Economics Note and Question Solve

Chapter 3:

Types of Goods (With Examples)

1. Normal Goods: Normal goods are goods whose demand increases when people's income increases.

Example: Branded clothes, fresh fruits, good quality rice. When income rises → people buy more of them.

2. Luxury Goods: Luxury goods are high-quality goods that people buy more of when their income increases. These goods are not necessary for basic living.

Example: Gold jewelry, luxury cars, expensive watches.

3. Inferior Goods: Inferior goods are goods whose demand decreases when income increases. People buy less of them when they become richer.

Example: Local brand noodles, low-quality rice, second-hand clothes.

4. Giffen Goods: Giffen goods are a special type of inferior goods where demand increases even when the price rises. This happens mostly among very poor households.

Example: Low-quality rice or bread in extremely poor communities.

5. Complementary Goods: Complementary goods are goods that are used together. If the demand for one increase, the demand for the other also increases.

Example: Car and petrol, tea and sugar, pen and ink.

6. Substitute Goods: Substitute goods are goods that can replace each other. If the price of one increase, people switch to the other.

Example: Tea and coffee, butter and margarine.

7. Ordinary Goods: Ordinary goods follow the law of demand:

When price increases → quantity demanded decreases,

When price decreases → quantity demanded increases.

Example: Most daily items like rice, milk, soap, vegetables.

Which Goods Are Most Similar?

✓ **Normal goods and luxury goods:** Both have higher demand when income rises, but luxury goods are higher-end.

✓ **Inferior goods and Giffen goods:** Giffen goods are a special type of inferior goods.

✓ **Complementary goods and substitute goods:** These two are related to consumer choices in the market (though opposite in nature).

Which Goods Are Not Similar at All?

✗ **Complementary goods vs. Substitute goods:** One is used together, the other replaces the other.

✗ **Normal goods vs. Inferior goods:** Normal goods increase with income; inferior goods decrease with income.

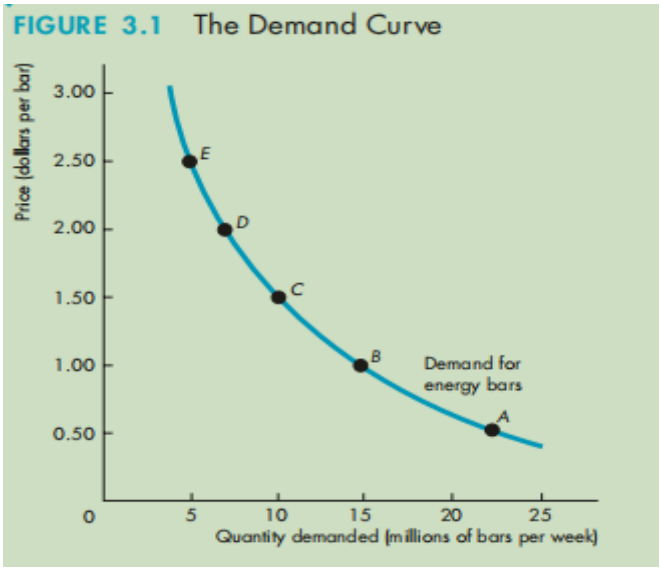
✗ **Luxury goods vs. Giffen goods:** Luxury goods are for rich people; Giffen goods are consumed by the poorest.

Definition of Demand

Demand is the *willingness* and the *ability* of a consumer to buy a specific quantity of a good or service at a particular price during a given period of time, ceteris paribus (other things remaining the same). **Noted that consumer must have enough money to buy something.**

Demand = Willingness to buy + Ability to buy

	Price (dollars per bar)	Quantity demanded (millions of bars per week)
A	0.50	22
B	1.00	15
C	1.50	10
D	2.00	7
E	2.50	5

