

MC > MR after MR = MC

OR

MC should have a positive slope

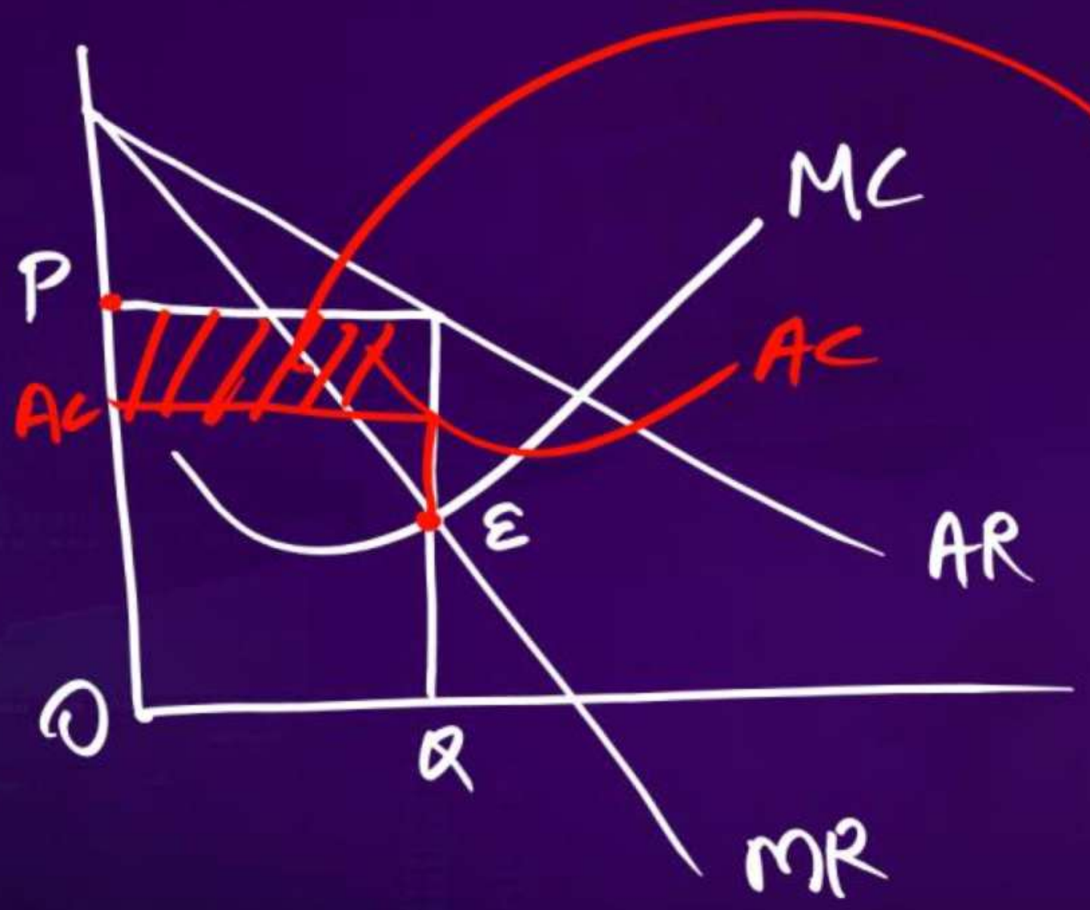
Short-Run Equilibrium Under Monopoly



Normal Profit

P = AC

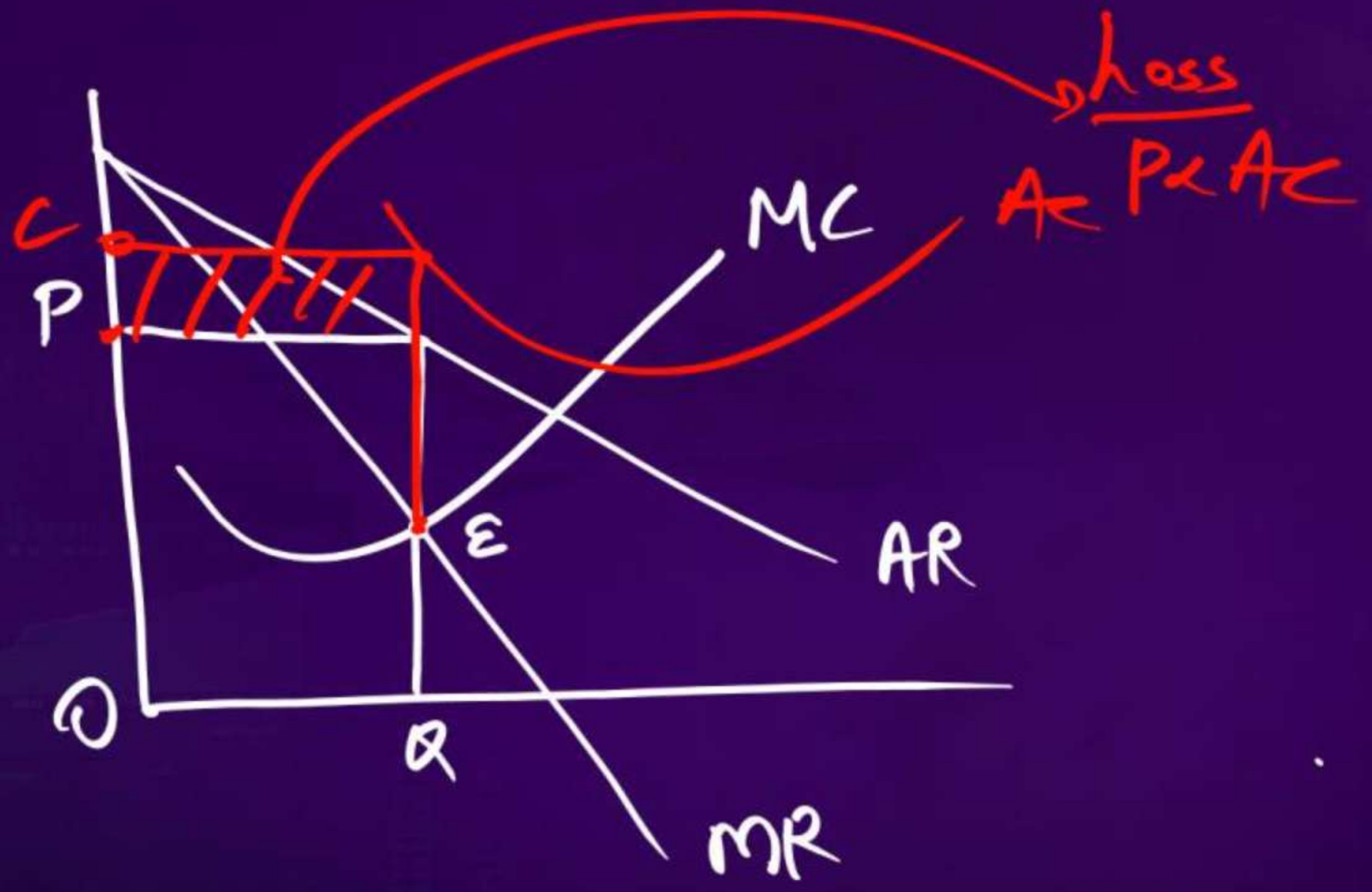
Short-Run Equilibrium Under Monopoly



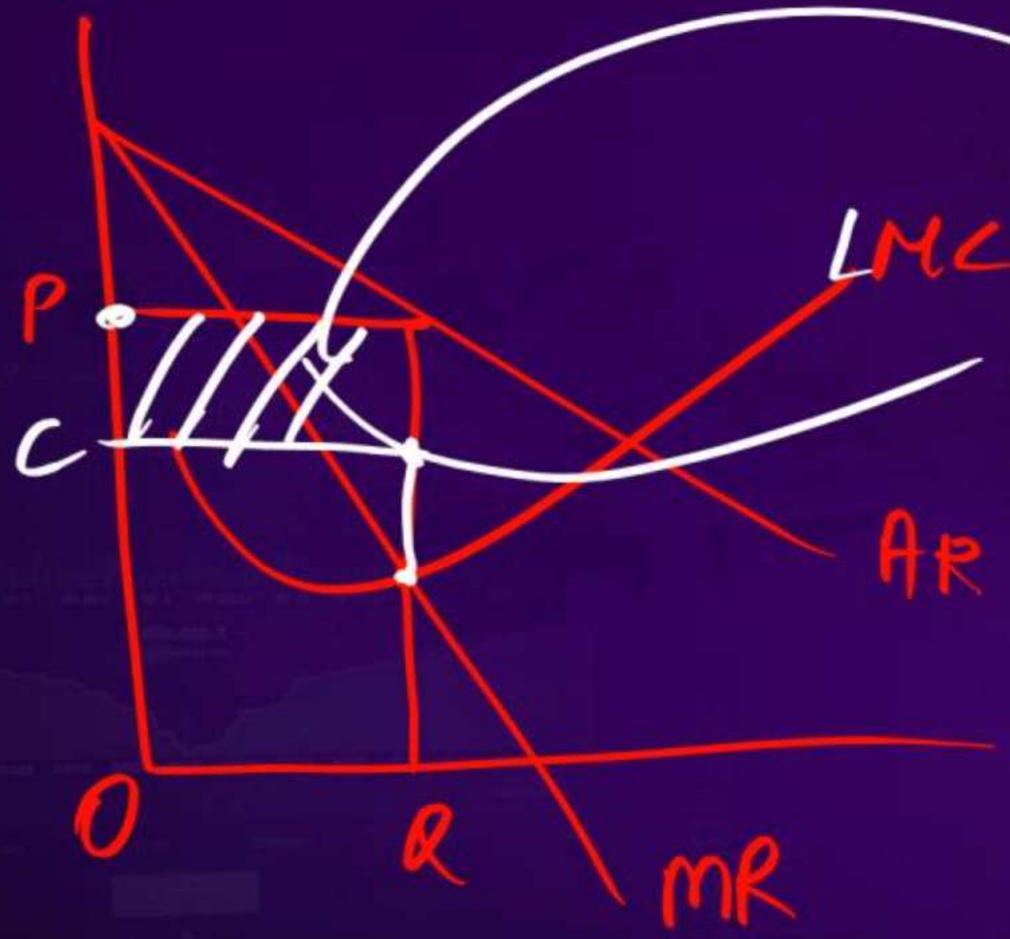
Supernormal Profit

P > AC

Short-Run Equilibrium Under Monopoly



Long-Run Equilibrium Under Monopoly



Supernormal Profit

$P > AC$


Dove
coconut milk
medimix
AYURVEDIC
Himalaya
SINCE 1930
Neem & Turmeric Soap
Vivel
SANTOOR
CINTHOL
CONFIDENCE
No.1
NEW
Lifebuoy
Care
VENUS
Johnson's
baby
milk soap
Dettol
skincare
with moisturizers
Fiama
Di WILLS
LUX
Hamam
NEEM
PATANJALI
Rose Kanti
POND'S
SKIN
FIT
NIVEA
creme care
Liril

Monopolistic Competition

In this market, Many Sellers are Selling a product which different in height, weight, color, Size, Shape etc.

Differentiated / Heterogeneous Product

Features of Monopolistic Competition

(i) **Large number of sellers:** In a monopolistically competitive market, there are large number of independent firms who individually have a small share in the market.

(ii) **Product differentiation:** → Heterogenous Product → Elastic Demand.

Substitute $E_p > 1$

(iii) **Freedom of entry and exit :** Barriers to entry are comparatively low and new firms are free to enter the market if they find profit prospects and existing firms are free to quit.

(iv) **Non-price competition:** → competition is based on Advertisement - Promotion

Monopolistic Competition

Short-Run

(1) Normal Profit (P = AC)

(2) Loss (P < AC)

(3) Super Normal Profit (P > AC)

Long-Run

Normal Profit P=AC



Oligopoly

- Oligopoly → **'competition among few sellers'**
- Examples – **Airlines, telephone connection, petroleum refining, power generation, cold drinks, automobile** and **Internet service providers etc.**

Oligo → few

Poly - firms

2 – 10

few large firms

