



ECONOMICS

BOOKS - FULL MARKS ECONOMICS (HINGLISH)

ELASTICITY OF DEMAND

Ncert Textbook Questions Solved

1. Explain price elasticity of demand.



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2. 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 the price elasticity ?



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3. Consider the demand curve $D(p) = 10 - 3p$. What is the elasticity at price

5/3 ?



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4. 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 ?



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5. Suppose the price elasticity of demand for a good is -0.2 . How will the expenditure on the good be affected if there is a 10% increase in the price of the good ?



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6. Suppose, there was 4% decrease in the price of a good and as a result, the expenditure on the goods increased by 2%. What can you say about the elasticity of demand ?





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7. Define price elasticity of demand.



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8. Why is price elasticity of demand has negative sign always ?



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9. Given the formula for measuring price elasticity of demand according to percentage method.



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10. Give the formula for measuring price elasticity of demand according to point method.



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11. Define perfectly inelastic demand.



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12. Define perfectly elastic demand.



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13. Demand for product X is perfectly elastic.

What will be the change in price if demand rises from 50 per unit to 70 per unit ?





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14. If $ED < 1$, in which portion the point would be located on a straight line demand curve ?



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15. When is the demand of a commodity said to be inelastic ?



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16. If price elasticity of demand for a product is equal to one, what will be the nature of its demand curve ?



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17. A rise in the price of a good results in an increase in expenditure on it. Is its demand elastic or inelastic ?



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18. If two demand curves intersect, which one has the higher price elasticity ?



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19. What happens to total expenditure on a commodity when its price falls and its demand is price elastic ?



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20. A poor household with no or very little income remains underfed. If the household's income rises, how will it affect household's demand for low - quality rice.



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21. How will a rich household's demand for low - quality rice respond to an increase in income of the household ?



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22. In case of a straight line demand curve meeting the two axes, the price elasticity of demand at the midpoint of the line would be :

A. 0

B. 1

C. 1.5

D. 2

Answer: b



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23. Identify the factor which generally keeps the price elasticity of demand for a good low :

A. Variety of uses for that good.

B. Its low price

C. Close substitutes for that good

D. High proportion of the consumer's income spent on it.

Answer: b



24. Identify the coefficient of price elasticity of demand when the percentage increase in the quantity of good demanded is smaller than the percentage fall in its price :

- A. Equal to one
- B. Greater than one
- C. Smaller than one
- D. Zero

Answer: c



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25. If the demand for a good is inelastic, an increase in its price will cause the total expenditure of the consumers of the good to :

A. remain the same.

B. increase

C. decrease

D. Any of these

Answer: b



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26. Which one of the following four possibilities, results in an increase in total consumer expenditure ?

- A. Demand is unitary elastic and price falls.
- B. Demand is elastic and price rises.
- C. Demand is inelastic and price falls.
- D. Demand is inelastic and price rises.

Answer: d



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27. The price elasticity of demand for hamburger is :

A. the change in the quantity demanded of hamburger when the hamburger increases by 30 paise per rupee.

B. the percentage increase in the quantity demanded of hamburger when the price of hamburger falls by 1 per cent per rupee.

C. the increase in the demand for hamburger when the price of hamburger falls by 10 per cent per rupee.

D. the decrease in the quantity demanded of hamburger when the price of hamburger falls by 1 per cent per rupee.

Answer: b



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28. The price elasticity of demand is defined as the responsiveness of :

- A. price to a change in quantity demanded.
- B. quantity demanded to a change in price.
- C. price to a change in income.

D. quantity demanded to a change in income.

Answer: b



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29. A decrease in price will result in an increase in total revenue if :

A. the percentage change in quantity demanded is less than the percentage

change in price.

B. the percentage change in quantity demanded is greater than the percentage change in price.

C. demand is inelastic.

D. the consumer is operating along a linear demand curve at a point at which the price is very low and the quantity demanded is very high.

Answer: b



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30. An increase in price will result in an increase in total revenue if :

A. the percentage change in quantity demanded is less than the percentage change in price.

B. the percentage change in quantity demanded is greater than the percentage change in price.

C. Demand is elastic.

D. The consumer is operating along a linear demand curve at a point at which the price is very high and the quantity demanded is very low.

Answer: a



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31. Differentiate between perfectly elastic and perfectly inelastic demand.



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32. When price is Rs. 20 per unit, demand for a commodity is 500 units. As the price falls to Rs. 15 per unit, demand expands to 800 units. Calculate elasticity of demand.



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33. The demand for a goods falls to 500 units in response to rise in price by Rs. 10. If the original demand was 600 units at the price of Rs. 30, calculate price elasticity of demand.