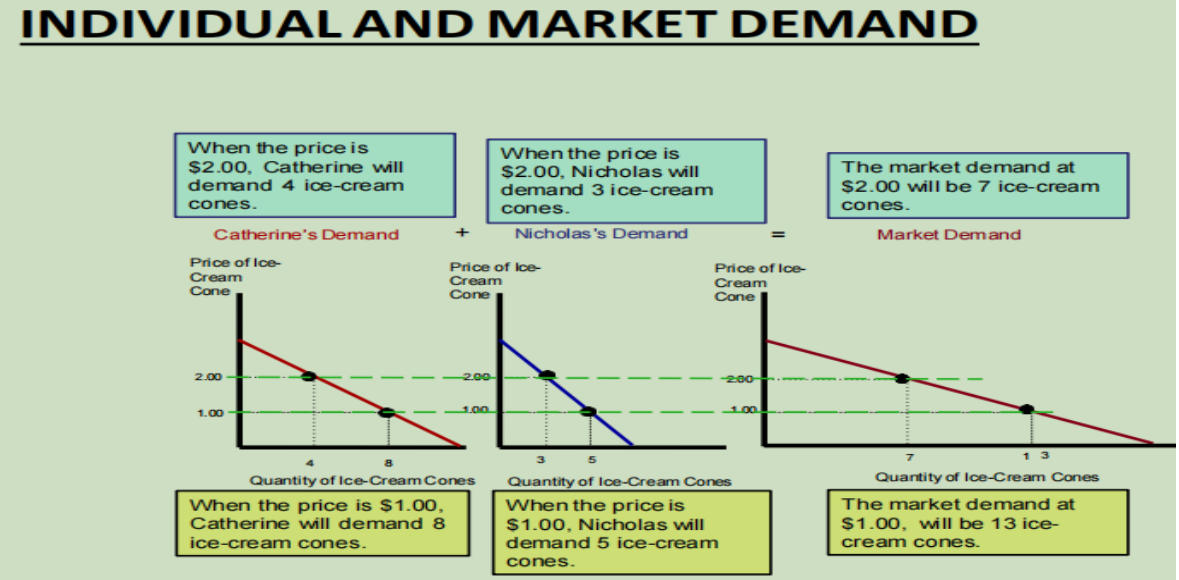


Individual Demand and Market Demand

Individual Demand: Individual demand is the amount of a good or service that one single consumer is willing and able to buy at different prices. It shows the relationship between the price of a good and the quantity demanded by one person.

Market Demand: Market demand is the total demand for a good or service in the entire market. The market demand shows the relationship between price and the total quantity demanded by all buyers.

Formula: **Market Demand = Sum of All Individual Demands**



Factors Affecting Demand

Demand for a product can increase or decrease due to several factors. The main factors are:

1. Price of Related Goods

Substitute Goods: These are goods that can replace each other (e.g., tea and coffee). If the price of a substitute rises, the demand for the other good increases.

Price ↑ (Coffee) Quantity ↓ (Coffee) Demand ↑ (Tea)

Price ↓ (Coffee) Quantity ↑ (Coffee) Demand ↓ (Tea)

Complementary Goods: These goods are used together (e.g., pen and ink). If the price of one complementary rises, the demand for the other goods fall.

Price ↑ (Pen) → Quantity ↓ (Pen) Demand ↓ (Ink)

Price ↓ (Pen) → Quantity ↑ (Pen) Demand ↑ (Ink)

2. Consumer's Income

Normal Goods: When income increases, demand for these goods increases (e.g., cars, shirts).

Inferior Goods: When income increases, demand for these goods decreases (e.g., low-grade rice, used cars).

3. Consumer's Preferences: If a product becomes fashionable or preferred by consumers, its demand increases.

4. Number of Buyers: A larger population means more buyers, so demand for goods and services increases.

5. Expectations About Future Prices: If consumers expect prices to rise in the future, they buy more now, increasing current demand.

6. Advertisement: Effective advertisements increase awareness and attract customers, resulting in higher demand.

7. Festive Seasons and Climate: Demand for a specific products increases during festivals or specific weather conditions. Example: High demand for Date in Ramadan.

8. Level of Taxation: Higher taxes reduce consumers' purchasing power, causing demand to fall. Lower taxes leave consumers with more money, increasing demand.

9. Supply of Money in Circulation: When more money is in circulation, people have more to spend. This leads to an increase in demand for goods and services.

State the Law of Demand

The Law of Demand states that when the price of a good increases, the quantity demanded decreases, and when the price decreases, the quantity demanded increases, ceteris paribus (meaning all other factors remain the same).

In simple words: **Price ↑ Quantity Demand ↓** +++ **Price ↓ Quantity Demand ↑**

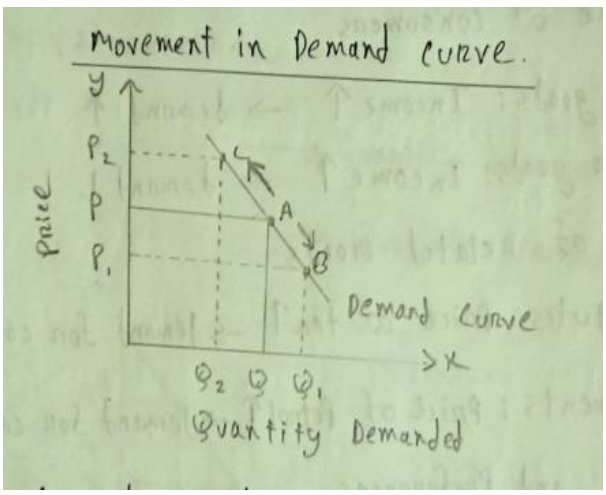
Assumptions of the Law of Demand: 1. Consumers' tastes and preferences stay unchanged. 2. Income of consumers remains constant. 3. Prices of related goods do not change. 4. The good has no prestige value. **A negative relationship between Price (P) and Quantity (Q) → Price ↑ Quantity ↓ and Price ↓ Quantity ↑.**

Changes in Quantity Demand or Movement on the Demand Curve

Movement on the demand curve happens when the price of the same good changes, and all other factors remain constant. **Two Types of Movement:**