Features / Characteristics of oligopoly

(1) Strategic Interdependence	Each seller is **big enough to influence market.** A firm has to **necessarily respond to its rivals' actions** and simultaneously **rivals also respond to the firm's actions.**
(2) Importance of advertising and selling costs	Firms use **aggressive and defensive marketing** weapons to **gain greater market share.** Firms **avoid price cutting** and try to compete **on non-price** basis.
(3) Group Behaviour	No generally accepted theory of group behavior. Firms may agree to behave together as a group in their common interest. May or may not have a leader.

Types of Oligopoly

(1) Pure and Impure oligopoly	**Pure oligopoly or perfect oligopoly** are the firms under oligopoly selling **homogeneous product** e.g. petroleum, steel, and aluminum industry.
(2) Open and closed oligopoly	**Open oligopoly → new firms can enter** market and compete with existing firms.
	In closed oligopoly **entry is restricted.**
(3) Collusive and competitive oligopoly	When few firms of oligopoly market come to common understanding → **deciding price or output or both together,** it is collusive oligopoly.
	When there is **absence of such an understanding** among the firms and they compete with each other, it is called competitive oligopoly.
(4) Partial and Full	Oligopoly is partial when **industry is dominated by one large firm** → looked upon as leader of group. Dominating firm will be **price leader.**
	Full oligopoly → **Absence of Price Leadership.**
(5) Syndicated and organised oligopoly	Syndicated oligopoly → Firms Sell their product **through a centralized syndicate.**
	Organized there is **absence of such an understanding** among the firms and they compete with each other, it is called competitive oligopoly.

Question #Q. Talcum powder market is an example of which of the following market?

