NAMIBIA UNIVERSITY
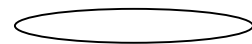## OF SCIENCE AND TECHNOLOGY

FACULTY OF COMMERCE, HUMAN SCIENCES AND EDUCATION

DEPARTMENT OF ECONOMICS, ACCOUNTING AND FINANCE

PRINCIPLES OF MICROECONOMICS

TEST 2 (FULL TIME, PART TIME, AND DISTANCE)

NAME:
STUDENT NUMBER:
QUALIFICATION:
MODE:

TEST DATE: 15 April 2023
MARKS: 40
DURATION: 1 HOUR

PLEASE CIRCLE YOUR LECTURER
Ms. Elina Haivela
Mr. Makaisapi Tjiumbirua
Ms. Precious Mwikanda
Ms. Lavinia Hofni

INSTRUCTIONS
1. Answer all questions on this question paper
2. Write neatly and legibly

Section A (5 marks)

In the following section, choose one possible/ correct answer and answer in the below sheet. Cross the correct answer with an X.

	A	B	C	D
1.1			X	
1.2				X
1.3	X			
1.4	X			
1.5			X	

1.1 On a linear downward sloping demand curve, the elasticity of demand is zero **(1 mark)**

    A. At its vertical intercept
    B. At its midpoint
    C. At its horizontal intercept
    D. Above the linear curve

1.2 If the quantity of cigarettes demanded decreases by 5% in response to an increase in the price of cigarettes of N$2.50 per pack, the price elasticity of demand is **(1 mark)**
    A. 0.5
    B. 2.0
    C. 5.0
    D. Information not enough to determine the price elasticity of demand

Reason: we are given a % change in quantity but not a % in price, if we had initial and current price then we could know the % in price and therefore determine the price elasticity

1.3 If a 1% increase in the market price of a product leads to a 1% decrease in the total revenue received by all firms in the industry, then: **(1 mark)**

    A. The price elasticity of demand is greater than one
    B. The price elasticity of demand is less than one
    C. The price elasticity of demand is one
    D. There is insufficient information to determine the price elasticity of demand

Reason: The decrease is in TR and therefore we conclude that for TR to decrease the price elasticity is not unit, because if it was unit there would be no change in TR. A price increase for elastic product reduces the quantities demanded by

greater than 1 and therefore a greater decrease in quantities lead to the decrease in TR.

1.4 Which of the following statement is correct? **(1 mark)**

    A. Total utility is the cumulative sum of all marginal utilities
    B. Consumers can maximise their utility irrespective of their available resources
    C. Marginal utility is the average satisfaction that Mrs Jones gets from eating a box of chocolates
    D. When John consumes more apples, his total utility will increase at an increasing rate

1.5 When a consumer enjoys more and more of a product and each additional unit provides him/her with less satisfaction, we can interpret this situation as **(1 mark)**

    A. The law of demand
    B. Decreasing utility levels
    C. Diminishing marginal utility
    D. Diminishing marginal returns

Section B (5 marks)

In the following section, state whether the given statement is true or false. Cross the correct answer with an X.

		True	False
1.1	If the price of a good increases from N$ 3.00 to N$3.50 and this results to quantities demanded decreasing from 1600 to 1400, the price elasticity of demand using point formula is 1.15.		**X**
1.2	If the price elasticity of demand for a commodity is estimated to be 1.2, then a decrease in price would increase total revenue.	**X**	
1.3	If the demand for a product is relatively price elastic, it is possible that the product is a luxury.	**X**	
1.4	If the price elasticity of demand is 0.5 and the demand curve is linear, a company wanting to increase its total revenue should decrease the price.		**X**
1.5	If a product is having price elasticity of demand greater than 1, then a decrease in its price would increase the total revenue.	**X**	

Section C (30 marks)
Answer all the questions in this section.

Question 1

The following table shows the utilities that Petra derives from eating a meal at a restaurant and buying shoes at Shoe City. A meal costs her N$150 and a pair of shoes costs her N$300. Her available budget is **N$1500.00.**   (18 marks)

Units	Meal Total Utility	Marginal Utility	Marginal Utility/Price	Designer shoes Total Utility	Marginal utility	Marginal utility/Price
0	**0**			**0**		
1	180	180	1.2	600	600	2
2	270	90	0.6	960	360	1.2
3	330	60	0.4	1050	90	0.3
4	375	45	0.3	1080	30	0.1

a) Fill in the missing fields in the table above (answer in the table above) (10 marks)

   ½ mark per empty space filled with correct answer

b) At which unit or combination of units does Petra derive consumer equilibrium? Show your work   (2 marks)

………………………………………………………………………………………………

at 4 units of a meal and 3 units of designer shoes where MU/P (meal and

designer shoe) = 0.3

………………………………………………………………………………………

c) Calculate the highest possible combination that maximises her total utility allowing her to utilize her whole available income of N$1500 (6 mark)