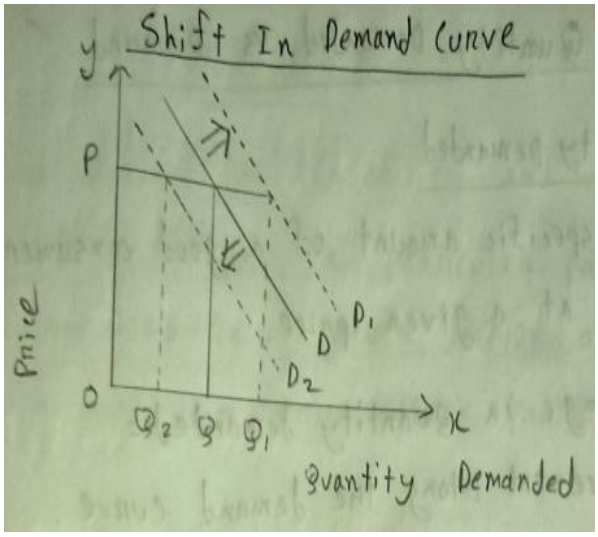
Extension of Demand (Downward Movement): When the price decreases, the quantity demanded increases. **Price ↓ Quantity Demand ↑**

Contraction of Demand (Upward Movement): When the price increases, the quantity demanded decreases. **Price ↑ Quantity Demand ↓**



Cause: If the price changes only for the same good.

Changes in Demand or Shift of the Demand Curve (Shift = Any factor changes except price)



Shift of the demand curve happens when demand changes due to other than price of the good.

Two Types of Shift:

Increase in Demand (Rightward Shift): Demand curve shifts right when consumers buy more at the same price. **Quantity Demand ↑**

Decrease in Demand (Leftward Shift): Demand curve shifts left when consumers buy less at the same price. **Quantity Demand ↓**

Cause: Changes in non-price factors (income, taste, population etc.) only

Quantity Demanded vs Demand Curve

1. Quantity Demanded: Quantity demanded means the specific amount of a product that consumers are willing and able to buy at a particular price. It is one point on the demand curve. When price changes, quantity demanded changes, leading to movement along the curve.

Example: If the price of mango decreases from 100 taka to 80 taka, the quantity demanded increases from 5 kg to 8 kg. **This is change in quantity demanded.**

2. Demand: Demand refers to the whole relationship between price and quantity demanded. It is shown by the entire demand curve, not just one point. Demand changes when non-price factors change (income, taste, population, etc.), causing the curve to shift.

Example: If people's income increases, they buy more mangoes at all prices. **This is a change in demand, shown by a shift of the entire curve.**

How a demand curve change(example)

TABLE 3.1 The Demand for Energy Bars

The Law of Demand

The quantity of energy bars demanded

Decreases if:	*Increases if:*
■ The price of an energy bar rises	■ The price of an energy bar falls

Changes in Demand

The demand for energy bars

Decreases if:	*Increases if:*
■ The price of a substitute falls	■ The price of a substitute rises
■ The price of a complement rises	■ The price of a complement falls
■ The expected future price of an energy bar falls	■ The expected future price of an energy bar rises
■ Income falls*	■ Income rises*
■ Expected future income falls or credit becomes harder to get*	■ Expected future income rises or credit becomes easier to get*
■ The population decreases	■ The population increases

*An energy bar is a normal good.

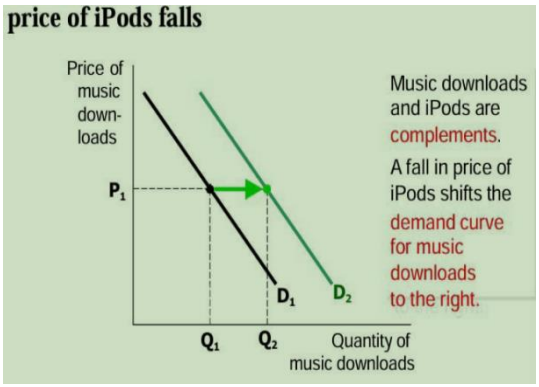
The Final Three situations of Quantity Demand and Demand given below:

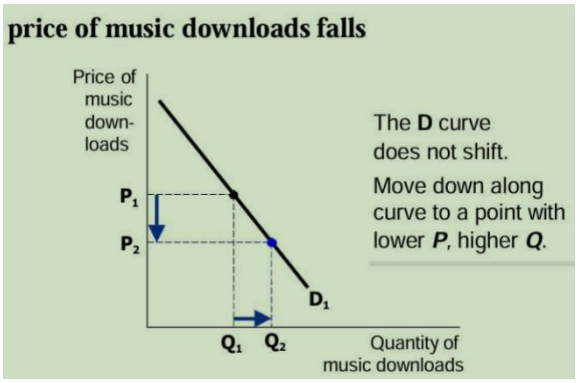
Draw a demand curve for music downloads. What happens to it in each of the following scenarios? Why?