A Imperfect oligopoly

B Collusive Oligopoly

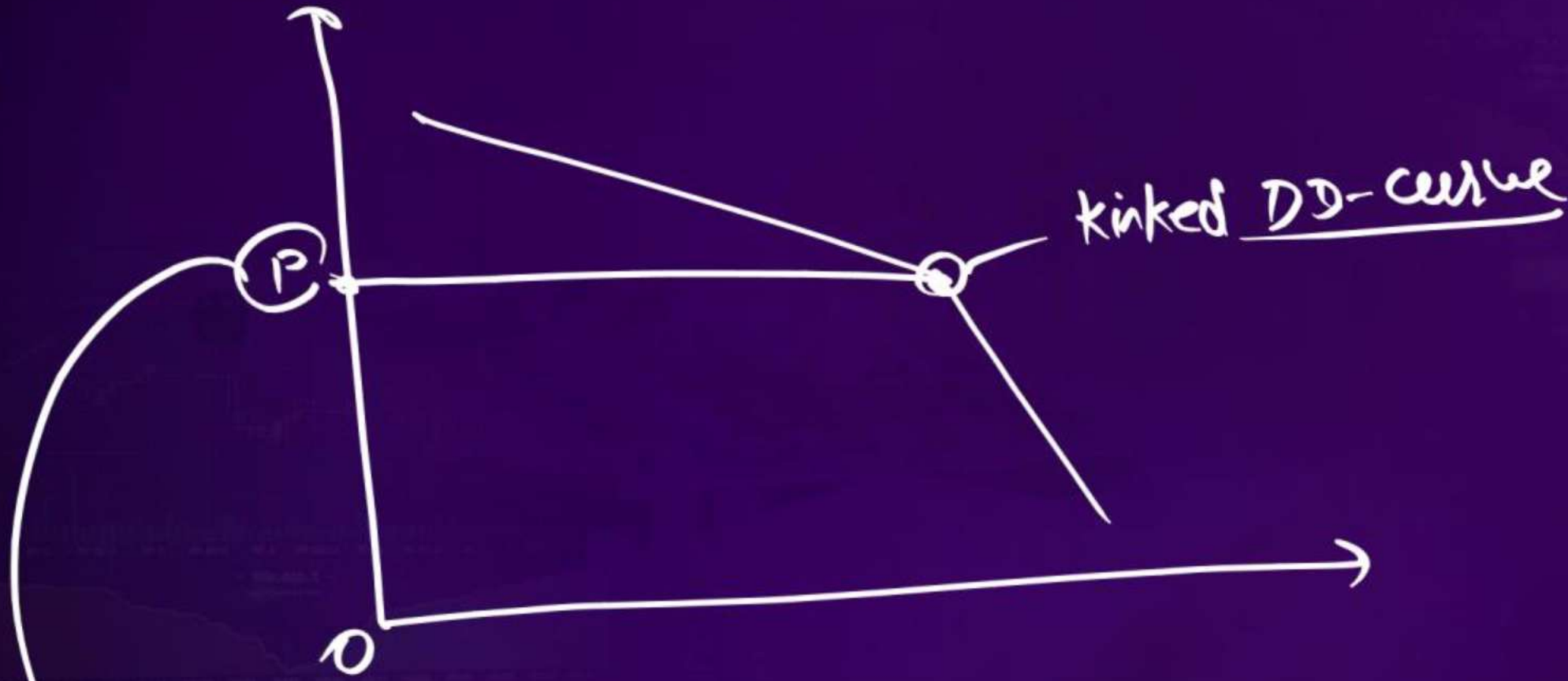
C Open Oligopoly

D Close Oligopoly

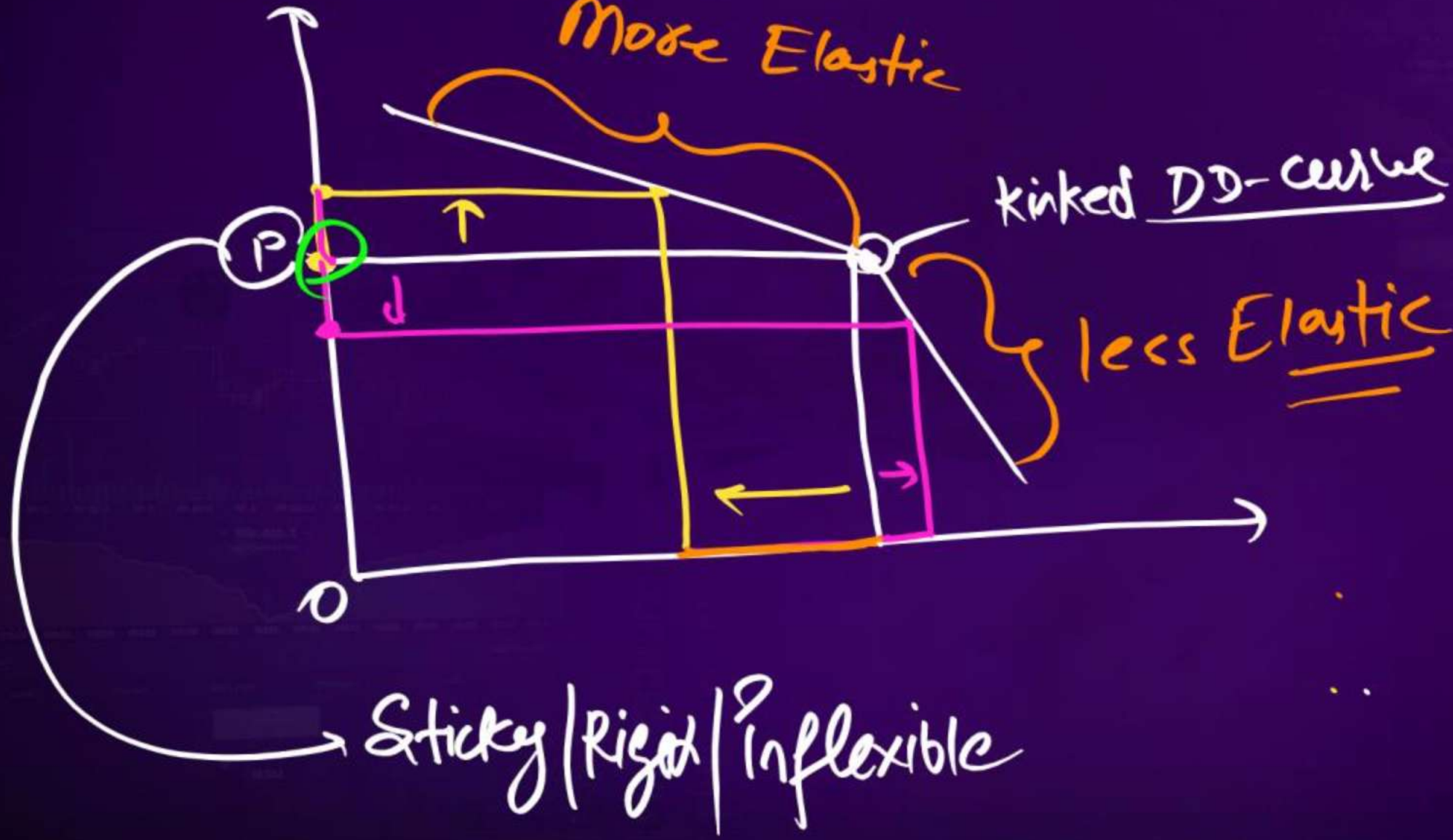


Oligopoly - demand curve cannot determined fully.

Monopoly - No Supply curve Why? Price discrimination.



Sticky / Rigid / Inflexible


More Elastic
kinked DD-curve
P
d
less Elastic
O
Sticky / Rigid / Inflexible

Oligopoly Models

(1) **Ignore** firm's **inter dependence**

(2) (a) Cournot model → **firms' control variable** is **output.** They do **not collude/co-operate.**

(b) Stackelberg's model **leader decides** output and rest of firms are **followers.**

(c) Bertrand model, **price** is **control variable.**

(3) **Enter into agreement** and try to **pursue their common interests. Eg-OPEC.**

Kinked Demand Curve

- As per **Paul A. Sweezy,** prices in oligopolistic industries **remain sticky** or **inflexible.**
- Price rigidity under oligopoly is explained by **kinked demand curve hypothesis (Sweezy's Model).**
- Kinked demand curve faced by an oligopolist has a 'kink' at the level of the prevailing price.
  - **Segment** of demand curve **above prevailing price** level is **highly elastic** (when a firm raises price, competitors do not follow)
  - **segment** of demand curve **below prevailing price** level is **inelastic.** (when a firm decreases price, competitors will follow)

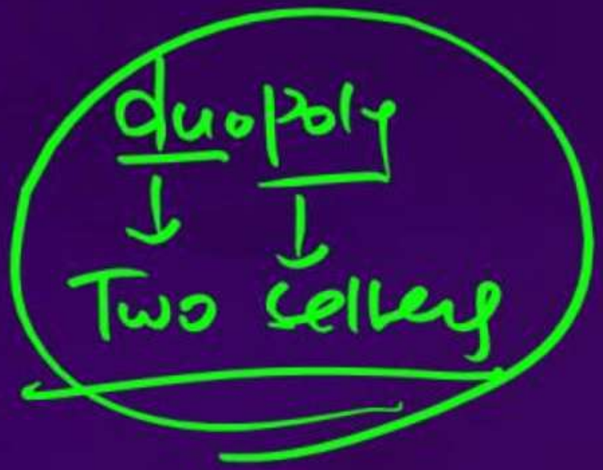
Monopsony → Mono + Psony ⟹ Single Buyer

Oligopsony → Oligo + Psony ⟹ Few Buyer

Bilateral Monopoly → One Buyer – One Seller

Poly – Firm

Psony → buyer



Question

#Q. Combination of Monopoly market and Monopsony Market is called as:

