ПАМΙΒΙΑ UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OFCOMMERCE, HUMAN SCIENCE AND EDUCATION

DEPARTMENT OF ECONOMICS, ACCOUNTING AND FINANCE

QUALIFICATION: BACHELOR OF ECONOMICS HONOURS DEGREE	
QUALIFICATION CODE: 08BECO	LEVEL: 8
COURSE CODE: AMI810S	COURSE NAME: ADVANCED MICROECONOMICS
SESSION: JUNE 2024	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 100

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

INSTRUCTIONS
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 _3_ PAGES (Including this front page)

QUESTION ONE [25 MARKS]

Consumers derived utility from consuming housing (H) and composite good (Y). Consumer utility function is $U(Y, H) = 10Y^2 H$, price of composite good is (Py = N\$1.00), the price of housing is (Ph =N\$5.00) and consumer income is (I = N\$300). Government would like to increase the consumption of good x with 200 per cent.

a) Government would like to increase the current demand for housing with 50%. Government can achieve this objective by either giving cash subsidy or a voucher that can only be used in the purchasing of housing. How much will it cost government if it decides to give cash subsidy and how much will cost if it decides to give voucher? [15 marks]

b) Similarly, if government want to increase the initial demand for housing with 100% from the initial level, which option is cost effective to the government? [10 marks]

Question Two [25 marks]

a) Discuss in detail why economic models are at the heart of economics theory. [7 marks]

b) Construct two economics models. Each model must have at least three exogenous variables and one endogenous variable. Use your knowledge of economic theories to state expected signs between exogenous variables and endogenous variables in your models. [8 marks]

c) Consider the market for beef that is initially in equilibrium with a market price of N\$75.00 and a market quantity of 10 000 tons per month. Beef is a normal good. Both elasticities of demand and supply are relatively inelastic. Suppose that people's incomes rise, and the production cost of beef increases. Draw graphs illustrating the initial equilibrium and the new equilibrium after the described changes. Provide a verbal description of the outcome in this market due to these changes. [10 marks]

Question Three [25 marks]

A homogeneous products duopoly faces a market demand function given by $P = 500 - 10Q$, where $Q = Q1 + Q2$. Both firms have a constant marginal cost $MC = 200$.

a)

  i. What is Firm 1's profit-maximizing quantity, given that Firm 2 produces an output of 50 units per year? [2.5 marks]

  ii. What is Firm 1's profit-maximizing quantity when Firm 2 produces 20 units per year? [2.5 marks]

b) Derive the equation of each firm's reaction curve and then graph these curves. [5 marks]

c) What is the Cournot equilibrium price and quantity per firm in this market? [5 marks]

d) What would be the equilibrium price in this market if it were perfectly competitive?

[5 marks]

e) What would be the equilibrium price in this market if the two firms colluded to set a monopoly price? [5 marks]

Question three [25 marks]

Consumer maximizes utility by consuming a combination beef (B) and pork (P). the price of beef is N$10.00 and the price of pork is N$5.00. Consumer's utility function is $U(B,P) = B^2P^3$ and income is N$800.00. If the price of pork increases from N$5.00 to N$10.00, construct demand curve for beef and pork. Let unit of pork be on the x-axis.

All the best