"Investing in Africa's Future"

COLLEGE OF BUSINESS AND MANAGEMENT SCIENCES

ECO1101 MICROECONOMIC PRINCIPLES

END OF FIRST SEMESTER EXAMINATIONS

NOVEMBER 2025

LECTURER: DR T. MASESE

TIME: 3 HOURS

INSTRUCTIONS

Answer *ANY FOUR* Questions

Marks allotted to each question are clearly indicated

CLEARLY AND NEATLY PRESENTED WORK WILL BE AWARDED MARKS

ALL WRITTEN WORK (*including rough work*) TO BE DONE IN THE AFRICA UNIVERSITY ANSWER BOOKLET

DO NOT TEAR OFF ANY PAGES FROM THE AFRICA UNIVERSITY ANSWER BOOKLET

Answer any FOUR Questions from the paper

Question 1

a. List the three main types of economic systems and their main characteristics **(10 marks)**
a. An agricultural economist calculated the income and price elasticities for beef meat and potatoes which are shown on the following table. Explain the meaning of these estimates of elasticities and how the values recorded might be of use to the agricultural industry **(5 marks)**

	Beef	Potatoes	All Food
Price Elasticity of Demand	-1.25	-0.21	-
Income Elasticity of Demand	+0.08	-0.48	+0.01

b. HealthMed P/L makes and sales portable x-ray machines at an average price of $900 each. Over the past year they sold 4000 of these a-ray machines. The company believes that the price elasticity of demand is about -2.5. If it decreases the price to $750
    i. What should be the quantity sold? **(2 marks)**
    ii. By how much will revenue increase or decrease? Explain why? **(2 marks)**
    iii. Do you think HealthMed P/L's x-ray machine has many close substitutes? Why? **(2 marks)**
c. What is the difference between positive and normative economics? Identify whether the following policy statements are positive or normative. Explain.
    i. The price of petrol is too high.
    ii. The majority of the population would prefer a policy that reduced unemployment to one that reduced inflation.
    iii. Governments should arrange taxes so that people cannot avoid paying them.
    iv. Unemployment is a more important social problem than inflation.

    (4 marks)

Question 2

a. Suppose that because of a legal settlement over health care claims, tobacco companies raise the average price of a pack of cigarettes from $1.95 to $2.45. Also, suppose the projected decline in cigarette sales was 8 percent. What does this imply about the elasticity of demand for cigarettes? Explain. **(3 marks)**
b. Below is a production possibilities table for consumer goods (cars) and capital goods (forklifts) in Zambia:

| Type of Production	Production Alternatives				
	A	B	C	D	E
Consumption Goods (Automobiles)	0	2	4	6	8
Capital Goods (Forklifts)	30	27	21	12	0

i. Sketch and show these data graphically on a PPC. Also indicate points F and G which are located inside and outside the PPF respectively **(3 marks)**
ii. Upon what specific assumptions is this production possibilities curve based? **(3 marks)**
iii. If the economy is at point C, what is the opportunity cost of one more automobile? Of one more forklift? **(2 marks)**
iv. Briefly explain how the production possibilities curve reflects the economic problem, opportunity costs, economic growth and the law of increasing opportunity costs **(4 marks)**
v. If the economy characterized by this production possibilities table and curve were producing 3 automobiles and 20 fork lifts, what could you conclude about its use of its available resources? **(3 marks)**
vi. What would production at point F inside the production possibilities curve indicate? What must occur before the economy can attain such a level of production? **(3 marks)**
vii. Suppose improvement occurs in the technology of producing forklifts but not in the technology of producing automobiles. Draw the new production possibilities curve **(2 marks)**
viii. Now assume that Zambia's current choice is to produce more forklifts and other goods of the future. What are the implications of this decision to the future position of its PPF? **(2 marks)**

Question 3

a. Outline the assumptions necessary for price discrimination to take place. Distinguish between first, second- and third-degree price discrimination **(10 marks)**
b. Explain why it is possible for a monopolist to earn supernormal profit in the long run **(2 marks)**
c. Outline the relationship between total, average and marginal revenue. With the use of a diagram, outline what is meant by profit maximization **(5 marks)**
d. Why is a firm in a perfectly competitive market said to be a 'price taker'? With the aid of diagrams, distinguish between the short-run and long-run equilibrium in perfect competition **(8 marks)**

Question 4

a. Suppose we have the following relationships: $Q^D = 18 - 3p$ and $Q^S = 2 + 5p$. The equilibrium condition is that $Q^{D*} = Q^{S*} = Q^e$. Calculate the equilibrium price and equilibrium quantity **(4 marks)**
b. Consider households demand for chicken meat. For each of the events listed below, state and explain the likely effect on the demand for chicken. How would each event be illustrated in a demand/supply diagram?
   a. A medical study reports that eating chicken reduces the likelihood of suffering from particular types of heart problems **(3 marks)**
   b. A widespread foot and mouth disease lead to an increase in the price of beef **(3 marks)**
   c. An increase in average household income **(4 marks)**
a. The following diagram describes the hypothetical demand and supply for tinned beef in Zimbabwe in 2024.
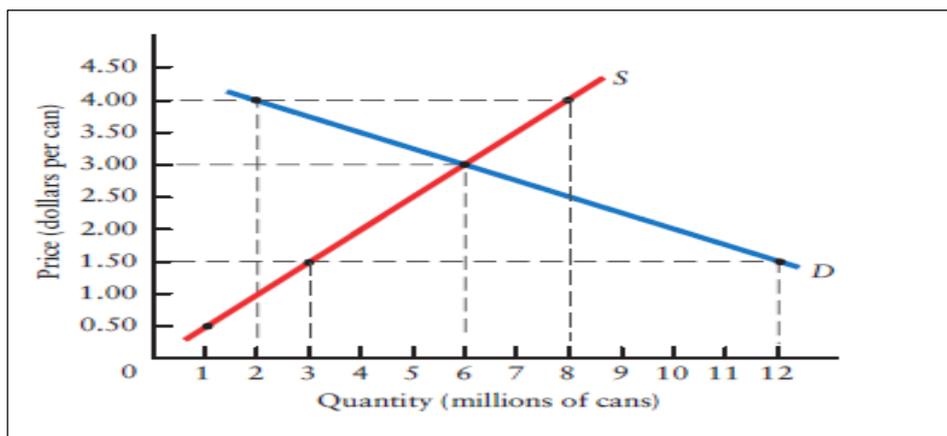
    i. Suppose the price of a can of beef is $4.00. What is the quantity demanded? What is the quantity supplied? At this price, is there a shortage or a surplus? By what amount? **(4 marks)**

    ii. Suppose the price of a can of beef is $1.50. What is the quantity demanded? What is the quantity supplied? At this price, is there a shortage or a surplus? By what amount? **(4 marks)**

    iii. What is the equilibrium price and quantity in this market? **(3 marks)**

Question 5

a. Define the terms isoquant and isocost. What is meant by the least-cost process of production? **(3 marks)**

b. Study the table below and answer the questions that follow:

Output	TC	TFC	TVC	ATC	AFC	AVC	MC
0	15						
1	30						
2	35						
3	39						
4	45						
5	60						

    i. Complete the above table **(10 marks)**

    ii. Sketch the ATC, AVC and the MC **(3 marks)**

    iii. Outline the relationship between total, average and marginal cost **(3 marks)**

c. Outline what is meant by economies and diseconomies of scale and how they affect the shape of the long-run average cost curve. **(4 marks)**

d. Using a particular industry or sector, explain what is meant by economies of scope **(2 marks)**

END OF EXAMINATION