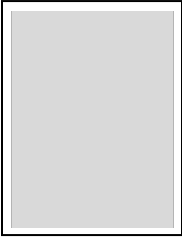


## Elasticity Test

Subject:

1. Define the term “price elasticity of demand.” (4 marks)



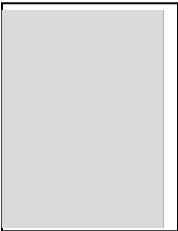
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2. For what range of values of elasticity is demand said to be elastic? For what range is it inelastic? (3 marks)



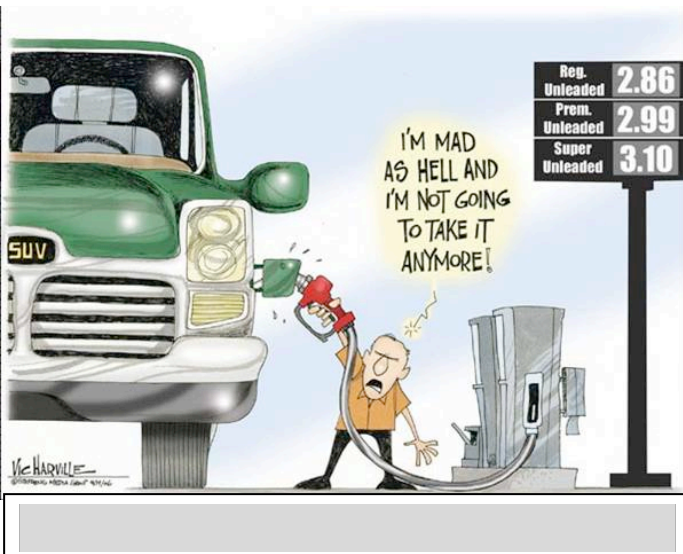
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3. What is this cartoon trying to say with a link to PED? (1 mark)



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4. The New Millennium Dome Company (NMDC) must choose the entry fee for a new sports arena. Suppose an expensive consultancy firm has estimated the demand schedule to be as follows:

Price of ticket (dollars)	Visitors (millions)
36	10
30	15
24	20
18	25
12	30
6	35

Refer to the table above table:

4a) Compute the price elasticity of demand for the range  $P = \$30$  to  $P = \$24$  and for the range  $P = \$18$  to  $P = \$12$ . *(Write formula and show working)*

(5 marks)

4b) The current admission price is \$18. If NMDC wants to increase its total revenue, should it charge a lower or higher price? (5 marks)

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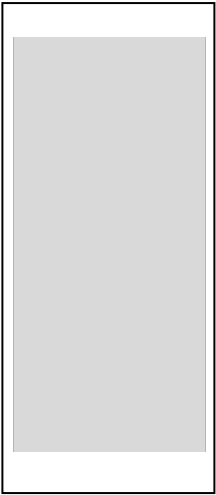


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The text below will help you answer question 5:

*The price elasticity of demand is a measure of the responsiveness of quantity demanded to changes in price. Demand for a product or service is more responsive (that is, more elastic) as the number and closeness of substitutes for that good or service rises, and as the importance of the item in a person's budget increases. Suppose a seller knows that some customers have fewer substitutes (less elastic demand) than others. In some situations the seller can increase his or her profit by charging a higher price to those customers whose demand for the product is less elastic, and a lower price to those with more elastic demand. With this result in mind, answer the following questions:*

5a. Why do airlines charge business travelers higher prices than tourists? (5 marks)



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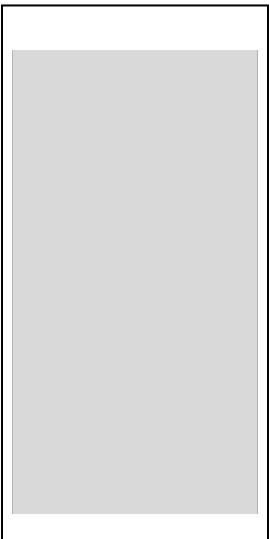
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5b. Why are fuel prices higher at stations located on motorways than those off the motorway? (5 marks)



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## **Calculations**

6. Calculate the price elasticity of demand in each of the following examples:  
In each case say whether the price elasticity is inelastic or elastic. (10 marks)

a) \* The change in demand is 5%, the change in price is 7%

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b) \* The change in demand is 12%, the change in price is 3%

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c) \* The change in demand is 9%, the change in price is 4%

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d) \* The change in demand is 13%, the change in price is 25%

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e) \* The change in demand is 6%, the change in price is 8%

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7. Calculate the percentage change in demand in each of the following cases:  
Where appropriate say whether the good is a normal good or an inferior good, or whether it is a substitute or complement. (10 marks)

- a) \* Yed is 2.4 and the %  $\Delta Y$  is 5%
- b) \* Xed is -1.5 and the %  $\Delta$  Price of good y is 20%
- c) \* Ped is -0.6 and the %  $\Delta P$  is 18%
- d) \* Pes is 1.2 and the %  $\Delta P$  is 6%
- e) \* Yed is -3.1 and the %  $\Delta Y$  is 8%

8. Calculate the percentage change in price or income in each of the following cases: (10 marks)

- a) \* Yed is 1.7 and the %  $\Delta Q$  is 2%
- b) \* Ped is -0.75 and the %  $\Delta Q$  is 25%
- c) \* Pes is 2.5 and the %  $\Delta Q$  is 3%
- d) \* Yed is -0.35 and the %  $\Delta Q$  is 3%
- e) \* Ped is 1.6 and the %  $\Delta Q$  is 4%

9. Say whether revenue will rise or fall (or stay the same) in each of the following cases: (8 marks)

- a) \* Ped is inelastic and a firm raises its price
- b) \* Ped is elastic and a firm lowers its price
- c) \* Ped is elastic and a firm raises its price
- d) \* Ped is -1.3 and the firm raises price by 2%

10. With the use of example, explain the importance of YED for firms and for LDC (less developed country) governments that mostly export food products. (10 marks)

**Total Marks Available: 76**

**Your Score:     /76**

**Optional: Answer only if requested**

**Essay Question: XED**

**Why would business use Cross Elasticity of Demand?**

Demand is the quantity of a good or service consumers are willing and able to purchase in a period of time. The cross elasticity of demand (XED) is represented as the percentage change in quantity of demand of the product divided by the percent change in price of another product (*or write formula*). When the value of XED is greater than 0, it means two products are substitute goods, while if it is less than 0, the two products are complementary goods.

Substitutes are important in the process of businesses making decision, because they indicate how close a change in price of competitors products will impact their own. Substitutes are products, which are closely related, meaning that if there is a change in price more consumers are willing and able to buy the other, cheaper product instead of buying the more expensive option. In comparison, complementary goods and services are products that are consumed together. E.g. tooth paste and tooth brush. When there is a change in price on one of these complementary products the demand for the other product will also change.

This is important for companies as the XED represents how sensitive the demand of a different firm's product (good A) is to change in price of their product (Good B). Alternatively, the XED shows how sensitive the demand of their product is to change in the price of another firm's product. It is extremely important for business to stay ahead of their competitors and this is why XED is important to businesses.

Activity:

Finish off this question.

Step 1: Draw 2 graphs (sub & comp) (10 marks)

Step 2: Analyse both graphs linking it to the question, examples and theory (6 marks)

Step 3: Finish with 3 to 4 paragraphs on the impacts to the various stakeholders (8 marks)