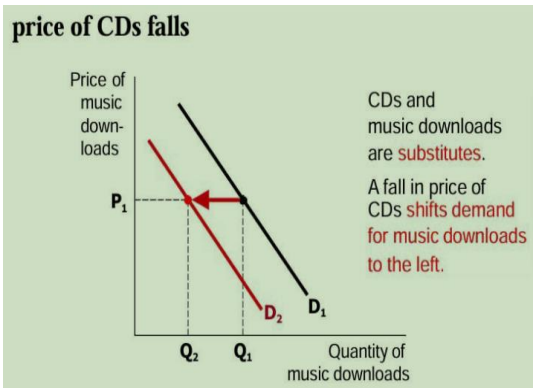
A. The price of iPods falls

B. The price of music downloads falls

C. The price of compact discs falls







Definition of Supply

Supply means the quantity of a product that producers are willing and able to sell at different prices in a given period of time. It depends on the producer's ability to produce and the price they receive.

Example: If the price of mangoes increases, farmers will supply more mangoes to the market because they can earn more profit. If the price falls, they will supply fewer mangoes.

Individual Supply and Market Supply

Individual Supply: Individual supply is the amount of a good or service that a single seller is willing and able to supply at different prices. It shows the relationship between the price of a good and the quantity supplied by one seller.

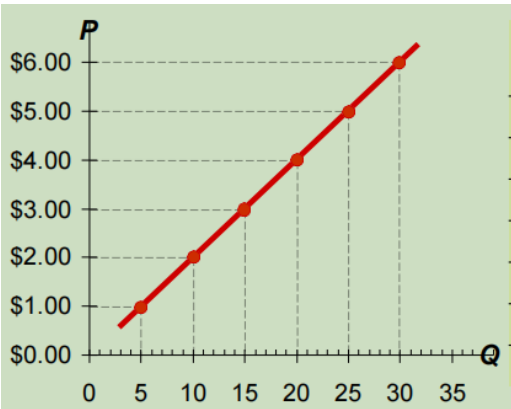
Market Supply: Market supply is the total supply of a good or service in the entire market. It shows the relationship between price and the total quantity supplied by all sellers.

Formula: **Market Supply = Sum of All Individual Supplies**

An example of Individual Supply and Market Supply

Suppose Starbucks and Jitters are the only two sellers in this market.
(Q^s = quantity supplied)

Price	Starbucks		Jitters		Market Q^s
$0.00	0	+	0	=	0
1.00	3	+	2	=	5
2.00	6	+	4	=	10
3.00	9	+	6	=	15
4.00	12	+	8	=	20
5.00	15	+	10	=	25
6.00	18	+	12	=	30



P	Q^s (Market)
$0.00	0
1.00	5
2.00	10
3.00	15
4.00	20
5.00	25
6.00	30

Factors Affecting Supply

Supply is influenced by many factors other than price. These factors decide how much producers are willing to supply in the market.

1. Price of Related Goods

A. Substitute Goods: These are goods that can replace each other in production. If the price of one product rises, producers supply more of that product and reduce the supply of the substitute. Example: Coca-Cola and Pepsi

Price ↑ (Pepsi) **Quantity Supplied** ↑ (Pepsi) **Supply** ↓ (Coca-Cola)

B. Complementary Goods: These goods are produced or used together. If the price of one good rises, producers increase the supply of both. Example: Pen and ink

Price ↑ **(**Pen**)** **Quantity Supplied** ↑ **(**Pen**)** **Supply** ↑ **(**Ink**)**

2. Cost of Production: If production cost (wages, raw materials, electricity) increases, producers cannot supply as much because profit falls.

Example: If labor wages rise, cost goes up → supply decreases.

3. Expectations About Future Prices: If producers expect prices to rise in the future, they may hold stock now and reduce current supply. If they expect prices to fall later, they supply more now.

4. Technological Advancement: Better technology reduces production cost and increases efficiency. As a result, supply increases (more can be produced with the same resources).

5. Number of Sellers: More sellers in the market mean a larger total supply. Example: If more cafeterias open on a campus, supply of food and drinks increases.

6. Government Policies

A. Taxes: Taxes increase production cost, so supply decreases.

B. Subsidies: Subsidies reduce cost and encourage producers, so supply increases.

7. Improvement in Infrastructure: Better transport, roads, electricity, and communication help goods move quickly and reduce cost. This increases supply because producers can deliver products more easily.

State the Law of Supply

The Law of Supply states that when the price of a good increases, the quantity supplied also increases, and when the price decreases, the quantity supplied decreases, *ceteris paribus* (meaning all other factors remain the same).

In simple words: **Price ↑ Quantity Supplied ↑ ||| Price ↓ Quantity Supplied ↓**

Assumptions of the Law of Supply: 1. Cost of production remains constant (The prices of inputs like labor, raw materials, and machines do not change). 2. Number of sellers remains the same (No new firms enter or leave the market). 3. Prices of related goods (substitutes or complements) do not change. 4. Availability of other inputs remains unchanged (Resources like land, tools, and technology stay the same).

