



**TECHNICAL UNIVERSITY OF MOMBASA**  
**SCHOOL OF BUSINESS**  
**DEPARTMENT OF MANAGEMENT SCIENCE**  
**UNIVERSITY EXAMINATION FOR:**  
**MASTER OF BUSINESS ADMINISTRATION**  
**BMS 5101: MANAGERIAL ECONOMICS.**  
**END OF SEMESTER EXAMINATION**  
**ORDINARY EXAMINATIONS**  
**SERIES: AUGUST 2019**  
**TIME: THREE HOURS**  
**DATE: AUGUST 2019**

**Instructions to Candidates**

You should have the following for this examination

-*Answer Booklet*, examination pass and student ID

This paper consists of FIVE questions. Attempt Question One and Any other Three Questions.

**Do not write on the question paper.**

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**Question One.**

**(a)** Briefly explain the basic managerial economics concepts (10 marks)

(b) Kojos co. Ltd sells a single product in its local market. The fixed cost are estimated to be sh. 700,000 per year and variable cost of sh. 70 per unit. The current selling price is sh.160 and at this price 10,000 units are demanded per year. It is estimated that for each successive increase in price by sh.2, annual demand will decrease by 500 units. Alternatively, for each sh. 2 reduction in price, demand will increase by 500 units.

Required;

Calculate the optimum output and price for the product assuming that if prices are set within sh.2 range. (10 marks)

## Question Two

(a) Manuko Co. Ltd is trying to set the selling price for one of its products and three prices are under consideration. These are Sh.4, Sh.4.30 & Sh.4.40

The following information is also provided

Alternatives

Conditions	Sh.4.00	Sh.4.30	Sh.4.40
Best possible	16,000	14,000	12,500
Most likely	14,000	12,500	12,000
Worst possible	10,000	8,000	6,000

Fixed costs = Sh. 20,000  
variable cost per unit = Sh. 2

### Required:

Advice the company on the best price to set. using:

Maximax decision rule (4 marks)

Maximin decision rule (3 marks)

Minimax Decision rule. (3 marks)

(b)

Andrew operates a small shop specializing in party favors. He owns the building and supplies all his own labor and money capital. Thus, Andrew incurs no explicit rental or wage costs. Before starting his own business Andrew earned sh.1,000 per month by renting out the store and earned sh.2,500 per month as a store manager for a large department store chain. Because Andrew uses his own money capital, he also sacrificed sh.1,000 per month in interest earned on Treasury bonds. Andrew's monthly revenues from operating his shop are sh.10,000 and his total monthly expenses for labor and supplies amounted to sh.6,000. Calculate Andrew's monthly accounting and economic profits (10 marks)

## Question Three

(a) A manufacturer produces two pieces of furniture: tables and chairs. The production of the furniture requires the use of two different pieces of raw-material, large and small pieces. One table is assembled by putting together two pieces of each, while one chair is assembled from one of the larger pieces and two of the smaller pieces, When determining the optimal production plan, the manufacturer must take into account that only 6 large and 8 small pieces are available. One table is sold for sh.1600 while the chair sells for sh.1000.

### Required:

Using linear programming model, determine the number of tables and chairs to be produced in order to maximise sales (10 marks).

b) Demand is a very important concept in managerial economics. Briefly explain the factors which determine the level of demand. (10 marks)

#### Question four

(a)

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Sales	22734	24731	31489	44685	55319	91021	146234	107887	127483	97275

#### Required;

Using regression model, Estimate the sales for 2012, 2015 (10 marks)

(b) The demand equation for a popular brand of fruit drink is given by the equation

$$Q_x = 10 - 5P_x + 0.001I + 10P_y$$

where  $Q_x$  = monthly consumption per family in gallons

$P_x$  = price per gallon of the fruit drink = sh.2.00

$I$  = median annual family income = sh. 20,000

$P_y$  = price per gallon of a competing brand of fruit drink = sh.2.50

#### Required:

- Interpret the parameter estimates. (2 marks)
- At the stated values of the explanatory variables, calculate the monthly consumption (in gallons) of the fruit drink. (4 marks)
- Suppose that median annual family income increased to sh.30,000. How does this change your answer to part (4 marks)?

#### Question Five.

(a) Briefly explain any five (5) methods used in demand forecasting (10 marks)

(b) At a price of sh.25, the quantity demanded of good X is 500 units. Suppose that the price elasticity of demand is -1.85. If the price of the good increases to sh. 26,

#### Required:

The new quantity demanded of this good (10 marks)