PLEASE AWARD 6 MARKS TO ALL STUDENTS FOR THIS QUESTION C

Question 2 (8 marks)

OPEC currently supplies 90 000 barrels of oil per day at a price of N$50 per barrel.

a) They decide to cut back the supply to 85 000 barrels of oil per day and as a result, the price increases to N$70 per barrel. Will the total revenue from oil sales rise or fall? Explain and show all your calculations.   (3 Mark)

…………………………………………………………………………………………………

……   TR = P x Q

$50 x 90 000 = $4 500 000 ✔

$70 x 85 000 = $5 950 000 ✔

Total revenue from oil sales will rise by $1 450 000 ✔ .

…………………………………………………………………………………………………

(b) Calculate the price elasticity of supply for oil using the arc elasticity (midpoint) formula. Use the prices and quantities given above.   (3 Mark)

Arc (midpoint) elasticity

ES = 0.171428

………

…………………………………………………………………………………………………

(c) Based on your answer in (b) above, what would you conclude about the price elasticity of oil?   (2 Mark)

…………………………………………………………………………………………………

The elasticity coefficient is smaller than 1 which means the supply is relatively inelastic.

…………………………………………………………………………………………………

Question 3 (4 marks)

Given the following individual demand curve for Petrus' consumption, answer the questions that follow. Petrus initially bought a hot dog at the price of $3 and eventually due to some exogenous variable the price increases to $4.
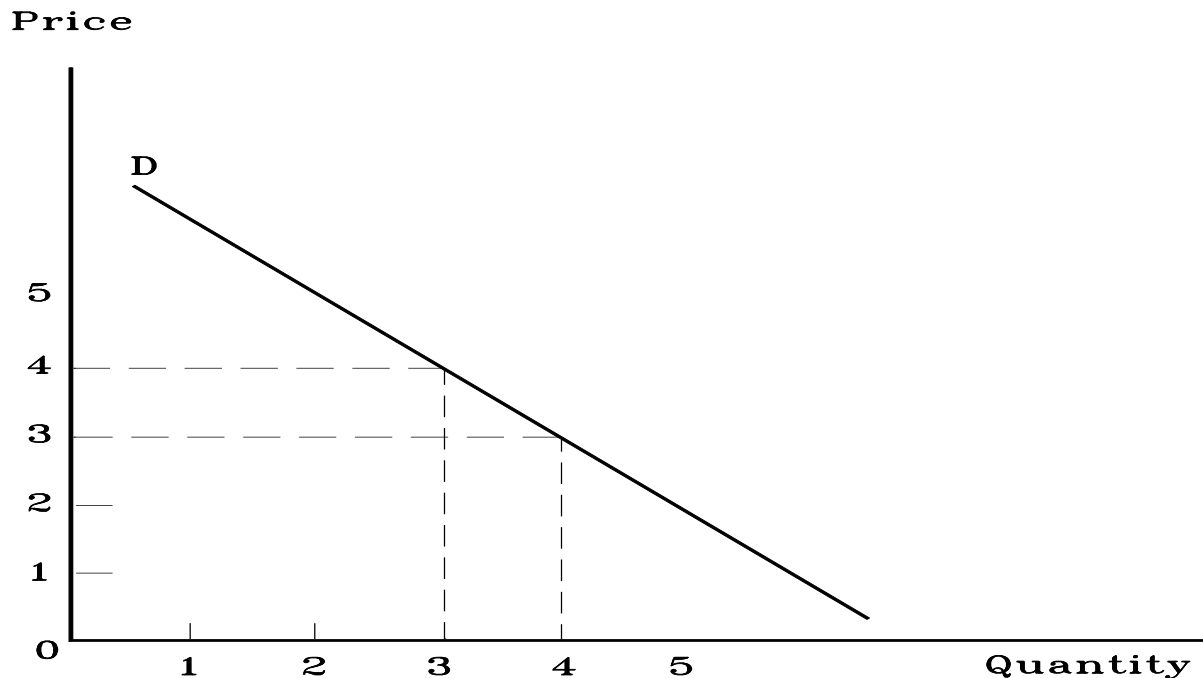
Price

a) What is Petrus actual expenditure at the price of $4   (2 marks)

That is N$4 spent for 3 hot dogs , graphically it is the vertical zone from 0 to 4 and horizontal zone from 0 to 3 quantities.

……………………………………………………………………………………….

b) Label his area of surplus at the price of $3 (show on the demand curve) (1 mark)

Student should label the area above the price of $3 but below the linear demand curve, consumer surplus area

c) Which of the two prices give Petrus a larger consumer surplus   (1 mark)

……the price of N$3

…………………………………………………………………………………….