Single seller — Single buyer

A. Duopoly Market

B. Oligopoly Market

C. Bilateral Monopoly Market ✓

D. Monopolistic Market



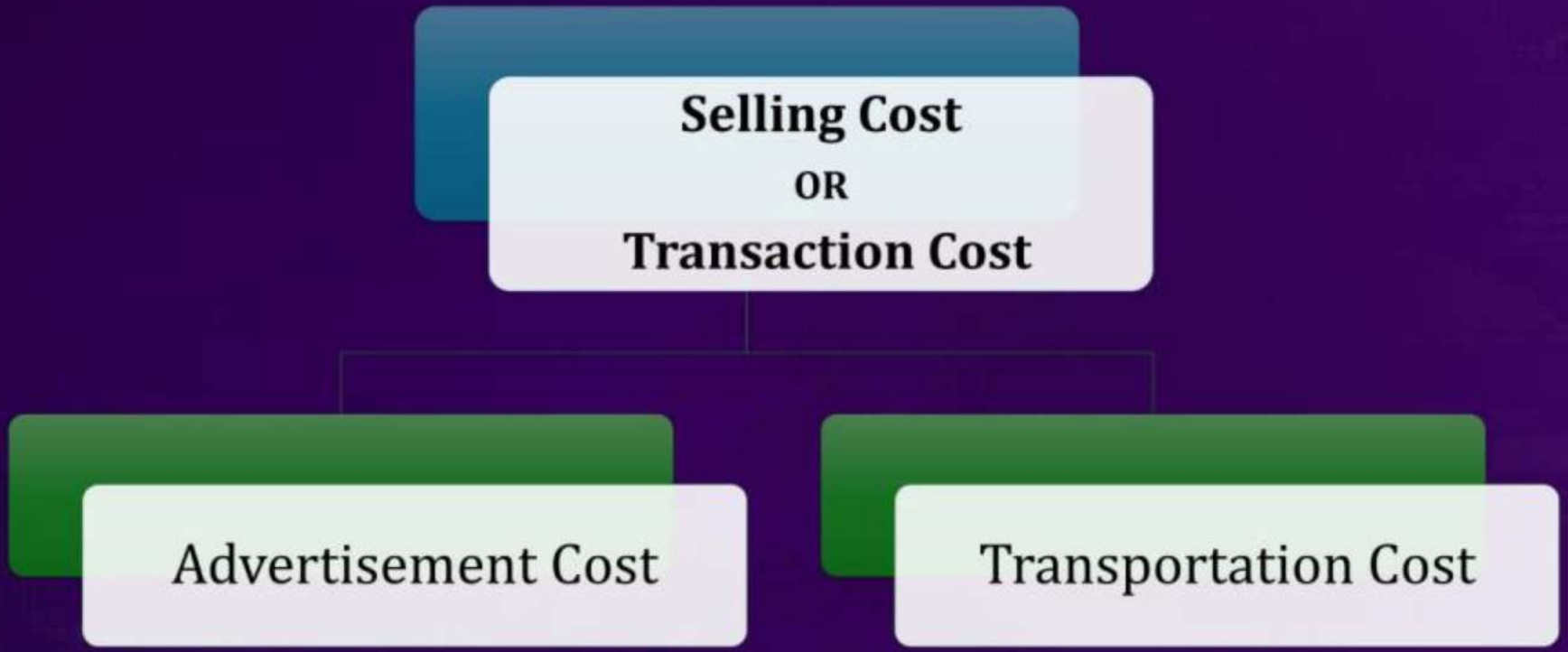
Game Theory in Oligopoly

Theory of Games provide a different approach to the analysis of strategic behaviour of the oligopolists under uncertainty. It was developed by **Von Neumann and Oskar Margentern** in 1944. The subject of Games Theory is rational behavior in situations of conflicts-military combat political rivalry, struggles of firms for sales and profits. Economic theory situations of duopoly and oligopoly often fit into this category.

Oligopolistic firms also select strategies in the face of uncertainty as to how their rivals will respond to their actions.

Features / Characteristics of Perfect Competition		
1.	Large Number of Buyers and Sellers	➢ Share of **each seller** and **buyer** in market is too small → single buyer and single seller is **unable to influence existing price and quantity.**
2.	Homogenous or Identical Product Like cooking gas	➢ **Perfect Substitutes** ➢ **Perfectly elastic demand** $E_p = \infty$
3.	Free Entry and Exit	➢ **There are No legal or market related barriers to entry and no special costs** to enter an industry.
Above 3 characteristics are conditions for **pure competition.**		




Selling Cost
OR
Transaction Cost
Advertisement Cost
Transportation Cost

4.	Perfect knowledge of market condition	➢ **Both buyers and sellers have full information related to their decision to buy or sell**
5.	Very low transaction costs	➢ **No advertisement** required
6.	All firms individually are price takers	➢ Firms **accept price determined by market forces** ➢ Price taking **applies to consumers** as well ➢ If any **seller raises his price,** he would **lose his customers**

Perfect Mobility of Factors

- Perfect competition is a **myth.**
- Eg-**agricultural products**, financial instruments (**Stock**, bonds, **foreign exchange**), precious metals (gold, silver, platinum) the above examples approach the condition of perfect competition.



Question #Q. Price elasticity of demand of a firm under perfect competition will be:

[Jan. 2025]

A. Very Large

B. Infinite $E_p = \infty$

C. Large

D. Small



Equilibrium of Firm → Two Conditions

1st Order Condition : MR = MC

2nd Order Condition:

MC Curve must cut MR curve from below

OR

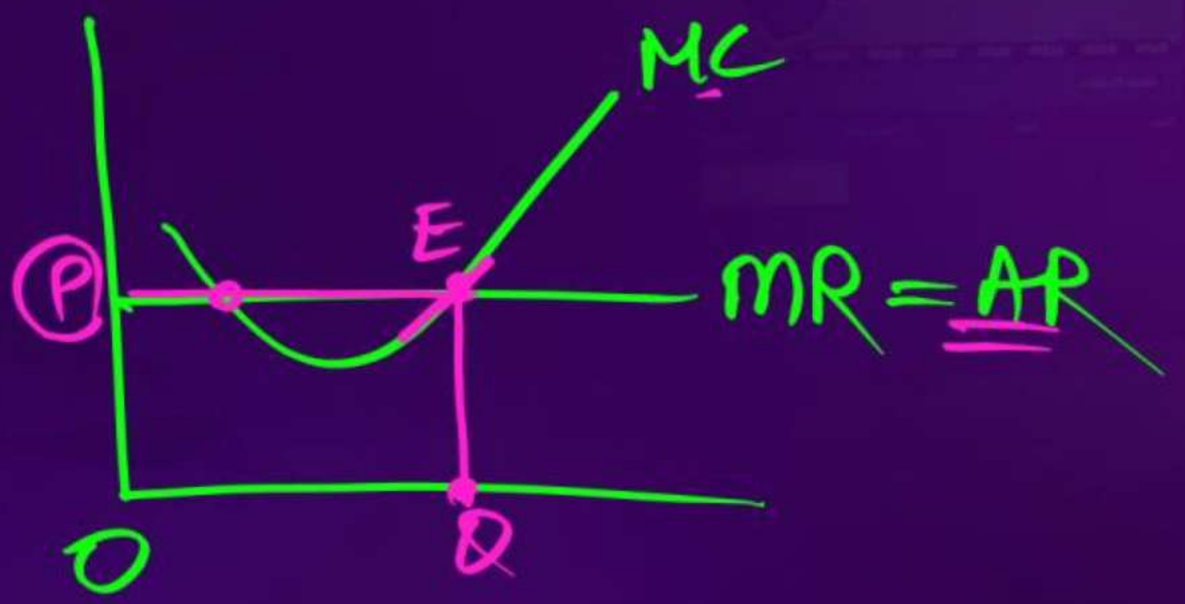
MC must be rising after MR = MC

OR

MC > MR after MR = MC

OR

MC should have a positive slope



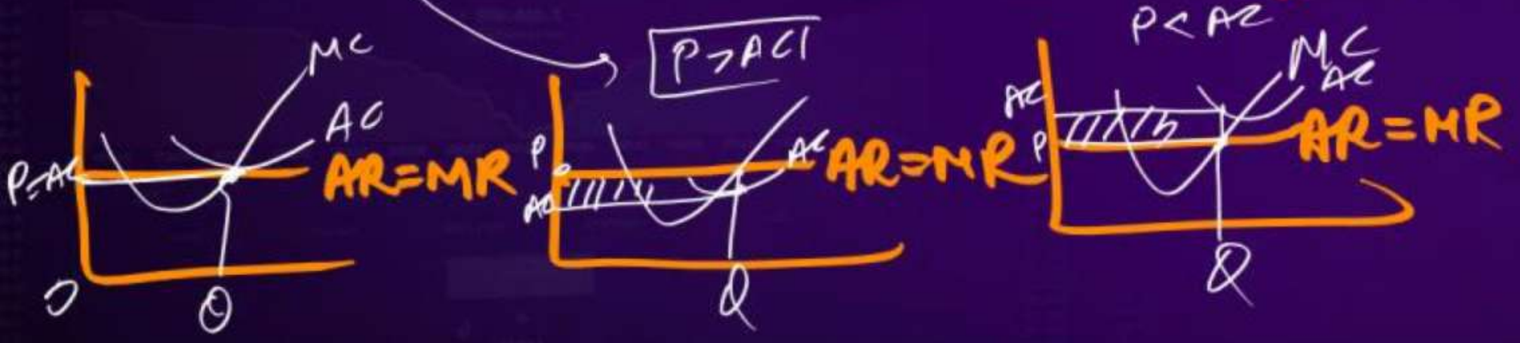
Firm under Perfect Competition

Short-Run

1. Loss [P < AC]
2. Super Normal Profit [P>AC]
3. Normal Profit [P = AC]

Long-Run

Normal Profit [P = AC]

