Chapter-1: Demand

1) **Explain the Law of Demand.**
2) **Define Demand and distinguish between Individual Demand and Market Demand.**
3) **What are the determinants of demand?**
4) **Explain the concept of Elasticity of Demand.**
5) **Discuss the measurement of Price Elasticity of Demand.**

Answers:

Q1) Explain the Law of Demand?

1. **Definition of Law of Demand**
   The Law of Demand states that *other things remaining constant (ceteris paribus)*, the quantity demanded of a commodity **increases when its price falls** and **decreases when its price rises**.
2. **Inverse Relationship**
   There is an inverse relationship between **price** and **quantity demanded**. Price is the independent variable, and demand is the dependent variable.
3. **Role of Price Changes**
   A fall in price leads to an expansion of demand, whereas a rise in price leads to a contraction of demand.
4. **Income Effect**
   When price falls, the real income of the consumer increases, enabling him to purchase more of the commodity.
5. **Substitution Effect**
   A fall in the price of a commodity makes it relatively cheaper than its substitutes, increasing its demand.
6. **Law Based on Consumer Behavior**
   Consumers generally try to maximize satisfaction, so they buy more at lower prices and less at higher prices.
7. **Graphical Explanation**
   The demand curve slopes downward from left to right, showing the inverse relationship between price and demand.
8. **Example**
   If the price of apples falls from ₹100 per kg to ₹60 per kg, consumers will buy more apples. Conversely, if the price rises, demand falls.

Q2) Define Demand and distinguish between Individual Demand and Market Demand?

A. Definition of Demand (8 Descriptive Points)

1. **Meaning of Demand**
   Demand refers to the **quantity of a commodity** that a consumer is **willing and able to purchase** at a given price during a given period of time.
2. **Willingness to Buy**
   Mere desire for a good is not demand; the consumer must have the willingness to buy the commodity.
3. **Ability to Pay**
   Demand exists only when the consumer has sufficient purchasing power to buy the commodity.
4. **Price Factor**
   Demand is always expressed **at a particular price**, not in isolation.
5. **Time Element**
   Demand is related to a **specific period of time**, such as per day, per week, or per month.
6. **Effective Demand**
   Demand that is supported by both willingness and ability to pay is called effective demand.
7. **Law of Demand Connection**
   Demand generally varies inversely with price, as explained by the Law of Demand.
8. **Example**
   If a consumer is willing and able to buy **5 kg of rice at ₹40 per kg per month**, it constitutes demand.

B. Difference Between Individual Demand and Market Demand

Basis	Individual Demand	Market Demand
1. **Meaning**	Demand for a commodity by a single consumer	Total demand for a commodity by all consumers in the market
2. **Scope**	Limited to one buyer	Includes all buyers in the market
3. **Measurement**	Measured by quantity demanded by one person	Sum total of individual demands
4. **Demand Curve**	Individual demand curve	Market demand curve
5. **Construction**	Based on one consumer's demand schedule	Derived by horizontal summation of individual demand curves
6. **Nature**	Narrow in nature	Broad in nature
7. **Change in Demand**	Changes due to personal factors like income or taste	Changes due to market factors like population or income distribution
8. **Example**	Consumer A demands 2 units of	If A, B, and C demand 2, 3, and 5 units respectively,

Basis	Individual Demand	Market Demand
	a product at ₹50	market demand = 10 units at ₹50

Q3) Determinants of Demand and Their Effect on the Demand Curve

Determinants of Demand

1. **Price of the Commodity**
   Price is the most important determinant. When price falls, quantity demanded rises and vice-versa.
2. **Income of the Consumer**
   Increase in income raises demand for normal goods and reduces demand for inferior goods.
3. **Prices of Related Goods**
   - **Substitutes**: Rise in price of tea increases demand for coffee.
   - **Complements**: Fall in price of cars increases demand for petrol.
4. **Tastes, Habits, and Preferences**
   Change in taste due to fashion or advertisement can increase or decrease demand.
5. **Population Size**
   Increase in population increases market demand, especially for necessities.
6. **Expectations of Future Prices**
   If prices are expected to rise in future, present demand increases.
7. **Distribution of Income**
   Equal distribution increases demand for mass goods; unequal distribution increases demand for luxury goods.
8. **Season and Climate**
   Demand for woollen clothes rises in winter and falls in summer.

Effect on Demand Curve

- **Increase in demand** → Rightward shift of demand curve
- **Decrease in demand** → Leftward shift of demand curve

Example:
Increase in consumer income increases demand for cars even at the same price, shifting the demand curve to the right.