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34. A consumer spends Rs. 80 on a commodity when price is Rs. 1 per unit. If the price increases by Rs. 1, his expenditure becomes Rs.

96. Comment on PED.



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35. A decline in the price of good X by Rs. 5 causes an increase in its demand by 20 units to 50 units. The new price is Rs. 15. Calculate elasticity of demand.



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36. A dentist was charging Rs. 300 for a standard clearing job, and per month it used to generate total revenue equal to Rs. 30,000.

She has increased the price of dental cleaning to Rs. 350 since last month. As the result of, few customers are now coming for dental clearing, but the total revenue is now Rs. 33,250. From this, what can we conclude about the elasticity of demand for such a dental service. Calculate PED by proportionate method.



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37. 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 the percentage method. Comment on the likely shape of demand curve based on this measure of elasticity.



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38. A consumer buys 20 units of a good at a price of Rs. 5 per unit. He incurs an expenditure of Rs. 120 when he buys 24 units. Calculate price elasticity of demand using the percentage method. Comment upon the likely shape of demand curve based on this information.



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39. A consumer buys 10 units of a commodity at a price of Rs. 10 per unit. He incurs an expenditure of Rs. 200 on buying 20 units. Calculate price elasticity of demand by the percentage method. Comment upon the shape of demand curve based on this information.



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40. A consumer buys 14 units of a good at a price of Rs. 8 per unit. At price Rs. 7 per unit he

spends Rs. 98 on the good. Calculate price elasticity of demand by the percentage method. Comment upon the shape of demand curve based on this information.



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41. A consumer spends Rs. 100 on a good at Rs. 4 per unit. When its price falls by 25 per cent, the consumer spends Rs. 75 on the good. Calculate price elasticity of demand by percentage method.



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42. A consumer spends ₹ 1,000 on a good priced at ₹ 10 per unit. When price falls by 20 percent, the consumer spends ₹ 800 on the good. Calculate the price elasticity of demand by the percentage method.



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43. A consumer demands 40 kg of a commodity when its price is Rs. 1 per kg. If the

price increases by Rs. 0.10, what would be the quantity demanded ? $PED = -1$.



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44. $PED = [-]1$. A consumer demands 50 units of a commodity when price is Rs. 1 per unit. At what price will he demands 45 kg of a commodity ?



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45. A consumer spends Rs. 80 on a commodity when price is Rs. 1 per unit. If the price increases by Rs. 1, what would be his expenditure. $PED = -0.4$?



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46. The market demand for a good at Rs. 5 per unit is 50 units. Due to increase in price, the market demand falls to 30 units. Find out the

new price if the price elasticity of demand is $(-)2$.



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47. A consumer buys 18 units of a good at a price of Rs. 9 per unit. The price elasticity of demand for the good is $(-)1$. How many units the consumer will buy at a price of Rs. 10 per unit ? Calculate.



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48. When the price of a good X is Rs. 5, the consumer buys 100 units of the good X. At what price would he be willing to purchase 140 units of good X ? The price elasticity of demand for good X is 2.



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49. A consumer buys 80 units of a good at a price of Rs. 5 per unit. Suppose, the price elasticity of demand is (-) 2. At what price will he buy 64 units ?



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50. The demand for a good at Rs. 10 per unit is 40 units. Price falls by Rs. 5. If price elasticity of demand is $(-)3$, calculate the new quantity demanded.



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51. Price elasticity of demand for a product is 'unity'. A household buys 25 units of this

product at the price of Rs. 5 per unit. If the price of product rises by Rs. 1, how much quantity of the product will the household buy ?



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52. A consumer buys 20 units of a good at Rs. 10 per unit. The price elasticity of demand of this good is $(-)$ 1. Calculate quantity demanded by the consumer when price falls to Rs. 8 per unit.



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53. When the price of a commodity falls by Rs. 2 per unit, its quantity demanded increases by 10 units. Its price elasticity of demand is $(-)$ 1 . Calculate its quantity demanded at the price before change which was Rs. 10 per unit.



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54. When price of a commodity falls by Rs. 1 per unit, its quantity demanded rises by 3

units. Its price elasticity of demand is $(-)2$.

Calculate its quantity demanded if the price

before the change was Rs. 10 per unit.



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55. The price elasticity of demand of a commodity is $(-)1.5$. When its price falls by Rs. 1 per unit its quantity demanded rises by 3 units. If the quantity demanded before the price change was 30 units, what was the price at this demand ?



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56. As a result of increase in price by 20%, the quantity demanded decreases by 40%.

