MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS
2023/2024 ACADEMIC YEAR
THIRD YEAR FIRST SEMESTER

SCHOOL OF BUSINESS AND ECONOMICS
BACHELOR OF COMMERCE

COURSE CODE: BCM 3103-1
COURSE TITLE: MANAGEMENT ACCOUNTING

DATE: 6/12/2023 **TIME: 0830-1030 HRS**

INSTRUCTIONS TO CANDIDATES

- ***Answer question ONE (compulsory) and any other TWO questions.***
- ***Question one carries 20 marks***
- ***All other questions carry 15 marks***

QUESTION ONE

a) Discuss **three (3)** weaknesses of break-even analysis. **(3 Marks)**

b) ABC Company's projected profit for the coming year is as follows:

	Total	**Per Unit**
	Shs.	**Shs.**
Sales	200,000	20
Less: Variable expenses	120,000	12
Contribution margin	80,000	8
Less: Fixed expenses	64,000	
Operating income	16,000	

Required

i) Compute the break-even point in units**.** **(2 Marks)**

ii) How many units must be sold to earn a profit of sh.30,000? **(2 Marks)**

iii) Compute the contribution margin ratio. Using that ratio, compute the additional profit that ABC would earn if sales were sh.25,000 more than expected**.** **(2 Marks)**

iv) Suppose ABC would like to earn operating income equal to 20 percent of sales revenue. How many units must be sold for this goal to be realized? Prepare an income statement to prove your answer. **(2 Marks)**

v) For the projected level of sales, compute the margin of safety**.(2 Marks)**

c) Explain four (4) perspectives which the balanced scorecard focuses on**.** **(4 Marks)**

d) Baraka Ltd manufactures a single product which is meant for the local market only. The monthly demand for the product varies from one month to the other.

During the month of April 2022, 500 units were produced incurring the following expenses;

	Shs.
Direct materials	70,000
Direct labour	60,000
Rent (Fixed)	35,000
Electricity(30% Fixed)	25,000
Property taxes and rates(70% Variable)	60,000
Technical support(Fixed)	35,000
Total	**285,000**

Required

Using account analysis method formulate a prediction equation in the form Y = a + bx **(3 Marks)**

QUESTION TWO

Amsterdam Zuid Properties

Brinkman, the chairman of the Amsterdam Zuid Properties development company, has beenoffered two rental contracts at the Zuid-as in Amsterdam for the same prospective lessee. Eachcontract is for a year and the lessee would be responsible for all occupancy costs includingutilities, building insurance and property taxes.

The first contract is for sh.60 000 per year plus sh.30 per unit of product sold by the lessee.The other contract is for sh.5000 per year and sh.70 per unit sold. Thisprospect seems to be theonly one interested in the space available. Recent overbuilding in the area has cut demanddrastically for at least a year. For the sake of this analysis, assume that the sale of units in thisone year is independent of sales in any other year.

Required:

a) Brinkman knows that two states of nature may occur: a demand of 1000 units or a demand of 2000 units. But he has no information about the probability of occurrence.He knows one thing for sure: he does not want to get blamed afterwards too badly for having made a bad decision. With this in mind, which contractshould Brinkman choose? **(4 Marks)**
b) Suppose Brinkman is neither pessimistic nor optimistic, but exactly 'in the middle', whichcontract should he prefer? **(3 Marks)**
c) Suppose Brinkman has information about the probabilities of demand. There is 40% chance the demand will be 1000 offices, and 60% that the demand will be 2000 offices. Which alternative should Brinkman choose, if he wants to maximize the expected value? **(3 Marks)**
d) What is the expected value of perfect information? **(3 Marks)**
e) Find the expected value of sample information given the following facts. A consultant with a track record of being correct 85% of the time when predicting a low market and 90% of the time correct when predicting a strong market offers to do some market research for Brinkman at a cost of sh.800. Sampling will result in one of two reports:
    i) A pessimistic report – demand will be 1000 offices
    ii) An optimistic report – demand will be 2000 offices

Will it be worthwhile paying the consultant sh.800 for the information? **(2 Marks)**

QUESTION THREE

Division A manufactures picture tubes for TVs. The tubes can be sold either to Division B of the samecompany or to outside customers. Last year, the following activity was recorded in Division A:

Selling price per tube sh.175
Variable cost per tube sh.130

Number of tubes:

Produced during the year 20,000
Sold to outside customers 16,000
Sold to Division B 4,000

Sales to Division B were at the same price as sales to outside customers. The tubes purchased byDivision B were used in a TV set manufactured by that division. Division B incurred sh. 300 in additionalvariable cost per TV and then sold the TVs for sh. 600 each.

