



INDIAN SCHOOL AL WADI AL KABIR

Class: XI	Department: Commerce
Worksheet No: 1	Topic: The Theory of Consumer Behaviour and Demand

- Total utility is maximum when
 - Marginal utility is zero.
 - Marginal utility is at its highest point.
 - Marginal utility is equal to average utility.
 - Average utility is maximum.A: (a)
- Who gave the cardinal concept of utility?
 - Marshall
 - Pigou
 - Hicks
 - SamuelsonA: (a)
- What does the area under the marginal utility curve depict?
 - Average Utility
 - Total Utility
 - Indifference Curve
 - Consumer EquilibriumA: (b)
- Which of the following statement is true?
 - Utility means want-satisfying power
 - Utility is a function of intensity of desire
 - Desire of consumption gives birth to utility
 - All of theseA: (d)
- Which of the following is a characteristic of utility?
 - Utility is a psychological phenomenon
 - Utility is subjective
 - Utility is a relative concept
 - All of theseA: d
- Which one of the following is not an assumption of the theory of demand based on analysis of indifference curve?
 - Given scale of preferences as between different combinations of two goods.

- (b) Diminishing marginal rate of substitution.
- (c) Constant marginal utility of money.
- (d) Consumers would always prefer more of a particular piece of goods to less of it, other things remaining the same.

A: (c)

7. In difference curve is:

- (a) Convex to the origin
- (b) Concave to the origin
- (c) Both (a) and (b) true
- (d) All of these false

A: a

8. The consumer is in equilibrium at a point where the budget line—

- (a) Is above an indifference curve.
- (b) Is below an indifference curve.
- (c) Is tangent to an indifference curve.
- (d) Cuts an indifference curve.

A: (c)

9. The ability of satisfying human want in a goods is called its:

- (a) Productivity
- (b) Satisfaction
- (c) Utility
- (d) Profitability

A: c

10. An indifference curve slopes down towards right since more of one commodity and less of another result in—

- (a) Same satisfaction.
- (b) Greater satisfaction.
- (c) Maximum satisfaction.
- (d) Decreasing expenditure.

A: (a)

11. Law of Equi-marginal utility is called:

- (a) Law of increasing utility
- (b) Law of diminishing utility
- (c) Law of substitution
- (d) None of these

A: (c)

12. Decreasing slope of indifference curve is explained by:

- a. Law of diminishing marginal returns
- b. Law of diminishing MRS
- c. Law of demand
- d. Law of constant MRS

A: b

13. Budget line indicates:

- a. Price ratio
- b. Income ratio
- c. Cost ratio
- d. None of these

A: b

14. Who propounded the ordinal utility theory?

- (a) Marshall
- (b) Pigou
- (c) Hicks and Allen
- (d) Ricardo

A: (c)

15. In marginal utility theory, utility is:

- a. An ordinal concept
- b. A cardinal concept
- c. Both (a) and (b)
- d. None of the above

A: b

16. Consumer's equilibrium takes at a point where:

- (a) $MU = Price$
- (b) $MU < Price$
- (c) $MU > Price$
- (d) None of these

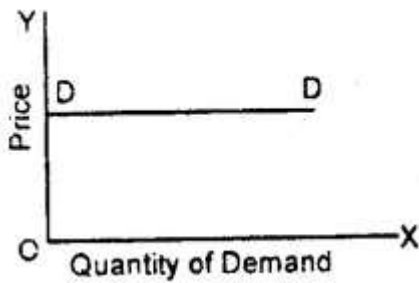
A: (a)

17. Which of the following is a formula for measuring the elasticity of demand?

- (a) $\frac{\text{Proportionate Change in Demand}}{\text{Proportionate Change in Price}}$
- (b) $\frac{\text{Proportionate Change in Price}}{\text{Proportionate Change in Demand}}$
- (c) $\frac{\text{Change in Demand}}{\text{Change in Price}}$
- (d) None of these

A: (a)

18. Following figure shows:



- (a) High Elastic Demand
- (b) Perfectly Elastic Demand
- (c) Perfectly Inelastic Demand
- (d) Inelastic Demand

A: (b)

19. Which of the following shows elasticity less than one?

- (a) Necessity Goods
- (b) Comforts
- (c) Luxuries
- (d) All of these

A: (a)

20. Elastic demand is shown by:

- (a) $\frac{\Delta Q}{Q} > \frac{\Delta P}{P}$
- (b) $\frac{\Delta P}{P} > \frac{\Delta Q}{Q}$
- (c) $\frac{\Delta P}{P} = \frac{\Delta Q}{Q}$
- (d) None of these

A: (a)

21. Consumer is in equilibrium when:

- (a) $MU_x = P_x$
- (b) $MU_x > P_x$
- (c) $MU_x < P_x$
- (d) $MU_x \div P_x$

A: a

22. If with rise in price of good Y, demand for good X rises, the two goods are;

- a. Substitutes
- b. Complements
- c. Not related
- d. Jointly demanded

A: b

1. Causes of Downward Sloping of Demand Curve:

- Law of diminishing the marginal utility
- Substitution effect
- Income effect
- New buyers
- Old buyers

1. Law of diminishing the marginal utility

The law of diminishing marginal utility states that with each increasing quantity of the commodity, its marginal utility declines.