Comment on PED.



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57. PED of X is known to be thrice that of Y. If price of the commodity X increases by 20% and price of the commodity Y decreases by

40%, calculate percentage change in demand in both the cases.



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58. As a result of increase in price from 4 to 5, the quantity demanded decreases by 20%.

Comment on PED.



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59. When price of a commodity falls by 20%, the quantity demanded of it increases by 80%.

Find out its price elasticity of demand.



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60. The demand for good rises by 20% as a result of fall in its price. Its $P. e_{Dis}(-)0.8$.

Calculate the percentage fall in price.



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61. A 5 per cent fall in the price of a good raises its demand from 300 units to 318 units. Calculate its price elasticity of demand.



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62. The quantity demanded of a commodity at a price of Rs. 8 per unit is 600 units. Its price falls by 25 per cent and the quantity demanded rises by 120 units. Calculate the price elasticity of demand. Is its demand elastic ? Give reason for your answer.



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63. Calculate the $P. e_D$ for a commodity when its price increases by 25% and quantity demanded falls from 150 units to 120 units.



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64. The price of commodity is Rs. 15 per unit and its quantity demanded is 500 units. Its quantity demanded rises by 80 units as a

result of fall in its price by 20 per cent. Calculate its price elasticity of demand. Is its demand inelastic ? Give reason for your answer.



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65. When the price of a commodity is Rs. 20 per unit, its quantity demanded is 800 units. When its price rises by Rs. 5 per unit, its quantity demanded falls by 20 per cent.

Calculate its price elasticity of demand. Is its demand elastic ? Give reason for your answer.



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66. When price of a good falls from Rs. 5 to Rs. 3 per unit, its demand rises by 40%. Calculate its price elasticity of demand.



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67. The price elasticities of demand for goods X and Y are known to be 1 and 2 respectively. Price of X rises by 5% while that of goods Y falls by 5%. What are the percentage changes in the quantities demanded of X and Y ?



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68. The demand of goods x and y have equal price elasticity. The demand of x rises from 100 units to 200 units due to 20 % fall in its

price. Calculate % rise in demand of y, if its price falls by 8%.



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69. The price elasticity of demand of good X is half the price elasticity of demand of Good Y. A 25% rise in the price of good Y reduces its demand from 400 units to 300 units. Calculate percentage rise in demand of good X when its price falls from Rs. 10 to Rs. 8 per unit.



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70. The price elasticity of supply of commodity X and Y are equal. The price of X falls from ₹10 to ₹8 per unit and its quantity supplied falls by 16 per unit. The price of Y rises by 10 per cent. Calculate the percentage increase in its supply.



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71. Calculate the elasticity of demand by total expenditure method.

Price (Rs.)	Total Expenditure (Rs.)
4	40
6	50



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72. Calculate the elasticity of demand by total expenditure method.

Price (Rs.)	Total Expenditure (Rs.)
5	50
6	50



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73. from 20 units to 24 units. What can you say about price elasticity of demand of the good through the 'expenditure approach' ?



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74. As the price of a product decreases by 7% the total expenditure on it goes up by 3.5%. What can we say about the elasticity of demand for this product ?



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75. A consumer buys 40 units of a good at the price of Rs. 3 per unit. When the price rises to Rs. 4 per unit, he buys 30 units. Calculate the price elasticity of demand by total expenditure method.



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76. When price of a good rises from $\hat{a},^{15}$ to $\hat{a},^{16}$ per unit, its demand falls from 20 units to 10 units. Compare the expenditure on the good

to determine whether demand is elastic or inelastic



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77. When price of a good falls from Rs. 10 per unit to Rs. 9 per unit, its demand rises from 9 units to 10units. Compare expenditure on the good to find price elasticity of demand.



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78. When price of a good falls from Rs. 8 per unit to Rs. 7 per unit, its demand rises from 12 units to 16 units. Compare expenditure on the good to determine whether demand is elastic or inelastic.



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79. When the price of a good changes to Rs. 11 per unit, the consumer's demand falls from 11 units to 7 units. The price elasticity of demand

is (—) 1. What was the price before change ?

Use expenditure approach of price elasticity of demand to answer this question.



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80. A dentist was charging Rs. 300 for a standard clearing job, and per month it used to generate total revenue equal to Rs. 30,000. She has increased the price of dental cleaning to Rs. 350 since last month. As the result of, few customers are now coming for dental

clearing, but the total revenue is now Rs. 33,250. From this, what can we conclude about the elasticity of demand for such a dental service. Calculate PED by proportionate method.