Positive relationship: **Price ↑ Quantity Supplied ↑ and Price ↓ Quantity Supplied ↓**

Changes in Quantity Supplied (Movement Along the Supply Curve)

A change in quantity supplied happens when the price of the product changes, and producers respond by supplying more or less of that product.

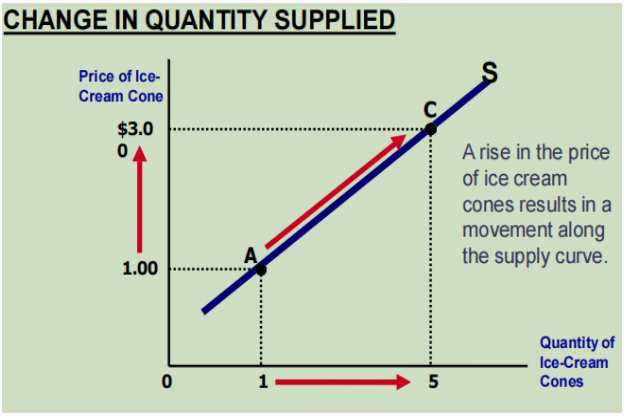
Expansion (Upward movement):

If Price ↑ Quantity Supplied ↑

Contraction (Downward movement):

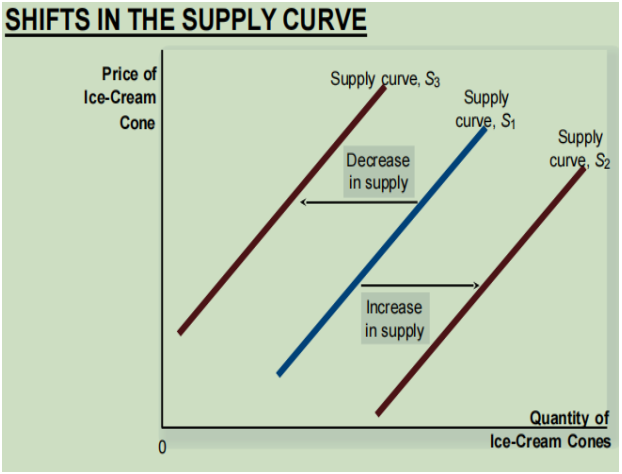
If Price ↓ Quantity Supplied ↓

Cause: *Only price changes*



Changes in Supply (Shift of the Supply Curve)

A change in supply happens when non-price factors change.



Increase in Demand (Rightward Shift):

If supply ↑ = the supply curve shifts right.

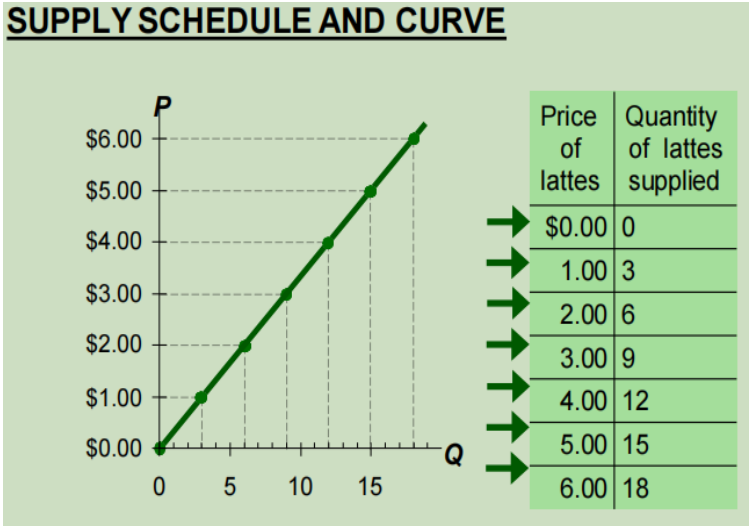
Increase in Demand (Leftward Shift):

If supply ↓ = the supply curve shifts left.

Cause: Non-price factors change (cost of production, technology, number of sellers, taxes, subsidies, or future expectations.)

Supply Schedule

A supply schedule is a table that shows how much quantity a producer is willing to supply at different prices. It lists price in one column and quantity supplied in another. It helps us understand how supply changes when the price changes.



Price of lattes	Quantity of lattes supplied
$0.00	0
1.00	3
2.00	6
3.00	9
4.00	12
5.00	15
6.00	18

Supply Curve

A supply curve is the graphical representation of the supply schedule. It is drawn on a graph with price on the vertical axis and quantity supplied on the horizontal axis. Because of the Law of Supply, the supply curve slopes upward, showing that higher prices lead to higher quantities supplied.