For example, when a person is very hungry the first chapatti that he eats will give him the most satisfaction. As he will consume more chapattis, his level of satisfaction will diminish.

Thus, when the quantity of goods is more, the marginal utility of the commodity is less. Thus, the consumer is not willing to pay more price for the commodity and its demand will decline.

Also, when the price of the commodity is low, its demand increases.

Hence, the demand curve slopes downwards from left to right.

2. Substitution effect

Let us understand this with an example. Tea and coffee are substitute goods. If the price of tea rises, consumers will shift to coffee.

This will decrease the demand for tea and increase the demand for coffee. Thus, the demand curve of tea will slope downwards.

3. Income effect

Income effect refers to the change in the real income or the purchasing power of the consumers. When the price level falls the purchasing power of the consumer's increases and they buy more goods.

Similarly, when the price level rises, the purchasing power of the consumer's decreases and they buy less quantity of goods.

4. New buyers

Due to the fall in the prices of a commodity new buyers get attracted towards it and buy it. Thus, this increases the demand for the commodity.

5. Old buyers

When the prices of the goods fall the old buyers tend to buy more goods than usual thereby increasing its demand. This causes the downward sloping of demand curve.

2. How does a change in the income of the consumer affects the demand for goods?

When the income of the consumer's increases they purchase more goods and vice-versa. Thus, income and demand have a directly proportional relationship. This implies that the demand curve slopes upward from left to right. This holds true in case of superior or normal goods only.

However, this is not the case of inferior goods. Inferior goods are goods of low quality. Thus, when the income of the consumer increases he will refrain from buying the inferior goods and shift to buying superior or normal goods. So, the demand curve will slope downwards from left to right.

3. A consumer wants to consume two goods. The prices of the two goods are Rs 4 and Rs 5 respectively. The consumer's income is Rs 20.

1. Write down the equation of the budget line.
2. How much quantify of good 1 can the consumer consume if she spends her entire income on that good?
3. How much of good 2 can she consume if she spends her entire income on that good?
4. What is the slope of the budget line?

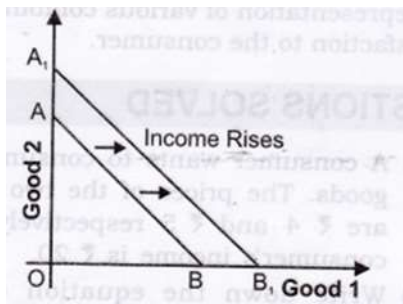
Answer:

- Let the two quantities of goods be X and Y. We are given $P_x = \text{Rs } 4$, $P_y = \text{Rs } 5$, Consumer's income (M) = Rs 20. Budget line equation is,
 $P_x \cdot X + P_y \cdot Y = M$ or $4X + 5Y = 20$
- If quantity consumed of good Y = 0, Budget equation becomes,
 $P_x \cdot X + \text{zero} = M = 4 \cdot X = 20 = X = 20/4 = 5$ units
- If quantity consumed of good X = 0, Budget equation becomes,
 $\text{Zero} + P_y \cdot Y = M$
 or $5Y = 20 = Y = 20/5 = 4$ units.
- Slope of budget line = $P_x/P_y = 4/5 = 0.8$

(Questions 2, 3 and 4 are related to question 3)

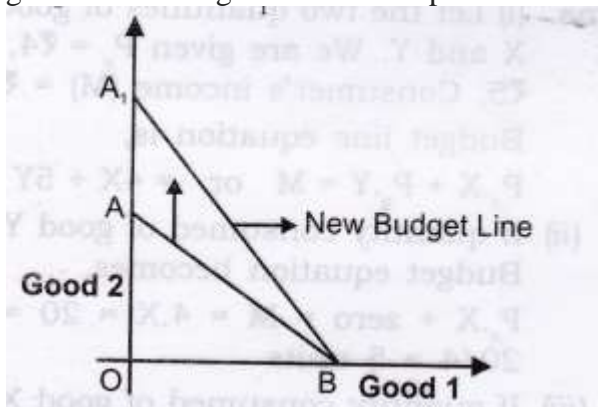
Question 2. How does the budget line change if the consumer's income increases to ?40 but the prices remain unchanged?