Q4) Elasticity of Demand and Types of Price Elasticity of Demand

Concept of Elasticity of Demand

1. **Meaning**
   Elasticity of demand measures the **degree of responsiveness of quantity demanded to changes in price**.
2. **Price Elasticity of Demand**
   It shows how much quantity demanded changes due to a change in price.
3. **Formula**

   Ep = % change in quantity demanded / % Change in Price

4. **Importance**
   Helps in pricing decisions, taxation policy, and revenue estimation.
5. **Nature of Goods**
   Necessaries have inelastic demand, luxuries have elastic demand.
6. **Time Factor**
   Demand is more elastic in the long run.
7. **Availability of Substitutes**
   More substitutes → higher elasticity.
8. **Example**
   A small fall in mobile phone prices leads to a large increase in demand → elastic demand.

Types of Price Elasticity of Demand (With Diagrams Explanation)

1. **Perfectly Elastic Demand (Ep = ∞)**
   Demand curve is a horizontal straight line.
2. **Perfectly Inelastic Demand (Ep = 0)**
   Demand curve is a vertical straight line (e.g., life-saving drugs).
3. **Relatively Elastic Demand (Ep > 1)**
   Small price change causes large change in demand (luxury goods).
4. **Relatively Inelastic Demand (Ep < 1)**
   Large price change causes small change in demand (necessities).
5. **Unitary Elastic Demand (Ep = 1)**
   Proportionate change in price and quantity; rectangular hyperbola curve.

5) Measurement of Price Elasticity of Demand

Methods of Measuring Price Elasticity (8 Points)

1. **Meaning of Measurement**
   Measurement helps to quantify elasticity numerically.
2. **Three Important Methods**
   - Total Expenditure Method
   - Point Method
   - Arc Method
3. **Total Expenditure Method (Outlay Method)**
   Measures elasticity by observing changes in total expenditure.

4. **Interpretation of Total Expenditure Method**
   - Price ↓, Total Expenditure ↑ → Elastic Demand
   - Price ↓, Total Expenditure ↓ → Inelastic Demand
   - Total Expenditure unchanged → Unitary Elastic Demand
5. **Example (Total Expenditure)**
   Price falls from ₹10 to ₹8, expenditure rises from ₹100 to ₹120 → Elastic demand.
6. **Point Method**
   Used to measure elasticity at a **specific point** on the demand curve.
7. **Formula (Point Method)**

   Ep=Lower Segment / Upper Segment

8. **Arc Method**
   Measures elasticity between **two points** on a demand curve (average elasticity).

   Formula:

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

Q6) Describe Indifference property advantage and disadvantage?

Answers:

Meaning of Indifference Property / Indifference Curve

Indifference property refers to the characteristics of an **Indifference Curve**, which shows different combinations of two goods that give the consumer **equal level of satisfaction**. The consumer is indifferent among all combinations on the same indifference curve.

Properties of Indifference Curve

1. **Downward Sloping**
   An indifference curve slopes downward from left to right, indicating that more of one good requires less of another to maintain the same satisfaction.
2. **Convex to the Origin**
   Indifference curves are convex due to the **law of diminishing marginal rate of substitution (MRS)**.
3. **Higher Indifference Curve Indicates Higher Satisfaction**
   Curves farther from the origin represent higher levels of satisfaction.

4. **Indifference Curves Never Intersect**
   Intersection would violate the assumption of consistency and transitivity of consumer preferences.
5. **Indifference Curves Do Not Touch the Axes**
   Consumer prefers some quantity of both goods rather than zero of one.
6. **Infinite Number of Indifference Curves**
   Each curve represents a different level of satisfaction.
7. **Indifference Curve is a Thin Line**
   Each curve represents a specific level of satisfaction, not a band.
8. **Slope Represents MRS**
   The slope of the curve indicates the marginal rate of substitution between two goods.

Advantages of Indifference Curve Analysis

1. **Scientific Analysis of Consumer Behavior**
   It provides a more realistic and scientific explanation of consumer choice.
2. **Ordinal Utility Approach**
   Utility is measured in relative terms, not in numbers, making it practical.
3. **Explains Consumer Equilibrium Clearly**
   Shows equilibrium with the help of budget line and indifference curve.
4. **Explains Income and Substitution Effects**
   Separates price effect into income effect and substitution effect.
5. **More Realistic Than Marshallian Approach**
   Does not assume constant marginal utility of money.
6. **Applicable to Modern Economics**
   Widely used in welfare economics and demand analysis.