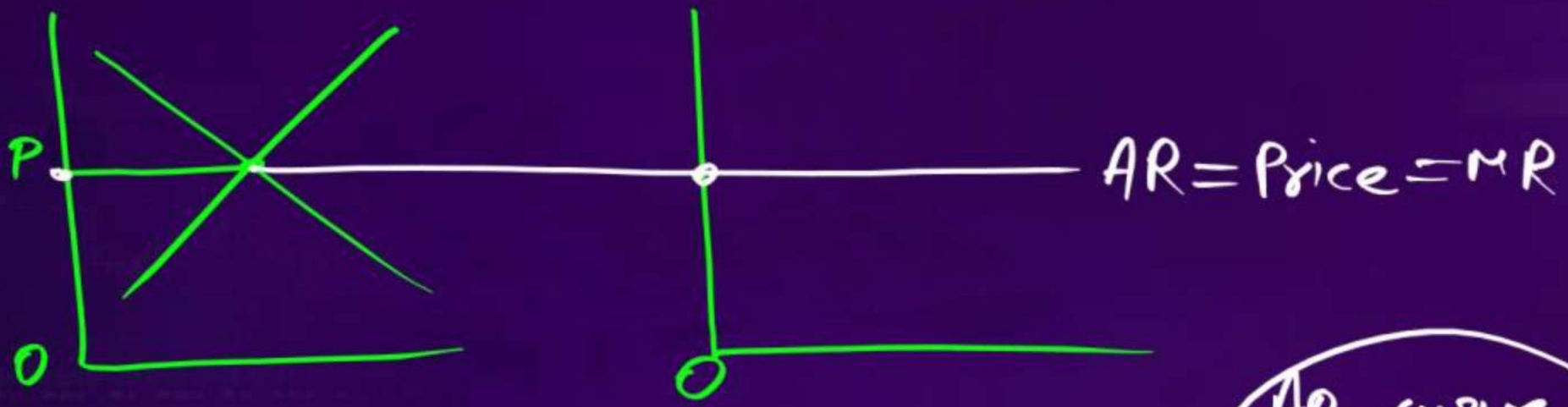




Perfect Competition

Industry

Firm



AR-curve
=
DD-curve

Long Run Equilibrium of the Industry

A long-run competitive equilibrium of a perfectly competitive industry occurs when three conditions hold:

1. All firms in the industry are in equilibrium i.e. all firms are maximizing profit.
2. No firm has an incentive either to enter or exit the industry because all firms are earning zero economic profit or normal profit.
3. The price of the product is such that the quantity supplied by the industry is equal to the quantity demanded by consumers.

S=D

Long Run Equilibrium of the Industry

(a) The output is produced at the minimum feasible cost.

(b) Consumers pay the minimum possible price which just covers the marginal cost i.e. MC = AR. (P = MC)

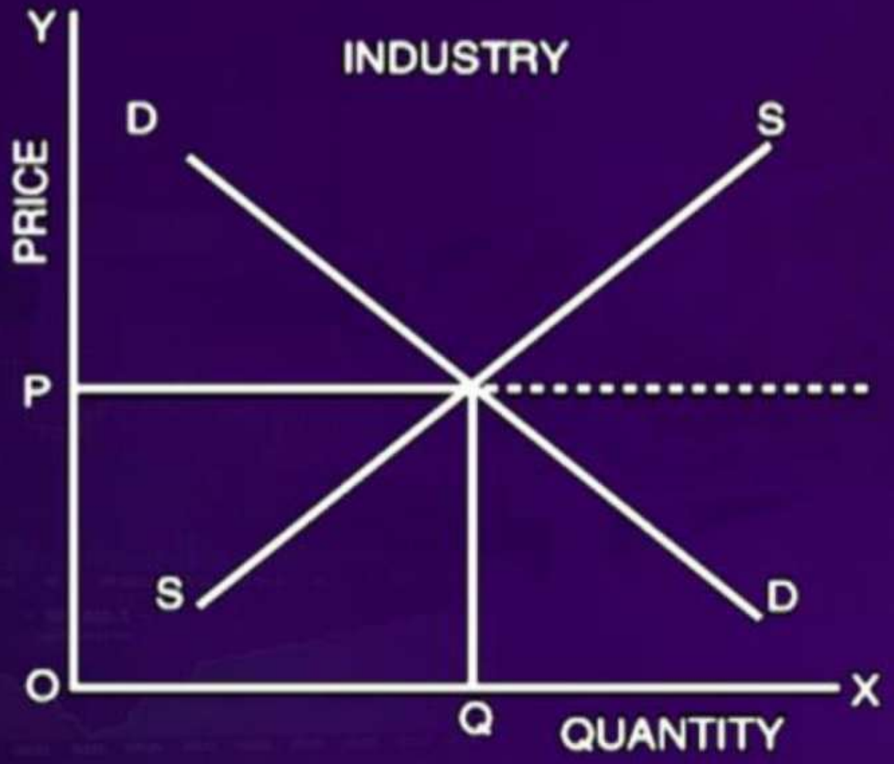
(c) Plants are used to full capacity in the long run, so that there is no wastage of resources i.e. MC = AC.

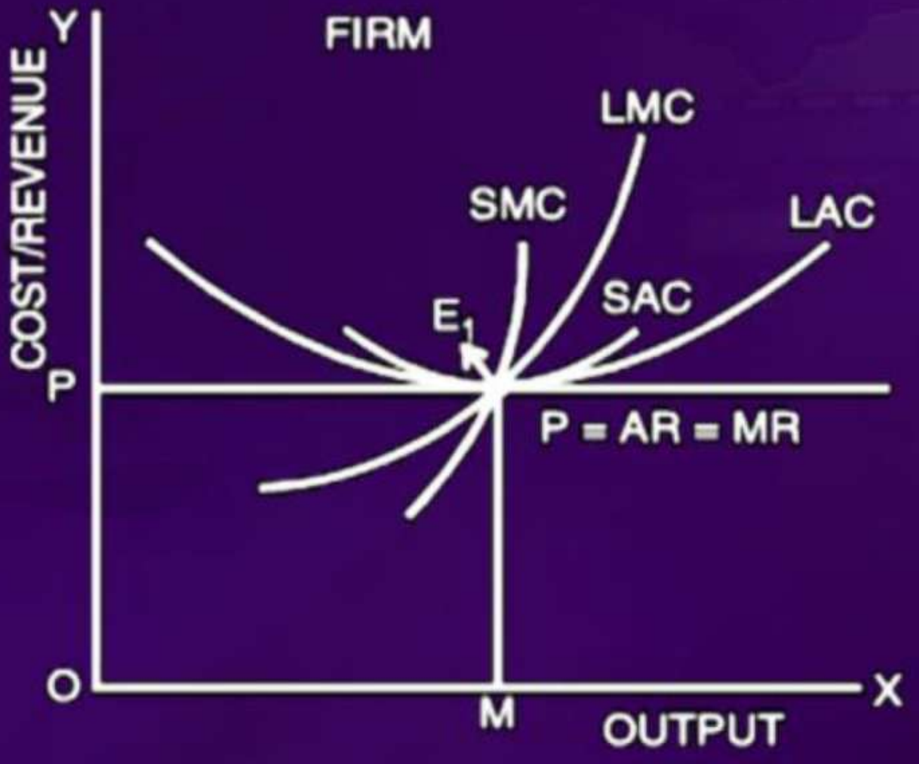
(d) Firms earn only normal profits i.e. AC = AR.

(e) Firms maximize profits (i.e. MC = MR), but the level of profits will be just normal.

(f) There is optimum number of firms in the industry.

Long Run Equilibrium of the Industry





Long Run Equilibrium of the Industry

In other words, in the long run,

LAR = LMR = P = LMC = LAC and there will be optimum allocation of resources.

It should be remembered that the perfectly competitive market system is a myth. This is because the assumptions on which this system is based are never found in the real world market conditions.

Question #Q. The supply curve of a perfectly competitive firm in the short run is [Sept. 2024]