Definition of Market Equilibrium

A market equilibrium is a situation when quantity demanded and quantity supplied are equal and there is no tendency for price or quantity to change. **Equilibrium E ($Q_{DD} = Q_{SS}$)**

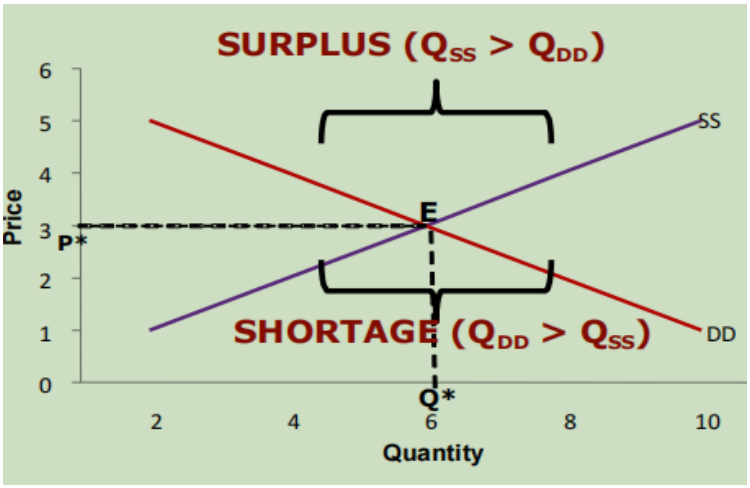
Shortage (Excess Demand): A shortage occurs when quantity demanded is greater than quantity supplied at a price below equilibrium. Buyers purchase more, but producers supply less. **Shortage ($Q_{DD} > Q_{SS}$). Result:** competition among buyers pushes the price **up toward** equilibrium.

Surplus (Excess Supply): A surplus occurs when quantity supplied is greater than quantity demanded at a price above equilibrium. Buyers purchase less, but producers supply more. **Surplus ($Q_{SS} > Q_{DD}$). Result:** unsold goods force sellers to reduce the price **down toward** equilibrium.

Market Condition Table

Price	Quantity Demanded	Quantity Supplied	Market Condition	Market Prices
5	2	10	SURPLUS	Falls
4	4	8	SURPLUS	Falls
3	6	6	EQUILIBRIUM	Equilibrium
2	8	4	SHORTAGE	Rises
1	10	2	SHORTAGE	Rises

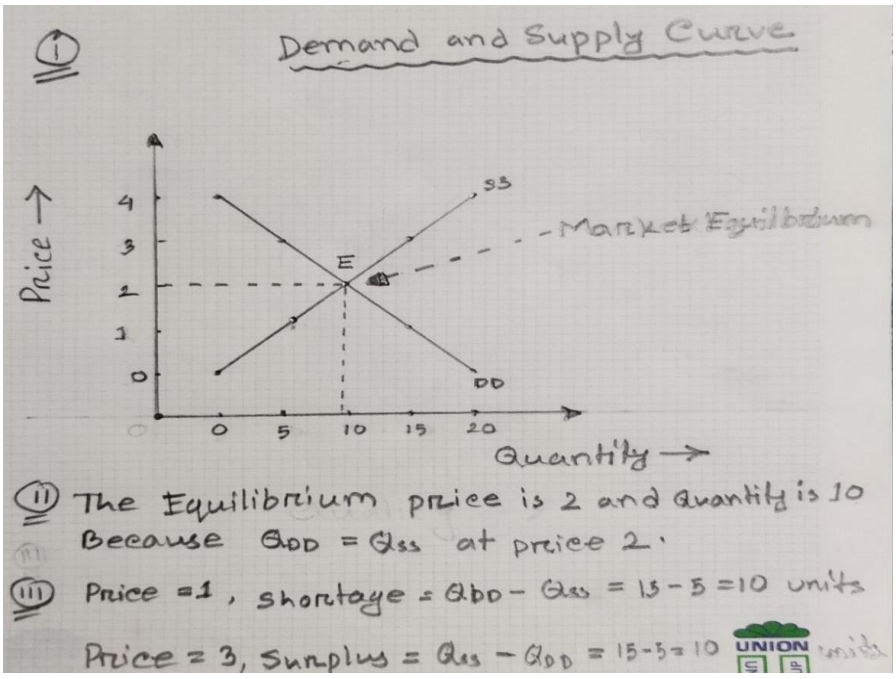
Market Equilibrium Graph



Answer the following questions given below using the table data. [final 20-21]

i. Draw demand and supply curve ii. Find equilibrium price and quantity iii. Find shortage and surplus at price 1 and 3 respectively

Price	Quantity of Demand	Quantity of Supply
0	20	0
1	15	5
2	10	10
3	5	15
4	0	20



Mid 21-22

Given : $Q_d = 100 - 5P$ and $Q_s = 10 + 40P$;