Disadvantages / Limitations of Indifference Curve Analysis

1. **Based on Unrealistic Assumptions**
   Assumes rational behavior and consistent preferences.
2. **Difficulty in Measuring Preferences**
   Consumer preferences cannot be observed or measured accurately.
3. **Only Two Goods Assumption**
   Real life involves many goods, but analysis is limited to two goods.
4. **Ignores Psychological Factors**
   Emotions and impulse buying are not considered.
5. **Complexity**
   Graphical and theoretical nature makes it difficult for beginners.
6. **Not Suitable for All Goods**
   Less applicable to indivisible or habit-forming goods.

Q7) What is National Income?

Answers

National Income refers to the **total monetary value of all final goods and services produced by the residents of a country during a given period of time, usually one year**, including income earned from abroad.

In simple terms, it measures the **overall economic performance** and **income-generating capacity** of a nation.

- National income includes **wages, rent, interest, and profits** earned by the factors of production.
- It considers only **final goods and services** to avoid double counting.
- It is calculated for a **specific period**, generally one financial year.
- Income earned by **residents** is included, whether earned domestically or abroad.
- Income earned by **foreigners within the country** is excluded.

Example

If the total value of goods and services produced in India during a year is ₹250 lakh crore and net income from abroad is ₹5 lakh crore, then **National Income = ₹255 lakh crore**.

Q8) Explain, What is GDP?

Answers:

Gross Domestic Product (GDP) is the **total monetary value of all final goods and services produced within the domestic territory of a country during a specific period of time**, usually one year.

It is the most important indicator used to measure the **size, growth, and performance of an economy**.

1. **Meaning of GDP**
   GDP measures the economic output generated **within the geographical boundaries** of a country.
2. **Includes Final Goods and Services**
   Only final goods and services are included to avoid double counting.
3. **Territorial Concept**
   GDP includes production by both **residents and non-residents**, as long as production takes place within the country.
4. **Time Period**
   GDP is calculated for a **specific period**, generally one financial year.
5. **Measurement at Market Prices**
   GDP is usually measured at **market prices**, including indirect taxes and excluding subsidies.
6. **Indicator of Economic Growth**
   Increase in GDP shows economic growth, while a decrease indicates economic slowdown.
7. **Use in Economic Planning**
   Governments use GDP data for planning, policy formulation, and budget preparation.

8. **Example**
   If the total value of goods and services produced in India within one year is ₹300 lakh crore, it is India's GDP.

Q9) Difference between GDP and GNP?

Basis	GDP (Gross Domestic Product)	GNP (Gross National Product)
1. **Meaning**	Total value of final goods and services produced **within a country**	Total value of final goods and services produced by **nationals of a country**
2. **Concept**	Territorial concept	National concept
3. **Coverage**	Includes income earned by **foreigners inside the country**	Includes income earned by **residents abroad**
4. **Exclusion**	Excludes income earned by residents abroad	Excludes income earned by foreigners inside the country
5. **Net Factor Income from Abroad (NFIA)**	Not included	Included
6. **Formula**	GDP = Value of domestic production	GNP = GDP + NFIA
7. **Focus**	Measures domestic economic activity	Measures income of citizens
8. **Usefulness**	Used to measure **economic growth**	Used to measure **national income**
9. **Relevance**	More relevant for short-term policy	More relevant for long-term welfare
10. **Example**	Production by a foreign company in India is part of India's GDP	Income earned by an Indian company abroad is part of India's GNP

Q10) What is Kinked Demand Curve?

1. **Meaning of Kinked Demand Curve**
   The kinked demand curve refers to a demand curve with a distinct bend at the prevailing market price. It shows different reactions of competitors to price increases and price decreases.
2. **Applicability to Oligopoly Market**
   This concept is applicable only in an oligopolistic market where a few large firms dominate the industry. Each firm's pricing decision directly affects its rivals.

3. **Reaction to Price Increase**
   When a firm raises its price, other firms do not follow the increase. As a result, the firm loses a large number of customers to its competitors.
4. **Reaction to Price Decrease**
   When a firm reduces its price, competing firms immediately follow the price cut. Therefore, the firm gains very little increase in sales.
5. **Elastic Demand Above the Kink**
   The demand curve above the kink is highly elastic. Even a small rise in price leads to a large fall in quantity demanded.
6. **Inelastic Demand Below the Kink**
   The demand curve below the kink is relatively inelastic. A fall in price does not significantly increase the quantity demanded.
7. **Discontinuous Marginal Revenue Curve**
   The kink in the demand curve causes a vertical gap in the marginal revenue curve. This discontinuity plays a key role in maintaining price stability.
8. **Price Rigidity**
   Due to the gap in the marginal revenue curve, changes in marginal cost do not affect price. Hence, prices remain rigid or stable in oligopoly markets.