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81. A consumer buys 10 units of a good at a price of Rs. 9 per unit. At price of Rs. 10 per unit he buys 9 units. What is price elasticity of demand / Use expenditure approach.

Comment on the likely shape of demand curve on the basis of this measure of elasticity.



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82. Comment upon the degree of elasticity of demand for Good X, in the following given situation, if the price of the commodity rises from $\hat{a},^{15}$ per unit to $\hat{a},^1 7$ per unit and the quantity demand falls from 20 units to 16 units using proportionate method.



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83. Would the elasticity of demand in the following cases be unity, less than unity or greater than unity ?

(i) A rise in the price of a commodity reduces the total expenditure.

(ii) A rise in the price of a commodity increases the total expenditure.

(iii) A fall in the price of a commodity increase the total expenditure.

(iv) A fall in the price of a commodity, the total expenditure remains the same.



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84. How is price elasticity of demand affected by :

- (i) Number of substitute available for the good.
- (ii) Nature of the good.



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85. Price elasticity of demand explains qualitative relationship between price and

demand.



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86. On a demand curve where it touches X-axis elasticity of demand is Infinity ?



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87. If price falls by 10% and total expenditure rises by 10%, then ED would be one.



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88. If percentage change in demand is greater than percentage change in price, it will be less elastic.



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89. With a rise in price, total expenditure also rises, elasticity of demand for such goods will be more.



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90. When demand curve is Rectangular hyperbola, $ED > 1$.



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91. When price and demand fall in equal proportion, elasticity of demand is unity.



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92. In the middle of a demand curve by geometric method, elasticity of demand is unity.



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93. To the right of middle point of a line AB touching X and Y - axes, E_d would be more than one.



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94. What is the price elasticity of demand for the following demand curves :

(i) Straight line demand curve parallel to X - axis.

(ii) Straight line demand curve parallel to Y - axis.

(iii) Mid - point of a straight line demand curve.



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95. Differentiate between Law of Demand and Price Elasticity of Demand.



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96. A family spending on a product has to be increased when product price increases. Defend or refute.



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97. Let slope of demand curve = -0.5 . Calculate ED when initial price is Rs. 20 per unit and initial quantity is 50 units of the commodity.



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98. As a result of high wage settlement in the New York City due to taxi strike of several years ago, taxi owners increased taxi fares. Was this the right decision ?





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99. Two drivers - Tom and Jerry - each drive upto a gas station. Before looking at the price, each places an order. Tom says, "I'd fill 10 gallons of gas." Jerry says, "I'd fill gas worth \$ 10." What is each driver's price elasticity of demand ?



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100. Raymond's management is discussing a proposal to offer a discount sale on its products to boost its revenue. Will such a discount sale definitely work to boost up the revenue ?



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101. Demand for salt is nearly perfectly inelastic. If the government imposes a tax of

10% on salt what shall be the effect on quantity demanded of salt ? Why ?



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102. The demand for life saving drugs is inelastic and hence prices will tend to be high. How can this problem be tackled ?



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103. The demand for cooking gas is not falling in spite of regular hike in the price of cooking gas. What will be the elasticity of demand for cooking gas. Explain giving suitable reasons in support of your answer.



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104. It is observed by the railway minister that the quantity of railway service demanded is decreasing day - by - day. So, price has to be

reduced to increase the service demanded.
How much price did the railway minister reduce, so that the railway may earn the maximum profit ? Comment on PED.



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105. If demand is elastic, how will an increase in price affect the total revenue ? Explain.



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106. Why is demand for water inelastic ?



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107. What is price elasticity of demand for life saving drugs ?



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108. Which one of the following commodities have inelastic demand ?

Salt, a particular brand of lipstick, medicine and school uniform.



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109. Give reasons for the following statements

:

(i) Demand for salt is highly inelastic.

(ii) Consumer's expenditure on milk rises with an increase in the price of milk.

(iii) A household's budget on entertainment make its elasticity equal to unity.



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110. Study the statements given below and state whether demand will be elastic or inelastic citing reasons for your answer :

(i) Demand for tea by a habitual coffee.

(ii) A consumer postpones the purchase of a refrigerator till the off - season sale.



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111. Calculate :

- (i) Total expenditure on good X when P_X falls from Rs. 6 to Rs. 1.
- (ii) Derive the value of ED.
- (iii) What shape will the demand curve take ?



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112. "Elasticity of demand at a common point will be more on a flatter curve than on a steeper curve". Prove.





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113. Differentiate between 'Law of Demand and Elasticity of demand'.



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114. Differentiate between perfectly elastic and perfectly inelastic demand curve.



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