



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF MANAGEMENT SCIENCES

DEPARTMENT OF ACCOUNTING, ECONOMICS AND FINANCE

QUALIFICATION: BACHELOR OF ECONOMICS	
QUALIFICATION CODE: 07BECO	LEVEL: 8
COURSE CODE: AMI810S	COURSE NAME: ADVANCED MICROECONOMICS
SESSION: JUNE 2022	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 100

SECOND OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	MR. PINEHAS NANGULA
MODERATOR:	Dr Ernest Ngeh Tingum

INSTRUCTIONS
<ol style="list-style-type: none">1. Answer ALL the questions.2. Write clearly and neatly.3. Number the answers clearly.

PERMISSIBLE MATERIALS

1. Scientific calculator
2. Pen and Pencil
3. Ruler

THIS QUESTION PAPER CONSISTS OF 4 PAGES (Including this front page)

QUESTION ONE**[25 MARKS]**

John has the utility function $U(Z,B) = 10Z^{0.4}B^{0.6}$, where Z denotes the amount of food consumed and B the amount of clothing. Now suppose that he has an income of N\$100 per week and that the price of clothing is $P_b = \text{N}\$10$ per unit. Suppose that the price of food is initially $P_{z1} = \text{N}\$20$ per unit and that the price subsequently falls to $P_{z2} = \text{N}\$10$ per unit.

Use income, substitution, and total effect to determine if pizza is a normal good or inferior good or giffen good.

QUESTION TWO**[30 MARKS]**

- a) What is a basket (or a bundle) of goods? [2 marks]
- b) What does the assumption that preferences are complete mean about the consumer's ability to rank any two baskets? [4 marks]
- c) Give an example of preferences that do not satisfy the assumption that preferences are transitive. [4 marks]
- d) Ali is a university student who receives a monthly stipend from his parents of N\$5,000. He uses this stipend to pay rent for housing and to go to the movies. In the town where Ali goes to university, each square foot of rental housing costs N\$2.50 per month. Each movie he attends costs N\$12. Let x denote the square feet of housing, and let y denote the number of movies he attends per month.
 - i) What is the expression for Ali's budget constraint? [2 marks]
 - ii) Draw a graph of Ali's budget line. [2 marks]
 - iii) What is the maximum number of square feet of housing he can purchase given his monthly stipend? [2 marks]
 - iv) What is the maximum number of movies he could attend given his monthly stipend [2 marks]
- v) Suppose Ali's parents increase his stipend by 10 percent. At the same time, suppose that in the university town where he lives, all prices, including housing rental rates and movie ticket prices, increase by 10 percent. What happens to the graph of Ali's budget line? [2 marks]

- e) Esther consumes two goods: housing and food.
- i) Suppose we are given Esther's marginal utility of housing and his marginal utility of food at the basket he currently consumes. Can we determine his marginal rate of substitution of housing for food at that basket? If yes, work it out? [4 marks]
- ii) Suppose we are given Esther's marginal rate of substitution of housing for food at the basket he currently consumes. Can we determine his marginal utility of housing and his marginal utility of food at that basket? If yes, work it out? [6 marks]

QUESTION THREE

[25 MARKS]

Suppose Cola and Pepsi's demand curves are given by $Q_1 = (64 + 2P_2) - 4P_1$ and $Q_2 = (50 + P_1) - 5P_2$, respectively. Coca-Cola's marginal cost is \$5 per unit, and Pepsi's marginal cost is \$4 per unit

- a) What is Coca-Cola's profit-maximizing price when Pepsi's price is \$8? [7 marks]
- b) What is the equation of Coca-Cola's price reaction function (i.e., Coca-Cola's profit-maximizing price when Pepsi sets an arbitrary price P_2)? [8 marks]
- c) What are Coca-Cola's and Pepsi's profit-maximizing prices and quantities at the Bertrand equilibrium? [10 marks]

QUESTION FOUR

[20 marks]

An individual consumes two goods, clothing and food. Given the information below, illustrate:

Price of food	Price of cloth	Quantity of food	Quantity cloth	Income
N\$10	N\$2	6	20	N\$100
N\$10	N\$2	8	35	N\$150
N\$10	N\$2	11	45	N\$200
N\$10	N\$2	15	50	N\$250

- i. Income-consumption curve for food. [5 marks]

- ii. Income-consumption curve for clothing. [5 marks]
- iii. Engel curve for clothing. [5 marks]
- iv. Engel curve for food. [5 marks]

All the best