A. The portion of the Marginal Cost curve which lies below the minimum point of Average Variable Cost Curve

B. The portion of the Marginal Cost curve which lies above the minimum point of Average Variable Cost Curve (B)

C. The portion of the Average Cost curve which lies below the minimum point of Average Variable Cost Curve ✗

D. The part of the Average Cost curve which lies above the Marginal Cost Curve



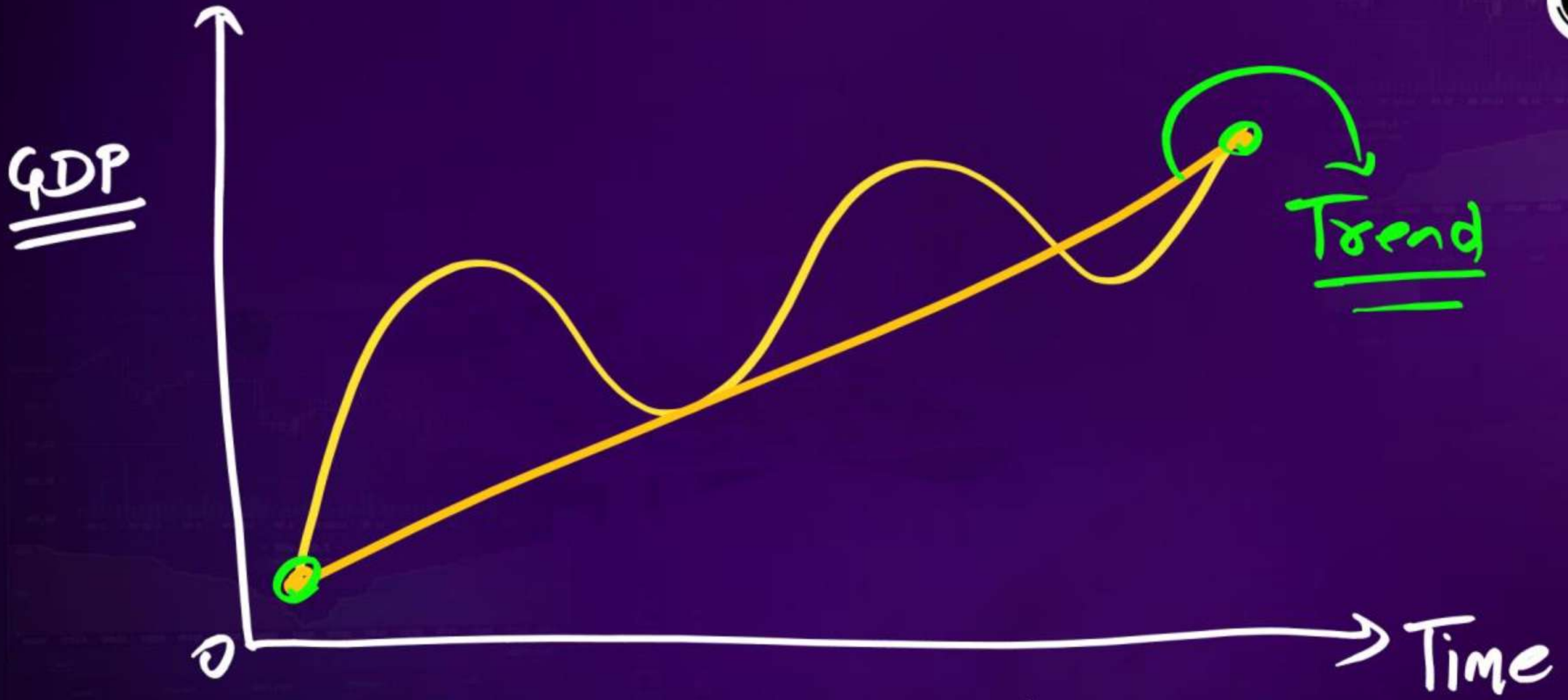


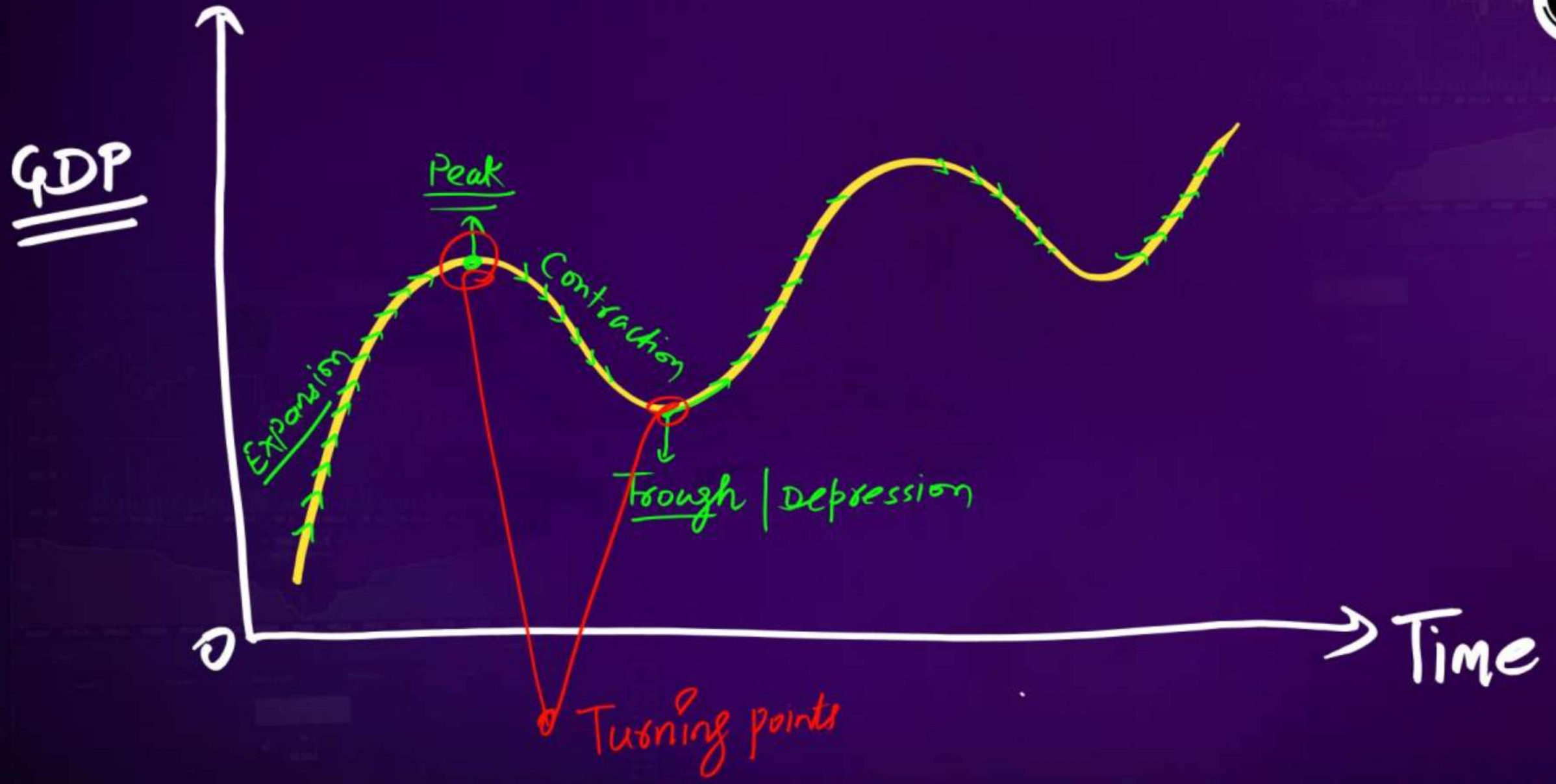
Chapter - 5

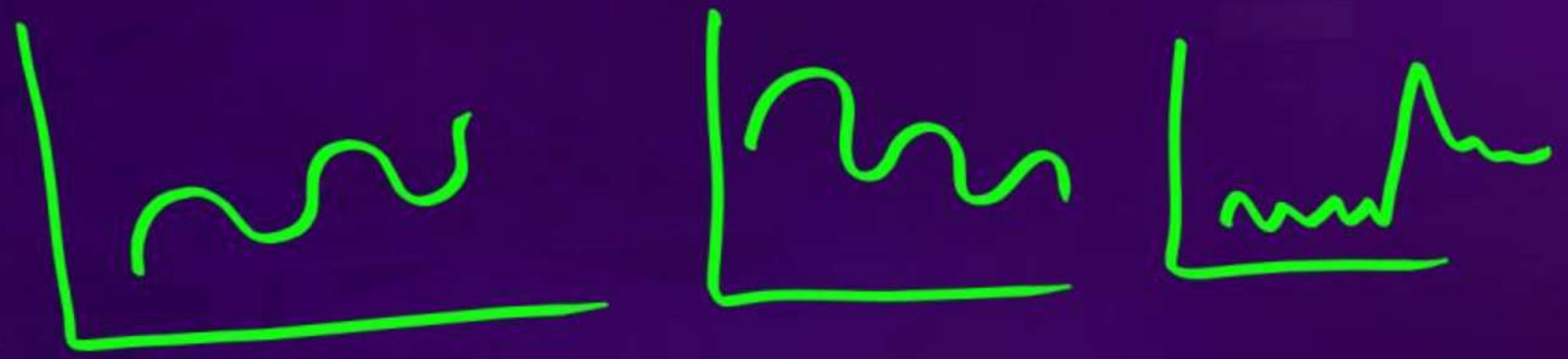
Business Cycle

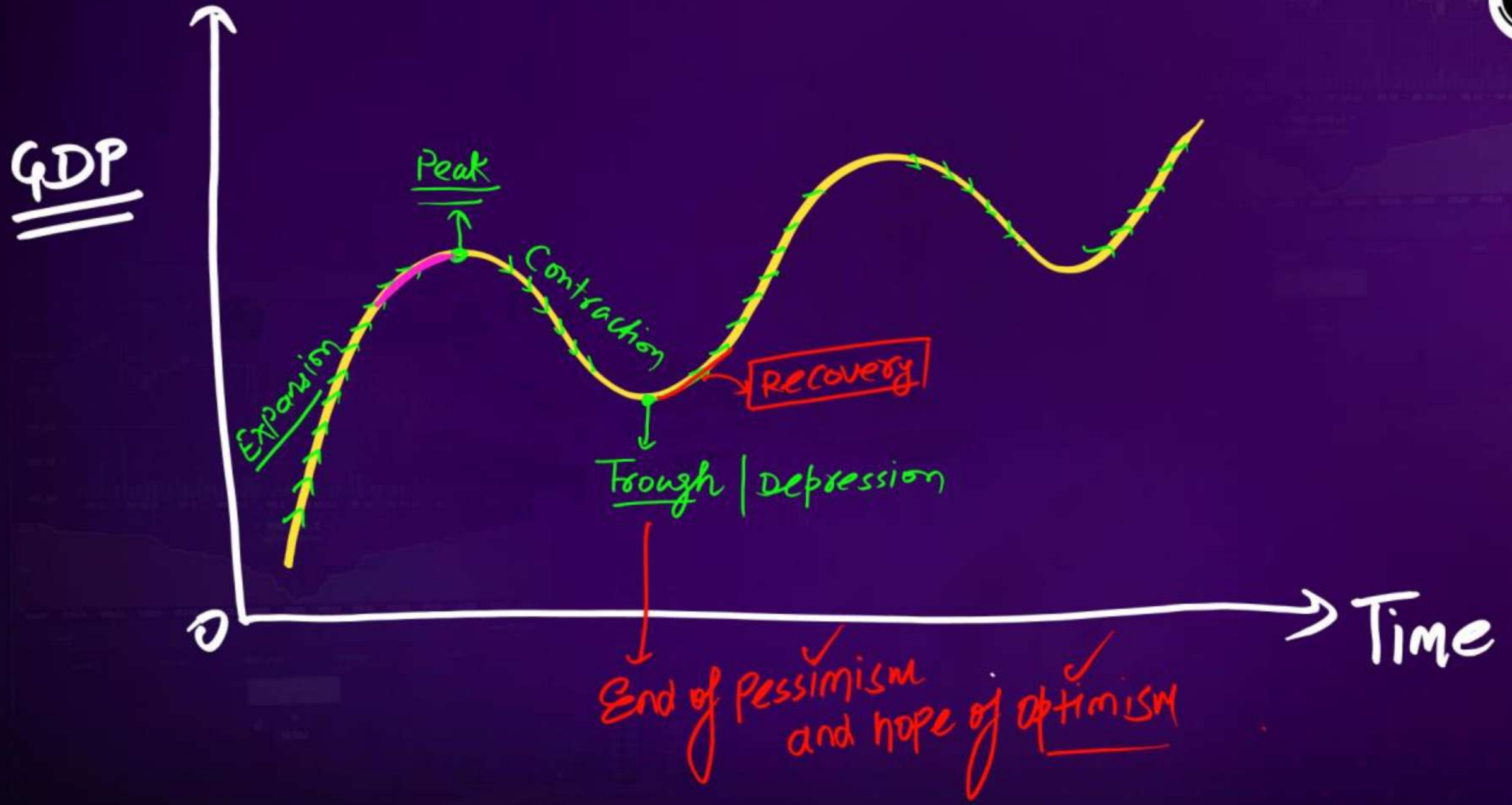
OR

Toade cycle


GDP
Trend
O
Time


GDP
Peak
Expansion
Contraction
Trough | Depression
Time
Turning points




GDP
Peak
Contraction
Expansion
Recovery
Trough | Depression
Time
End of pessimism
and hope of optimism

Phases of Business Cycle

(1) Expansion (also called Boom or Upswing)
(2) Peak or Prosperity
(3) Contraction (also called downswing or Recession)
(4) Trough or Depression

Expansion / Boom / Upswing	Peak / Prosperity	Contraction / Recession / Downswing	Trough / Depression
Everything Positive	Highest point/ the top point which Marks the end of expansion	Everything Negative / Significant Decline	Extremely Sluggish Economic Activities
Increasing Prosperity and standard of living		Increasing Demand is Halted	Growth rate Negative
Increase in GDP and National Output		Demand starts decreasing	National Income falls
Increase in Employment		Supply Exceeds Demand	Expenditure falls
Increase in Consumer and capital expenditure		Fall in Profits	Interest Rate falls
Rising Sales and Profit		Fall in Investments	Demand Decreases
Rising Stock prices and Rising business profits and rising business confidence		Fall in Income	Firms forced to Shutdown

Expansion / Boom / Upswing	Peak / Prosperity	Contraction / Recession / Downswing	Trough / Depression
Rising bank credit	Highest point/ the top point which Marks the end of expansion	Fall in investor confidence	Bankruptcies of companies increases
Involuntary unemployment is zero		Fall in employment	Unemployment Increases
Any unemployment that exist is Frictional or structural		Rise in Unemployment	Liquidations Increases
Lack of Skills / Gap Strike war		Fall in Output	Trough - When depression or aggregate economic activity touches its lowest point

