

The
Management
University
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UNDERGRADUATE UNIVERSITY EXAMINATIONS

SCHOOL OF MANAGEMENT AND LEADERSHIP

DEGREE OF BACHELOR OF MANAGEMENT AND LEADERSHIP/BACHELOR OF

COMMERCE AND BACHELOR OF ARTS IN DEVELOPMENT STUDIES

BML 200/ BCM 215 : INTERMEDIATE MICROECONOMICS/ MICRO ECONOMICS

DATE: 4TH AUGUST 2023

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:

GRANULAR INCORPORATION

The Granular Corporation was active in the fragrance and cosmetics industries. The business adhered to the product idea of marketing and focused only on satisfying its already established clientele; nevertheless, it paid little attention to the evolving preferences and requirements of its target market. A marketing graduate by the name of Njeri joined the firm and provided advice to the company on the essential adjustments that need to be made in the product based on the changing taste and preferences of customers in order for the company to be successful in selling the items that it makes. Njeri pushed for the update of the merchandise and invested around 30,000 Kenyan Shillings in new packaging and rebranding it all on the basis of income and social aspects that are important to the customers. The product manager and the assistant manager were not pleased with the efforts that Njeri had made since the firm was unable to generate effective increase in sales and beat their many competitors by capturing the huge and growing, market even after six months of implementing the changes. The product manager and the assistant manager were of the view that while Njeri had achieved some progress, she had also missed a great many essential aspects that impact the behavior of consumers. This was despite the fact that Njeri had made some progress.

Required:

a) Propose the type of economic system that Granular Corporation operates in.

(2 Marks)

b) Expound on the factors of demand that Njeri focused on detailing how they affect demand of Granular Corporation cosmetics and perfume. **(6 Marks)**

c) "The product manager and the assistant manager were of the view that while Njeri had achieved some progress, she had also missed a great many essential aspects that impact the behavior of consumers buying patterns." Explain the

factors that Njeri might have missed

(6 Marks)

d) Assuming Granular Corporation cosmetics and perfume are

i. Giffen goods, explain how a decrease in incomes will affect demand of their cosmetics products. **(2 Marks)**

ii. Inferior goods, explain how an increase in the prices of their products will affect their demand **(3 Marks)**

e) Identify the market structure that Granular Corporation operates in. Explain your answer. **(5 Marks)**

QUESTION TWO

a) ABZ Construction Company deals with construction of bridges using steel bars and sells in the foreign market. The market demand function is $Q = 800 - 10P$; where Q is the quantity sold in the respective market at price P . The firm's total cost function is given by; $TC = 0.05Q + 10,000$.

- i. Determine the quantities and prices that maximize the firm's profits. (5 Marks)
- ii. Determine the maximum profit for the firm. (2 Marks)
- iii. Comment on the price elasticity for the firm at $P=5$ (3 Marks)
- b) Robert's utility function on bundles of (x, y) is given by: $U = 2X^4Y^5$. Determine the value of $MRS_{x,y}$ when $x = 3$ and $y = 2$? (5 Marks)

QUESTION THREE

- a) Consider the cell phone market. Technological improvements have reduced the costs to produce cell phones. Successful advertising campaigns launched by cell phone companies have made more people want to buy cell phones. Assess the effects of the technological improvements and advertising campaigns on the equilibrium price of cell phones. (5 Marks)
- b) Paretum autos is a small producer of motorbike engines with the following production function: $Q = 70K^{0.65}L^{0.35}$. During the last production period, the firm operated efficiently and used input rates of 110 and 35 for capital and labour, respectively.
- i. Find the marginal product of capital and the marginal product of labour based on the input rates specified. (3 Marks)
- ii. Assuming Paretum is operating optimally and the price of capital was sh. 2,000 per unit, what was the wage rate? (3 Marks)

c) Determine the nature of returns to scale for each of the following production functions

i. $Q = K^{0.6}L^{0.4}$ suppose $t=2$ $K =10$ $L=100$ (2 Marks)

ii. $Q = K^{0.4}L^{0.3}$ suppose $t=2$ $K =10$ $L=100$ (2 Marks)

QUESTION FOUR

a) Distinguish between product discrimination and product differentiation.

(4 Marks)

b) Compare and contrast the marginal utility approach with the indifference curve approach in understanding consumer behaviour.

(4 Marks)

a) Show how equilibrium is attained in both short-run and long-run periods by a competitive firm?

(7 Marks)

QUESTION FIVE

a) Suppose a firm is the only computer producer in the local market. The market demand function is given as: $Q = 200 - 2P$. The firm's total cost function is given as: $TC = 10Q$. The government levies a unit-tax of \$10 on computers. What is the profit-maximizing price after the imposition of tax? (5 Marks)

b) Consider the market for paper. The market supply and demand functions are given as:

$$Q_S = 15P$$

$$Q_D = -10P + 500$$

Assume the government imposes a production quota of 150 units of paper. Determine the deadweight loss as a result of this production quota? **(4 Marks)**

c) Explain two exceptions to the law of demand **(2 Marks)**

d) If disposable incomes rise by 5% and the income elasticity of demand for good Z is known to be 0.5.

i. Determine the change in demand that be expect. **(2 Marks)**

ii. Identify what type of good Z is and explain your answer. **(2 Marks)**

QUESTION SIX

a) Differentiate between the following economic terms. **(6 Marks)**

i. Opportunity cost and Marginal cost

ii. Marginal rate of substitution and marginal rate of technical substitution

iii. Substitution effect and income effect of a price change

b) Andrea's Day Spa began to offer a relaxing aromatherapy treatment. The firm asks you how much to charge to maximize profits. The demand curve for the treatments is given by the first two columns in Table below; its total costs are given in the third column.

Price	Quantity	TC
.....		
\$25.00	0	\$130
\$24.00	10	\$275
\$23.00	20	\$435
\$22.50	30	\$610
\$22.00	40	\$800
\$21.60	50	\$1,005
\$21.20	60	\$1,225

- c) For each level of output, calculate total revenue, marginal revenue, average cost, and marginal cost. (7 Marks)
- d) What is the profit-maximizing level of output for the treatments and how much will the firm earn in profits? (2 Marks)

