



ECONOMICS

BOOKS - GOYAL BROTHERS

PRAKASHAN ECONOMICS (HINGLISH)

PRICE ELASTICITY OF DEMAND

Numerical Illustrations Problem

1. A consumer buys 80 units of a good at a price of Rs. 4 per unit . When the price falls ,

he buys 100 If price elasticity of demand is $(-)$ 1, find out the new price.



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2. A 5 percent fall in the price of X leads to a 10 percent rise in demand for X. A 2 percent rise in the price of Y leads to a 6 percent fall in demand for X. Calculate the price elasticity of demand of X and Y.



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3. A consumer buys 40 units of a commodity at a price of Rs. 5 per unit and his price elasticity of demand is (-) 1.5 . Calculate the amount he will buy at the amount he will buy at the price of 4 per unit of the commodity.



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4. A household increases its demand for a commodity from 40 units to 50 units when its price falls by 10 % What is price elasticity for the commodity?



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5. A consumer spends Rs. 80 on a commodity when its price is Rs. 1 per unit and spends Rs. 96 when the price is Rs. 2 per unit . What is the price elasticity of demand for the commodity ?

Note : By dividing expenditure with the price we can get the quantity demanded.



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1. Price elasticity of demand measure shows :

- A. Response of price to change in demand
- B. Response of demand to change in price
- C. Degree of response of price to change in demand
- D. Degree of response of demand to change in price

Answer: d



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2. Price elasticity of demand (-3) means 3 percent fall in demand due to :

- A. 3 per cent fall in price
- B. 3 per cant rise in price
- C. One per cent rise in price
- D. One per cent fall in price

Answer: c



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3. Given values of elasticities of demand , spot ' elastic' demand :

A. -0.8

B. -0.9

C. -1.0

D. -11

Answer: d



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Short Answer Question 1

1. Explain the concept of price elasticity of demand.



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2. What are the values attached to the 'elastic' and 'inelastic' demand and why?



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3. What are the values attached to (a) perfectly elastic demand and (b) perfectly inelastic demand? Explain the meaning of any one.



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4. What is the relation between the price of a good and the expenditure on that good when (a) $E_P > 1$ and (b) $E_P < 1$?



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5. Explain briefly and three factors influencing E_P .



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6. Explain the relation between habit and E_P

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Short Answer Question II

1. Define E_P . Explain the percentage change method of measuring E_P .



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2. Explain briefly any two factors determining E_P .



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3. Explain the relation between close substitutes of a good and E_P .

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Long Answer Questions

1. Explain the percentage change method of measuring E_P . Also give an example.

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2. Explain any three factors determining E_P .



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3. Explain the relation between time period and E_P with the help of an example.



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Application Questions

1. Price of a good rises from Rs. 4 to Rs.5 per unit . As a result its demand falls from 200 units to 100 units . Calculate E_P .



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2. A consumer busy 50 units of a good at Rs. 10 per unit . At a price of Rs.8 per unit he busy 100 units . Find out E_P .



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3. A 7% fall in the price of a good leads to 49% increase in demand of the good . Find out E_P .



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4. E_P of a good is -3 . At a price of Rs. 8 per unit a consumer buys 160 units of the good . How many units of the good will the consumer buy when price falls to Rs. 6 per units ?



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5. E_P of a good is - 5. At a price of Rs. 10 per unit consumer busy 200 units . At what price will busy 100 units ?



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6. E_P of a good is -4. When price of this good rises from Rs. 5 to Rs. 6 per unit , a consumer busy 40 units less . How many units did he buy at Rs. 5 ?



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7. Given $E_P = -1$, complete the following table :

Price (Rs. per unit)	Demand (Units)
4	60
—	90



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8. There are two goods A and B. The prices of both rise by 7 percent .As a result , demand for A falls by 10.5 percent, while there is no

change in demand for B. Find out E_P of A and B .



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9. Find out E_P by the percentage method :

Price (Rs.)	Total expenditure(Rs.)
8	800
10	900



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10. Calculate E_P .

Price (Rs.)	Demand (units)
4	125
5	100



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11. Comment upon E_P when price falls from

(a) Rs. 6 to Rs. 5 , (b) Rs. 5 to Rs. 4 and (c) Rs. 4

to Rs. 3.

Price (Rs.)	Demand
6	100
5	110
4	150
3	200



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Some Important Questions

1. What is meant by price elasticity of demand ?



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2. Explain the expenditure method of measuring price elasticity of demand of a

commodity . When is the demand said to be inelastic?



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3. Mention any three factors that affect the price elasticity of demand of a commodity.



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4. Give meaning of perfectly elastic demand and perfectly inelastic demand of a

commodity.



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5. Price elasticity of demand of a good is (-) 2.

At a price of Rs. 10 per unit 40 units of this good are bought . How units will be bought at a price of Rs. 11 per unit ? Calculate.



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6. At a price of Rs. 50 per unit the quantity demanded of a commodity is 1000 units . When its price falls by 10 percent , its quantity demanded rises to 1080 units . Calculate its price elasticity of demand . Is its demand inelastic ? Given reasons for your answer.



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7. When price of a good falls by 10 percent , its quantity demanded rises from 40 units to 50

units. Calculate price elasticity of demand by the percentage method.



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8. The quantity demanded of a commodity rises from 800 units to 850 units when its price falls from Rs. 20 per unit to Rs. 19 per unit . Calculate its elasticity of demand.