Features of Business Cycles

Different business cycles differ in duration and intensity. But there are certain features which they commonly exhibit:

(a) Business cycles occur periodically although they do not exhibit the same regularity. The duration of these cycles vary. The intensity of fluctuations also varies.

(b) Business cycles have distinct phases of expansion, peak, contraction and trough. These phases seldom display smoothness and regularity. The length of each phase is also not definite.

(c) Business cycles generally originate in free market economies. They are pervasive as well. Disturbances in one or more sectors get easily transmitted to all other sectors.

Features of Business Cycles

(d) Although all sectors are adversely affected by business cycles, some sectors such as capital goods industries, durable consumer-goods industry etc. are disproportionately affected. Moreover, compared to agricultural sector, the industrials sector is more prone to the adverse effects of trade cycles.

(e) Business cycles are exceedingly (complex phenomena) they do not have uniform characteristics and causes. They are caused by varying factors. Therefore, it is difficult to make an accurate prediction of trade cycles before their occurrence.

(f) Repercussions of business cycles get simultaneously felt on nearly all economic variables viz. output, employment, investment, consumption, interest, trade and price levels.

Features of Business Cycles

(g) Business cycles are contagious and are international in character. They begin in one country and mostly spread to other countries through trade relations. For example, the great depression of 1930s in the USA and Great Britain affected almost all the countries, especially the capitalist countries of the world.

(h) Business cycles have serious consequences on the well-being of the society.

Question

#Q. _____ Phase of business cycle marks the end of pessimism and the becoming of optimism.

A Recovery

B Depression

C Upswing

D Downswing



Question

#Q. A significant decline in general economic activity [redacted]

A Business cycle

B Contraction phase (B)

C Recession

D Recovery





Question

#Q. A significant decline in general economic activity extending over a period of time is