Answer: If consumer's income increases to Rs 40, the consumer can buy more pieces/quantities of both the goods X and Y. There will be parallel rightward shift in the budget line AB to A₁B₁.



Question 3. How does the budget line change if the price of good 2 decreases by a rupee but the price of good 1 and the consumer's income remain unchanged?

Answer: If price of good 2 (shown on y-axis) decreases, consumer can buy more pieces /quantity of good 2. The budget line AB will pivot at B and rotate upwards to A₁ B.



Question 4. What happens to the budget set if both the prices as well as the income double?

Answer: There will be no change in the budget line. Let us understand this with the help of an example: Suppose, the price of goods 1 rises from Rs 4 to Rs 8 and that of goods 2 rises from Rs 5 to Rs 10. Income also rises from Rs 20 to Rs 40. With double increase in prices and income, intercepts on both X-axis and Y-axis will remain unchanged at 5 units (goods 1) and 4 units (goods 2) respectively. Slope of budget line will also remain the same. Therefore, there will be no change in the budget set and the budget line.

2. What is meant by demand in economics? State the Law of Demand. Is there any exception to the law?
(Refer notes for law of demand)
Exception to the law:
 - a. A Giffen good is considered to be an exception of law of demand. The unique features of a Giffen good results in quantity demanded increasing where there is an increase in price.
 - b. Veblen goods, i.e: conspicuous Consumption, i.e: they are goods that people buy more of when or if the price increases. These goods tend to be status symbols and displays wealth eg: diamonds, Rolls Royce cars, Patek Phillipe watches.

3. Explain the inverse relationship between price and quantity demanded of a commodity.
when the price of a good falls it has following two effects that lead a consumer to buy more of that commodity.
 - a. Income effect:
When the price of a commodity falls, the real income of the consumer increases. As a result, he can now buy more of a commodity. This is called income effect.
 - b. Substitution effect:
When price of a commodity falls, it becomes relatively cheaper than others. This induces the consumer to substitute the relatively cheaper commodity for the other good which is relatively expensive. This is called substitution effect.
Thus, as a result of the combined operation of the income effect and substitution effect, the qty demanded of a commodity increases with a fall in the price of the given commodity and vice versa, provided other things remaining the same.

4. Explain how rise in income of a consumer affects the demand of a good. Give examples.
The rise in the income of the consumer affects the demand of a good in the following ways:
 - a. Normal goods:
In case of any normal good, like wheat, rice, any increase in the income of the buyer increases his demand for that commodity - causing the demand curve to shift towards right. There exists direct relationship between income and demand for normal good.
 - b. Inferior goods:
In case of inferior goods, there is inverse relationship between the income of the buyer and his demand for inferior goods. With the increase in income the demand curve of inferior good like bajra shifts left wards (draw the graphs)

5. Why is price elasticity of demand has negative sign always?
Price elasticity of demand is generally negative because of the inverse relationship between Price and Quantity demanded

6. Explain two causes of 'decrease' in demand for a commodity.
7. Draw and explain the different types of price elasticity of demand.
8. Why is an indifference curve strictly convex? Explain.
9. Distinguish between budget set and budget line. Use diagram.
10. Why is demand for water inelastic?
Because water is necessity for living, if price increases or decreases people will buy it.

11. Consider the demand for a good. At price Rs 4, the demand for the good is 25 units. Suppose price of the good increases to Rs 5, and as a result, the demand for the good falls to 20 units. Calculate **P.E** .
12. Differentiate between perfectly elastic and perfectly inelastic demand.

Perfectly elastic	Basis	Perfectly inelastic												
If quantity demand changes and price remains constant, then $ED = \infty$ and the result is known as perfectly elastic demand.	Meaning	If price changes, and quantity demand remains constant, then $ED = 0$ and the result is known as perfectly Inelastic Demand.												
<table border="1"> <thead> <tr> <th>Price</th> <th>Demand</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>10</td> </tr> <tr> <td>4</td> <td>20</td> </tr> </tbody> </table>	Price	Demand	4	10	4	20	Schedule	<table border="1"> <thead> <tr> <th>Price</th> <th>Demand</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>10</td> </tr> <tr> <td>4</td> <td>10</td> </tr> </tbody> </table>	Price	Demand	2	10	4	10
Price	Demand													
4	10													
4	20													
Price	Demand													
2	10													
4	10													
	Diagram													