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9. Price elasticity of demand of a good is (-) 1.

At a given price the consumer buys 60 units of the good . How many units will the consumer buy if the price falls by 10 percent?



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10. Price elasticity of demand of a good is (-)2.

The consumer buys a certain quantity of this good at a price of Rs. 8 per unit . When the

price falls he buys 50 percent more quantity .

What is the new price ?



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11. Why is demand for water inelastic ?



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12. On the basis of the following schedule ,
calculate price elasticity of demand by the

percentage method :

Price per unit (Rs.)	Total expenditure(Rs.)
10	180
9	162



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13. When price of a good is Rs. 13 per units , the consumer buys 11 units of that good . When price rises to Rs. 15 per unit , the consumer continues to buy 11 units . Calculate price elasticity of demand.



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14. When price of a good is Rs. 7 per unit a consumer buys 12 units . When price falls to Rs. 6 per unit he spends Rs. 72 on the good . Calculate price elasticity of demand by using percentage method. Comment on the likely shape of demand curve based on based on this measure of elasticity.



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15. When price of a product doubles, its demand falls to half of what it was before the price change. Calculate price elasticity of demand.



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16. Price elasticity of demand of a good is (-1) . When its price falls by one rupee, its demand rises from 16 to 18 units. Calculate the price before change.



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17. When price of a good falls from Rs. 15 per unit to Rs. 12 per unit , its demand rises by 25 percent . Calculate price elasticity of demand.



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18. Price elasticity of demand of a good is $(-)$ 1 . Calculate the percentage change in price that will raise demand from 20 units to 30 units.



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19. Price elasticity of demand of two good A and B (-) 3 and (-)4 respectively. Which of the two goods has higher elasticity and why ?



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20. What will be the effect of 10 percent rise in price of a good on its demand if price elasticity of demand is (a) zero , (b) -1 , (c) -2 ?



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Value Based Questions

1. There is a vaccine which can prevent a serious disease . Market experts feel that its use can be increased 5 times if its price falls to half . Calculated price elasticity of demand for the vaccine.



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2. There is an item of consumption crucial for health of the people . Government decides to

subsidize it . After subsidy , government found that on an average a family is now spending more on this item. Give reason.



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3. A consumption good has harmful effects on health . Government wants to bring its consumption down by imposing heavy tax on it . How much success government will be able to achieve will depend price elasticity of demand. Explain how ?



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Understanding Based Questions From Cbse

1. When price of a product doubles, its demand falls to half of what it was before the price change. Calculate price elasticity of demand.



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2. A consumer consumes only two goods A and B and is in equilibrium. Price of good A falls.

Show that it will lead to rise in demand for good A . Use Utility Analysis.



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3. Give meaning of an inferior good and explain the same with the help of an example.



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4. Explain the concept of (MRS) with the help of a numerical example . Also explain its

behaviour along the Indifference Curve.



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5. Explain the conditions of consumer 's equilibrium under Indifference Curve analysis.



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6. Distinguish between an inferior good and a normal good . Is a good which is inferior for

one consumer also inferior for all the consumer ? Explain.



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7. Price of a good rises from Rs.5 to Rs. 6 per unit but it had no effect on demand of that good. Calculate price elasticity of demand of the good.



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8. A consumer consumes only two goods. Explain consumer's equilibrium with the help of utility analysis.



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9. A consumer consumes only two goods X and Y both priced at Rs. 3 per unit. If a consumer chooses a combination of these two with Marginal Rate of Substitution equal to 3, is the

consumer in equilibrium ? Give reasons . What will a rational consumer do in this situation ?



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10. A consumer consumes only two goods X and Y whose prices are Rs. 4 and Rs. 5 per unit respectively. If the consumer chooses a combination of the two goods with marginal utility of X equal to 5 and that of Y equal to 4 , is the consumer in equilibrium ? Given reasons

. What will a rational consumer do in this situation ? Use utility analysis.



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11. Price elasticity of demand of good X is -2 and of good Y is -3. which of the two goods is more price elastic and why ?



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12. What will be the effect of 10 percent rise in price of a good on its demand if price elasticity of demand is (a) zero , (b), -1 © -2.



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13. Show that there is inverse relation between price of a commodity and its quantity demanded . Use Utility Analysis.



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14. A consumer 's income is Rs. 200 . He spends it on purchase of good x and good y. Price of x and y are Rs.40 and Rs. 20 per unit respectively.

Answer the following questions :

- (a) Write the such equation of his budget line.
- (b) Wirte two such combinations of x and y which lie on the budget line.
- (c) Write two such combinations of x and y which are a part of his budget set but do not lie on his dudget line.



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15. The measure of price elasticity of demand of a normal good carries minus sign while price elasticity of supply carries plus sign . Explain why ?



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16. Given market price of a good how does consumer decide as to how many of that good to buy.



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17. What is the relation between good x and y in each case , if with the rise in price of x demand for good y (i) rises and (ii) falls ? Given reason.



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18. When the price of X doubles , its quantity demanded falls by 60 percent . Calculate its price elasticity of demand . What should be

the percentage change in price so that its quantity demanded doubles.



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19. When price of a commodity X falls by 10 percent , its demand rises from 150 units to 180 units. Calculate its price elasticity of demand . How much should be the percentage fall in its price so that its demand rises from 150 to 210 units.



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