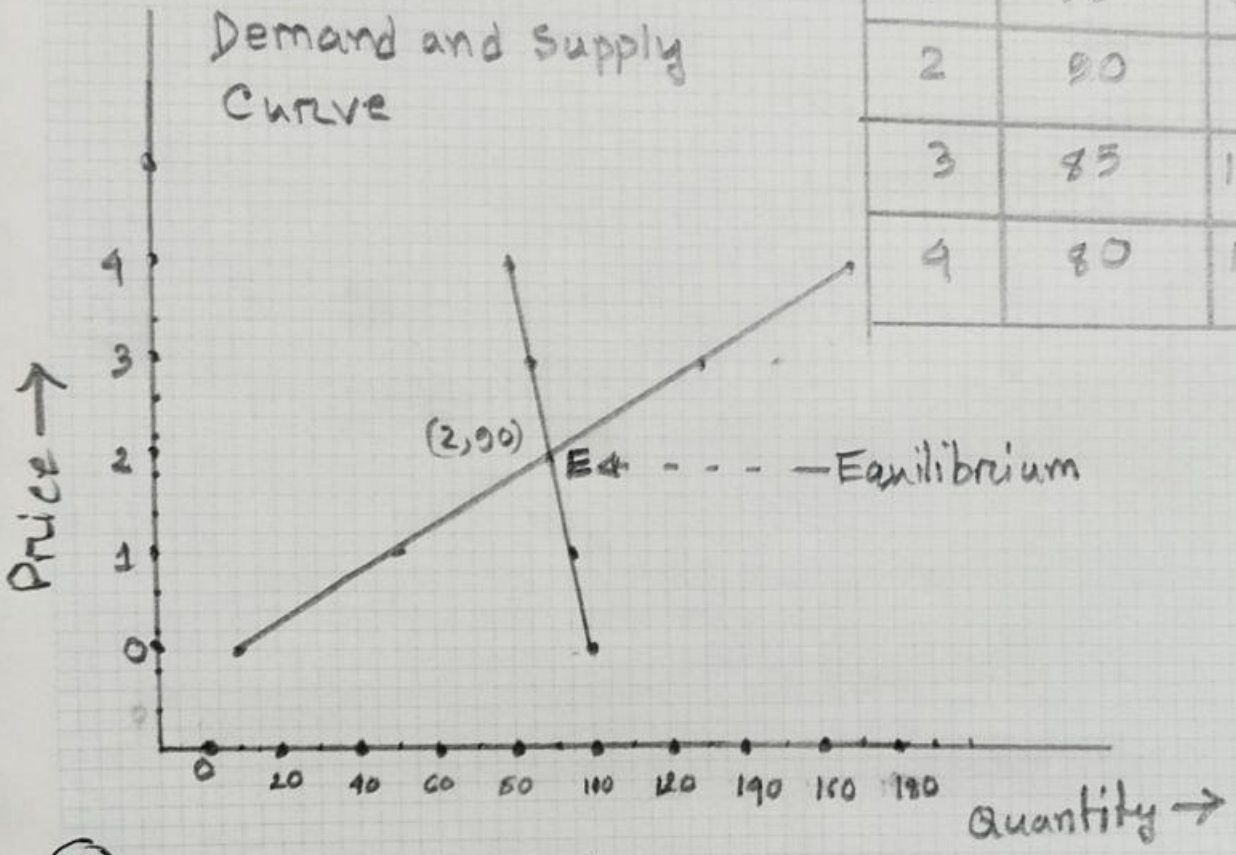
(i) Draw a demand and supply curve.

(ii) Find the equilibrium price and quantity.

(i) $Q_d = 100 - 5p$

$Q_s = 10 + 40P$

Price	Quantity of Demand	Quantity of Supply
0	100	10
1	95	50
2	90	90
3	85	130
4	80	170



(ii) In equilibrium point, $Q_D = Q_S$

$\therefore 100 - 5P = 10 + 40P \Rightarrow 45P = 90$

$\therefore P = 2$

$\therefore Q_D = 100 - 5.2 = 90$ and $Q_S = 10 + 40.2 = 90$

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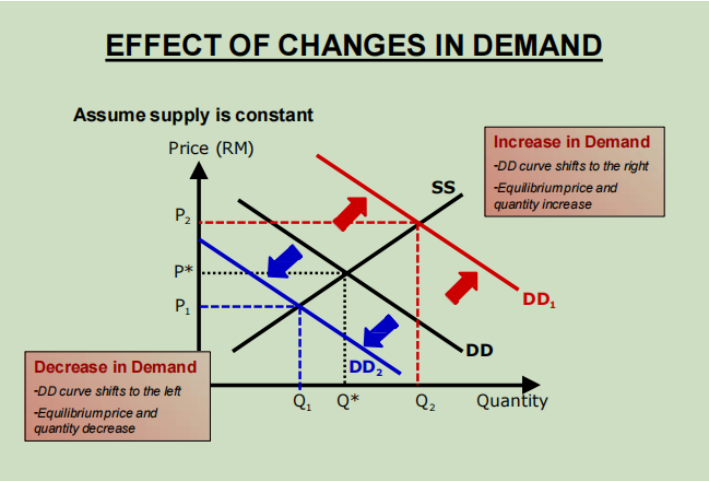
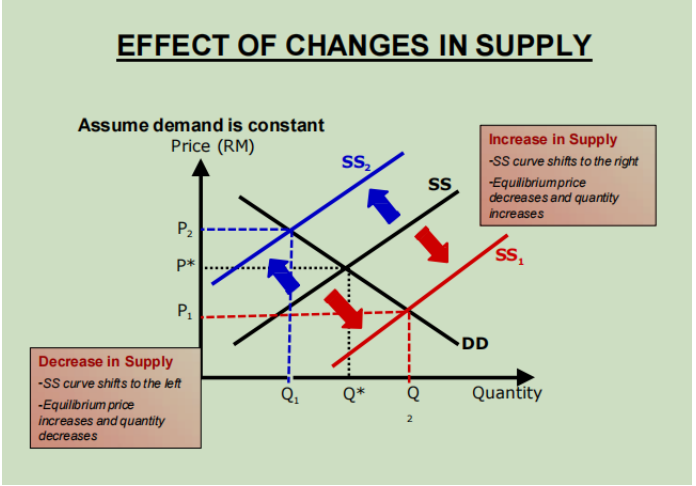
∴ Equilibrium Price = 2 and Quantity = 90





