TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF BUSINESS

DEPARTMENT OF ACCOUNTING & FINANCE

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN ACCOUNTANCY 2

BAC 2204: MANAGEMENT ACCOUNTING

END OF SEMESTER EXAMINATION

SERIES: DECEMBER, 2024

TIME: 2HOURS

DATE: DECEMBER, 2024

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 (Compulsory) and any other TWO questions.
Do not write on the question paper.

Question One

a) H Limited manufactures and sells two products, J and K. Annual sales are expected to be in the ratio of J:1, K:3. Total annual sales are planned to be sh.420000. Product J has a contribution to sales ratio of 40%, whereas that of product K is 50%. Annual fixed cost are estimated to be sh.120000. Compute the budgeted break-even sales value (to the nearest sh.1000). (8 marks)

b) Comden has three divisions. Information for the year ended 30th September is as:

	Division A	Division B	Division C	Total
	sh.000	**sh.000**	**sh.000**	**sh.000**
Sales	350	420	150	920
Variable costs	280	210	120	610
Contribution	70	210	30	310
Fixed costs				262.5
Net profit				47.5

General fixed overheads are allocated to each division on the basis of sales revenue; 60% of the total fixed costs incurred by the company are specific to each division being split equally between them.

Required:

Using relevant costing techniques, which divisions should remain open if Comden wishes to maximized profits? **(12 marks)**

b) i) Define Management Accounting. (3 marks)

ii) Highlight FOUR differences between management and financial accounting. (6 marks)

iii) Explain THREE characteristics of risk environment. (3 marks)

iv) Explain the following types of decision makers in an environment of uncertainty

i) Risk seeker (2 marks)

ii) Risk neutral (2 marks)

iii) Risk averse (2 marks)

Question Two

a) A hospital's records show that the cost of carrying out health checks in the last five accounting periods have been as follows:

Period	Number of patients seen	Total cost
1	650	17.125
2	940	17,800
3	1260	18,650
4	990	17,980
5	1150	18,360

Required:

a) Using the high-low method and ignoring inflation the estimated cost of carrying out health checks on 850 patients in period 6. **(8 marks)**

b) What are the major limitation of the high low method? **(4 marks)**

c) Establish the cost function using regression analysis (8 marks)

Question Three

A company manufactures two products, x and y by using three machines a, b, and c. machine a has 4 hours of capacity available during the coming week. similarly, the available capacity of machines b and c during the coming week is 24 hours and 35 hours respectively. one unit of product x requires one hour of machine a, 3 hours of machine b and 10 hours of machine c. similarly one unit of product y requires 1 hour, 8 hour and 7 hours of machine a, b and c respectively. When one unit of x is sold in the market, it yields a profit of rs. 5/- per product and that of y is rs. 7/- per unit.

Required:

i) Formulate the standard Linear programming model for this problem **(4 marks)**

ii) Solve the linear problem formulated above **(8 marks)**

iii) Calculate the maximum contributions from the optimal mix **(8 marks)**

Solution

Maximize Z = 5x + 7y

Explanation:

From the above question,

They have given :

The objective of this problem is to maximize the profit from the sale of products x and y. The constraints represent the available capacity of the machines, which is limited. Thus, the total number of units of x and y that can be produced using all three machines is limited by the amount of available capacity. The objective is to maximize the profit by finding the optimal number of units of x and y to produce, given the limited capacity of all the machines.

Maximize Z = 5x + 7y

Subject to:

Machine A: $x + y \leq 4$

Machine B: $3x + 8y \leq 24$

Machine C: $10x + 7y \leq 35$

Objective:

Maximize the total profit for the week

Decision Variables:

x: Number of units of product x

y: Number of units of product y

Constraints:

a: $x + y \leq 4$

b: $3x + 8y \leq 24$

c: $10x + 7y \leq 35$

Objective Function:

Maximize Profit = $5x + 7y$

Question Four

A company manufacture and sells two products, X and Y. forecast data for a year are:

	Product X	Product Y
Sales units	8,000	8,200
Sales price (per unit)	sh. 12	sh 8
Variable cost (per unit)	sh. 8	sh. 3

Annual fixed cost are estimated at sh.273,000.

Required:

What is the break-even point:

a) In sales revenue **(4 marks)**

b) In sales (units) **(4 marks)**

c) in sales revenue product X **(3 marks)**

d) In sales revenue product Y **(3 marks)**

e) In sales units product X **(3 marks)**

f) In sales (units) product Y. **(3 marks)**

Question Five

a) Company A is expecting to sell 10,000 cases in July, 20,000 cases in August, and 30,000 in September of Year 2. Selling price per case is sh.30. All sales are on credit.

The sales are collected 70% in the month of sale and 30% in the month following sale. June sales totaled sh.200,000. Bad debts are negligible and can be ignored.

Required:

a) Prepare a sales budget. **(4 marks)**

b) Prepare a schedule of expected cash collections from sales, by month and in total, for the third quarter. (**4 marks)**

c) Assume that the company will prepare a budgeted balance sheet as of September 30. Determine the accounts receivable as of that date. **(4 marks)**

b) Bell Telecom has budgeted sales of its innovative mobile phone for next four months as follows: Sales Budget in Units July 30,000 August 45,000 September 60,000 and October 50,000 The company is now in the process of preparing a production budget for the third quarter. Ending inventory level must equal 10% of the next month's sales.

Required:

i) Calculate the ending inventory as of June 30**. (4 marks)**

ii) Prepare a production budget for the third quarter showing the number of units to be produced each month and for the quarter in total (**4 marks)**