A Business cycle

B Contraction phase

C Recession

D Recovery



Question

#Q. The lowest point in the business cycle is referred to as the

A Expansion

B Boom

C Peak

D Trough ✓



Question

#Q. Industries that are extremely sensitive to the business cycle are the

A Durable goods and service sectors

B Non-durable goods and service sectors

C Capital goods and non-durable goods sectors

D Capital goods and durable goods sectors ✓



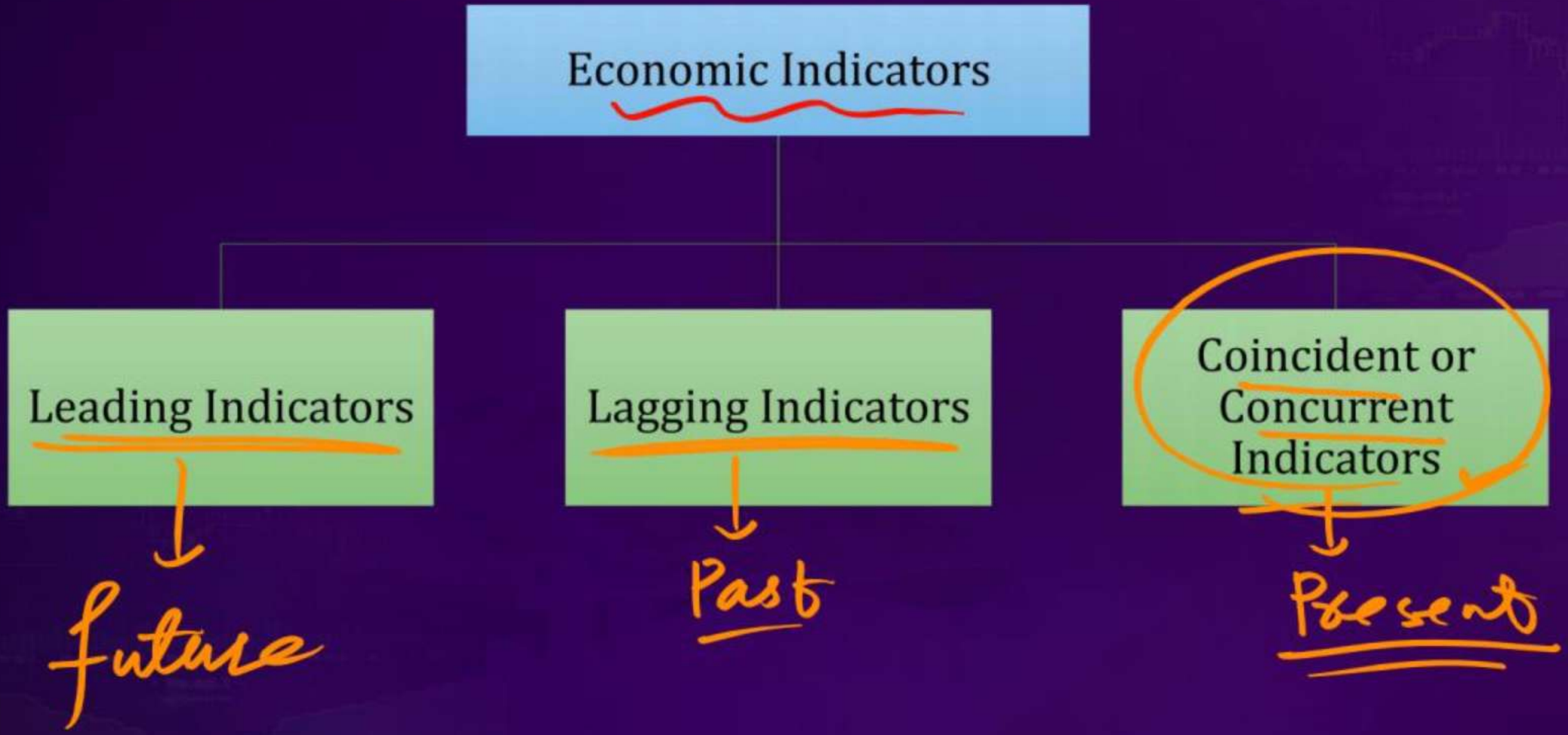
Name of the Economists and Their Quotations

Lower aggregate expenditure is the reason for massive decline in Income and employment	**J.M. Keynes**
Trade Cycle is purely Monetary phenomenon	**Hawtrey**
Trade cycle is result of innovation	**Schumpeter**
Business Activities are affected by wave of optimism and pessimism	**A.C. Pigou**

AD

Great Depression
1930
AD↓
15% ↓ GDP World

Cobweb Theory
Nicholas Kaldor


Economic Indicators
Leading Indicators
Lagging Indicators
Coincident or Concurrent Indicators
future
Past
Present

Types of Indicators

Leading Indicators

A leading indicator is a measurable economic factor that changes before the economy starts to follow a particular pattern or trend.

In other words, those variables that change before the real output changes are called 'Leading Indicators'. Leading Indicators often change prior to large economic adjustments.

Examples

- Changes in stock prices,
- Profit margins and profits
- Indices such as housing, interest rates and prices
- Value of new orders for consumer goods, new orders for plant and equipment, building permits for private houses,
- Fraction of companies reporting slower deliveries,
- Index of consumer confidence and money growth rate

Lagging Indicators

Meaning

Lagging Indicators reflect the economy's historical performance and changes in these indicators are observable only after an economic trend or pattern has already occurred. In other words, variables that change after the real output changes are called 'Lagging Indicators'.

Examples

- Unemployment
- Corporate profits
- Labour cost per unit of output
- Interest Rates
- The consumer price Index and
- Commercial Lending Activity

Coincident Indicators

If leading indicators signal the onset of business cycles, lagging indicators confirm these trends.

Coincident Indicators

Coincident economic indicators, also called concurrent indicators, coincide or occur simultaneously with the business-cycle movements. Since they coincide fairly closely with changes in the cycle of economic activity, they describe the current state of the business cycle.

Examples

- Gross Domestic Product
- Industrial production, inflation
- Personal Income
- Retail sales and
- Financial market trends such as stock market prices

Significance

These indicators give information about the rate of change of the expansion or contraction of an economy more or less at the same point of time it happens.

Causes of Business Cycles

- Internal Causes → Endogenous
- External Causes

Exogenous

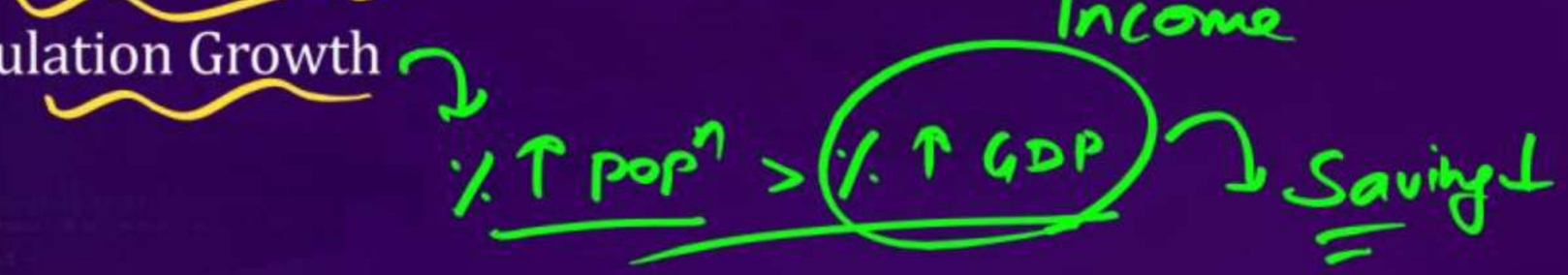


Internal Causes

- Fluctuations in Effective Demand
- Fluctuations in Investment
- Variations in government spending
- Macroeconomic policies
- Money Supply
- Psychological Factors

External Causes

- War
- Post War Reconstruction
- Technology Shock
- Natural Factors
- Population Growth



Question

#Q. Endogenous factors refers to _____ causes:

A Internal ✓

B External

C Economic

D Ecological



Question

#Q. Which of the following is not an example of coincident indicator?

A Industrial production

B Inflation

C Retail sales

D New orders for plant and equipment D



Question

#Q. According to ____? trade cycles occur due to onset of innovations.

A Hawtrey

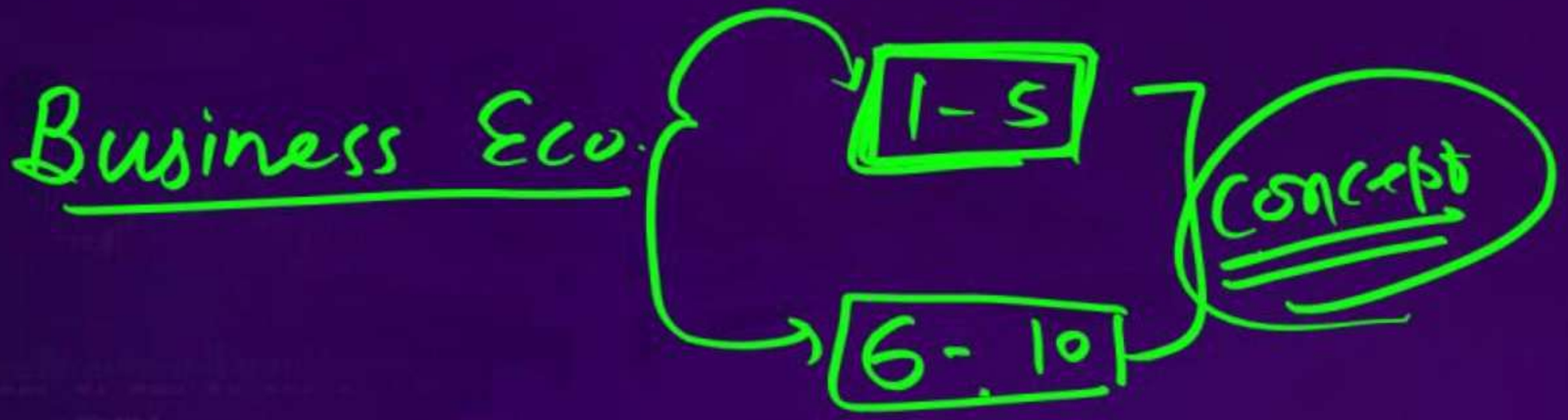
B Adam Smith

C J M Keynes

D Schumpeter



2 Mins. Summary



THANK YOU