Definition of Market Failure

Market failure happens when the free market fails to allocate resources efficiently, causing waste, imbalance, or outcomes that are not good for society.

Causes of Market Failure

1. Externalities: When a third party is affected by an economic activity.

- **Negative externalities:** Harm to others (e.g., pollution, traffic congestion). These create extra social costs that the market ignores.
- **Positive externalities:** Benefits to others (e.g. vaccination, planting trees). These create extra social benefits that the market doesn't reward properly.

2. Monopoly Power: When a single seller (or very few sellers) dominate the market. They can set higher prices because consumers have fewer choices. They may reduce output to maximize profit. Lack of competition means less pressure to improve quality or efficiency.

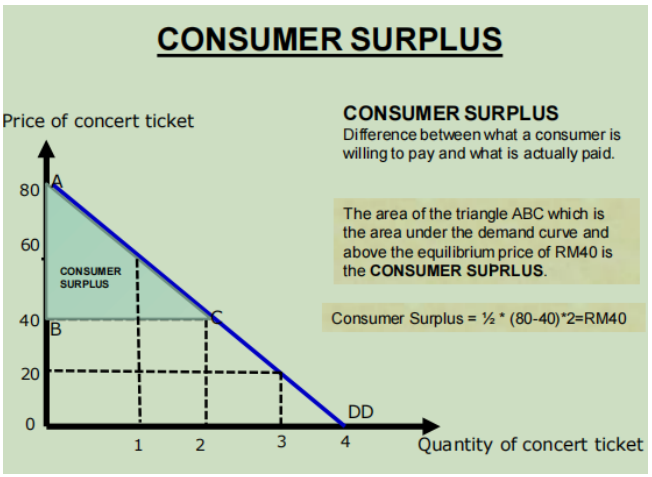
3. Public Goods: Goods (e.g. street lighting, national defense, public parks.) that everyone can use, and one person's use doesn't reduce another's. Because producers cannot charge everyone, they earn little or no profit.

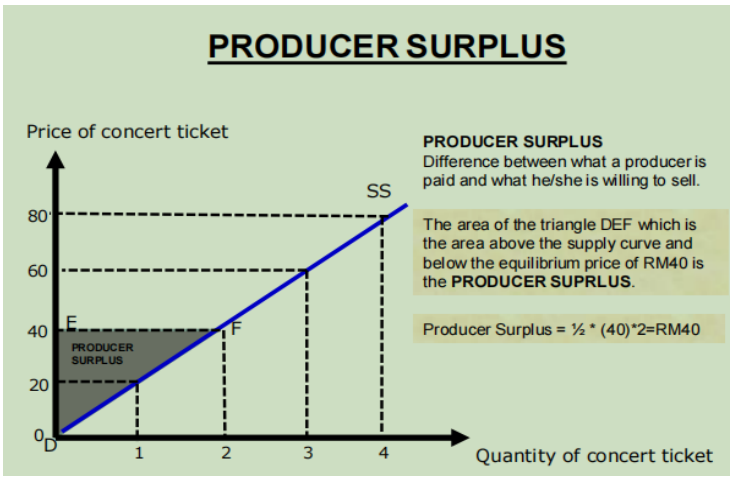
- **Non-excludable:** Cannot stop anyone from using the good.
- **Non-rival:** One person's use does not reduce availability for others.
- **Free rider problem:** People enjoy the good without paying.

4. Incomplete Information: Consumers or producers do not have full or correct information about a product. Buyers may not know the true quality, price, safety, or side effects. This causes wrong choices and misallocation of resources.

Producer Surplus: Producer surplus is the extra amount a producer gets above what they are willing to accept. It is the area above the supply curve and below the equilibrium price.

Consumer Surplus: Consumer surplus is the extra benefit a consumer gets when they pay less than what they are willing to pay. It is the area under the demand curve and above the equilibrium price.





Market Efficiency: Market efficiency means resources are used in the best way, giving the highest benefit to society.

- **Consumer Surplus (CS):** area above equilibrium price and below demand curve.
- **Producer Surplus (PS):** area below equilibrium price and above supply curve.
- **Total Surplus (TS):** **CS + PS.** When TS is maximized, the market is efficient.