

CBSE Test Paper-05
Class – 11 Economics (Theory of Consumer Behaviour)

General Instruction: All questions are compulsory. Marks are given along with their questions.

1. Given the following four possibilities, which one results in an increase in total consumer expenditures? (1)
 1. Demand is unitary elastic and price falls.
 2. Demand is elastic and price rises.
 3. Demand is inelastic and price falls.
 4. Demand is inelastic and price rises.
2. Suppose a department store has a sale on its silverware. If the price of a plate-setting is reduced from Rs. 300 to Rs. 200 and the quantity increased from 3000 plate-setting to 5000 plate-setting, what is the price elasticity of demand for silverware? (1)
(a) 0.8, (b) 1.0, (c) 1.25, (d) 1.50
3. Given the linear demand curve, $q = 10 - 2p$, calculate the quantity demanded at $p = 1$ (2)
4. State whether the following statement is true or false. 'The demand for a commodity always increases with increase in the prices of other goods'. (2)
5. Consumer buys 10 units of a good at a price of 6 per unit. Price Elasticity of Demand is (-)
 1. At what price will he buy 12 units? Use expenditure approach of Price Elasticity of Demand to answer this question. (3)
6. The price of a commodity is 20 per unit and Total Expenditure on it is 1000. When its price falls to 18 per unit, Total Expenditure increases by 8%. Calculate its Price Elasticity of Demand by percentage method. (3)
7. How is Price Elasticity of Demand affected by -?
 - a. number of substitute available for the good
 - b. nature of good (4)
8. Suppose the price elasticity of demand for a good is -0.2 . If there is a 5 % increase in the price of the good, by what percentage will the demand for the good go down? (4)
9. When does a demand curve take the shape of a rectangular hyperbola? (6)
10. Explain the relationship between Price Elasticity of Demand and Total Expenditure (6)

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Answers

1. D. Demand is inelastic and price rises.
2. C. 1.25
3. Given, $q = 10 - 2p$
At $p = 1$,
Quantity demanded, $q = 10 - 2 \times 1 = 10 - 2 = 8$.
4. False, it is possible only in case of substitute goods.
- 5.

Price (₹)	Quantity (units)	Total Expenditure (₹)
6	10	60
5	12	60

Given $E_d = (-) 1$

In this case when Elasticity of Demand is $(-) 1$, Total Expenditure will remain constant.

Total Expenditure (TE) = $10 \times 6 = ₹ 60$

∴ TE does not change.

∴ When quantity is 12 units

Price = $60 \div 12 = ₹ 5$ per unit

6.

Price (₹)	TE (₹)	Quantity (units)
20	1000	50
18	1080	60

$$TE_1 = 1000 + 8\% \text{ of } 1000 = 1080$$

$$E_d = (-) \frac{P}{Q} \times \frac{\Delta Q}{\Delta P} = (-) \frac{20}{50} \times \frac{10}{2} = (-) 2$$

∴ Price Elasticity of Demand = $(-) 2$

7. 1. Number of substitute of a good which have close substitutes (like tea and coffee) is relatively more elastic. Because, when price of such a good rise, the consumers have the option of shifting to its substitute. Goods without close substitutes like cigarettes etc. are generally found to be less elastic or inelastic in demand.
2. Nature of good Ordinarily, necessities like salt, match boxes, medicines etc. have less

than unitary elastic (inelastic) demand. Luxuries, like air conditioner, costly furniture, car etc. have greater than unitary elastic demand. Comforts like, cooler, fans etc. have neither very elastic nor very inelastic demand. Jointly demanded goods like pen and ink etc. shows a moderate Elasticity of Demand.

8. $e_d = -0.2$ [Note that $e_d = -2$. Hence, we need not prefix ed to (-2)]

Percentage change in price = 5%

$$e_d = \frac{\text{percentage change in demand}}{\text{percentage change in price}}$$

$$0.2 = \frac{\text{percentage change in demand}}{5}$$

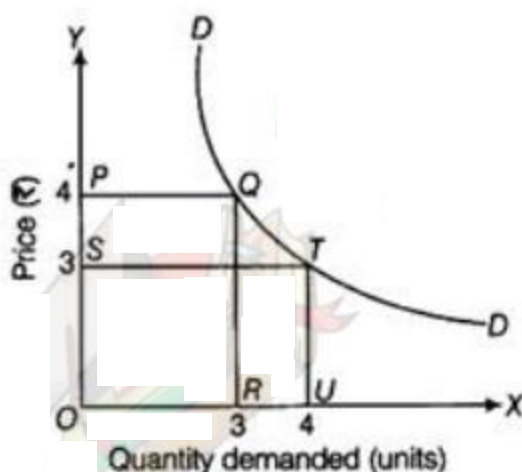
1.0 = percentage change in demand

= 1%

9. If the equation of a demand curve takes the form $pq = e$, where e is constant, irrespective of the values of p and q , then the demand curve that we get is a rectangular hyperbola, implying that on each and every point on the curve, the area underlying is the same. In the graph depicted above, point Q on the demand curve corresponds to area enclosed by rectangle OPQR which is 12 units [OP x OR = 4 x 3]

Also, point T on the demand curve corresponds to area enclosed by rectangle OSTU which is again 12 units [OSxOU = 3x4],

Therefore, demand curve DD is a rectangular hyperbola.



10. Relation between Price Elasticity of Demand and Total Expenditure are as follows:

Total Expenditure is calculated by multiplying price with quantity, i.e. $TE = P \times Q$

1. If Total Expenditure remains unchanged with increase or decrease in price then it is unitary elastic demand.

2. If direction of change in Total Expenditure is opposite to the direction of change in price i.e. with rise in Price Total Expenditure falls and vice-versa. Then, it is greater than unitary elastic demand.
3. If direction of change in Total Expenditure is the same as the direction of change in price i.e. with rise in Price Total Expenditure rises and vice-versa. Then, it is less than unitary elastic demand.

