The Management University of Africa

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UNDERGRADUATE UNIVERSITY EXAMINATIONS

SCHOOL OF MANAGEMENT AND LEADERSHIP

DEGREE OF BACHELOR OF MANAGEMENT AND LEADERSHIP

BMT 202/BMT 300: **MANAGERIAL ECONOMICS**

DATE: **8TH AUGUST 2024**

DURATION: 2 HOURS

MAXIMUM MARKS: 70

INSTRUCTIONS:

1. Write your registration number on the answer booklet.
2. **DO NOT** write on this question paper.
3. This paper contains **SIX (6)** questions.
4. Question **ONE** is compulsory.
5. Answer any other **THREE** questions.
6. Question **ONE** carries **25 MARKS** and the rest carry **15 MARKS** each.
7. **Write all your answers in the Examination answer booklet provided.**

QUESTION ONE

Read the Case Study below carefully and answer the questions that follow:

Equilibrium price and quantity are determined by the intersection of the supply and demand curves in a market. The demand curve shows the quantity of a product that consumers are willing to buy at different prices. Typically, the quantity demanded decreases as the price increases.

On the other hand, the supply curve shows the quantity of a product that producers are willing to sell at different prices. Typically, the quantity supplied increases as the price increases

When the supply and demand curves are plotted on the same graph, the point at which they intersect is called the equilibrium point. At this point, the quantity demanded by consumers is equal to the quantity supplied by producers, and the market is said to be in equilibrium.

The price at this equilibrium point is known as the equilibrium price, and the quantity sold at this price is known as the equilibrium quantity. Any price or quantity above or below this equilibrium point will create a surplus or a shortage, respectively, in the market, which will eventually cause the price and quantity to adjust until the market reaches a new equilibrium point.

Required:

(a) Reference to the case above; assume a new technology is introduced that decreases the cost of producing a certain product. What happens to the equilibrium price and quantity in the market for this product? **(5 Marks)**

(b) Assume a natural disaster destroys a significant portion of the crops that are used to produce a certain food item. What happens to the equilibrium price and quantity in the market for this food item? **(5 Marks)**

(c) Suppose the demand curve for a product is Qd = 100 - 2P and the supply curve is Qs = 20 + 3P. What is the equilibrium price and quantity? **(5 Marks)**

(d) What are some various constraints that firms face in maximizing their economic profit? **(5 Marks)**

(e) Discuss estimation of a demand function using econometric techniques **(5 Marks)**

QUESTION TWO

a) Explain with examples distinction between Diminishing Marginal Returns vs. Returns to Scale **(8 Marks)**

b) Why Do Economists Study and Research Game Theory **(7 Marks)**

QUESTION THREE

a) A company invests Ksh. 1,000,000 in a project which is expected to give a profit of Ksh500,000 a year. Determine the Payback Period **(3 Marks)**

b) A firm invests Ksh. 1,900,000 in a project with an expected return of Ksh2,400,000. The project is going to last 8 years. Compute Average Rate of \return **(3 Marks)**

c) Discuss Behavioural Theories of the Firm **(9 Marks)**

QUESTION FOUR

a) Define Marginal Rate of Substitution. **(2 Marks)**

b) Why is an indifference curve convex? **(2 Marks)**

c) Identify three characteristics of indifference curves and explain **(3 Marks)**

d) There are three major areas of study in the regression analysis. Explain each of the areas of focus

i. causal analysis, **(2 Marks)**

ii. forecasting an effect, **(2 Marks)**

iii. Trend forecasting. **(2 Marks)**

iv. Logistic regression **(2 Marks)**

QUESTION FIVE

A company can hire up to 12 workers to work on production in a day. Table 1 shows the production schedule of the company with each added worker.

Number of Workers	Total Product	Marginal Product	Production Stage
1	0	?	Stage I
2	5	?	
3	15	?	
4	29	?	
5	53	?	
6	95	?	
7	105	?	Stage II
8	112	?	
9	118	?	
10	116	?	Stage III
11	113	?	
12	104	?	

Table 1. Production Schedule,

Required: Populate the Marginal Product and explain the three stages of production as indicated in the schedule. **(15 Marks)**

QUESTION SIX

a) Solve the following pay-off matrix common in study of Game Theory **(7 Marks)**

Player A	**Player B**			
	Strategies	I	II	III
	I	6	8	6
	II	4	12	2

b) The **cost** of a project is Ksh50,000 and it generates cash inflows of Ksh20,000, Ksh15,000, Ksh25,000, and Ksh10,000 over four years.

Required:

Using the **present value index** method, appraise the profitability of the proposed investment, assuming a 10% rate of discount. **(8 Marks)**