Required:

a) Prepare income statements for last year for Division A, Division B, and the company as a whole. **(6 Marks)**

b) Assume that Division A's manufacturing capacity is 20,000 tubes per year. Next year, Division B wants to purchase 5,000 tubes from Division A, rather than only 4,000 tubes as in last year.
(Tubes of this type are not available from outside sources.) From the standpoint of the company as a whole, should Division A sell the 1,000 additional tubes to Division B, or should it continue to sell them to outside customers? Explain**.** **(6 Marks)**

c) Discuss the differences between centralized and decentralized decision making**.** **(3 Marks)**

QUESTION FOUR

Climate-Control, Inc., manufactures a variety of heating and air-conditioning units. The company iscurrently manufacturing all of its own component parts. An outside supplier has offered to sell a thermostatto Climate-Control for sh.20 per unit. To evaluate this offer, Climate-Control, Inc. , has gathered the following information relating to its own cost of producing the thermostat internally:

	Per Unit	**15,000 Units per Year**
	Shs.	Shs.
Direct materials	6	90,000
Direct labor	8	120,000
Variable manufacturing overhead	1	15,000
Fixed manufacturing overhead, traceable	5*	75,000
Fixed manufacturing overhead, common, but allocated	10	150,000
Total cost	30	450,000

*40% supervisory salaries; 60% depreciation of special equipment (no resale value).

Required:

a) Assuming that the company has no alternative use for the facilities now being used to produce the thermostat, should the outside supplier's offer be accepted? Show all computations. **(8 Marks)**

b) Suppose that if the thermostats were purchased, Climate-Control, Inc. , could use the freed capacity to launch a new product. The segment margin of the new product would be sh.65,000 per year.Should Climate-Control, Inc. , accept the offer to buy the thermostats from the outside supplier for sh.20 each? Show computations**.** **(7 Marks)**

QUESTION FIVE

a) New techniques are often described as contributing to cost reduction, but when cost reduction is necessary it is not obvious that such new approaches are used in preference to more established approaches. Three examples are;

i) Benchmarking
ii) Activity based budgeting
iii) Target costing

Required

Discuss how each of the above mentioned techniques contribute to cost reduction. **(6 Marks)**

b) GreenWorld, Inc., is a nursery products firm. It has three divisions that grow and sell plants: the Western Division, the Southern Division, and the Canadian Division. Recently, the Southern Division of GreenWorld acquired a plastics factory that manufactures green plastic pots. These pots can be sold both externally and internally.
Company policy permits each manager to decide whether to buy or sell internally. Each divisional manager is evaluated on the basis of return on investment.
The Western Division had bought its plastic pots in lots of 100 from a variety ofvendors. The average price paid was sh. 75 per box of 100 pots. However, the acquisitionmade Rosario Sanchez-Ruiz, manager of the Western Division, wonder whethera more favorable price could be arranged. She decided to approach Lorne Matthews,manager of the Southern Division, to see if he wanted to offer a better price for aninternal transfer. She suggested a transfer of 3,500 boxes at sh.70 per box.
Lorne gathered the following information regarding the cost of a box of 100 pots:

	Sh.
Direct materials	35
Direct labor	8
Variable overhead	10
Fixed overhead*	10
Total unit cost	63
Selling price	sh.75
Production capacity	20,000 boxes

*Fixed overhead is based on sh.200,000/20,000 boxes.

i) Suppose that the plastics factory is producing at capacity and can sell all that it produces to outside customers. How should Lorne respond to Rosario's request for a lower transfer price? (**3 Marks)**

ii) Now assume that the plastics factory is currently selling 16,000 boxes. What are the minimum and maximum transfer prices? Should Lorne consider the transfer at sh.70 per box? (**3 Marks)**

iii) Suppose that GreenWorld's policy is that all transfer prices be set at full cost plus 20 percent. Would the transfer take place? Why or why not? **(3 Marks)**

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