



PAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF COMMERCE, HUMAN SCIENCES AND EDUCATION

DEPARTMENT OF ECONOMICS, ACCOUNTING AND FINANCE

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| QUALIFICATION: BACHELOR OF ACCOUNTING | |
| QUALIFICATION CODE: 07BOAC | LEVEL: 6 |
| COURSE CODE: CMA611S | COURSE NAME: COST & MANAGEMENT ACCOUNTING 201 |
| SESSION: JUNE 2023 | PAPER: THEORY AND CALCULATIONS |
| DURATION: 3 HOURS | MARKS: 100 |

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER

| | |
|------------------|-------------------------------------|
| EXAMINERS | Ms Kangala, H. and Sheehama, K.G.H. |
| MODERATOR | Tjondu, K. |

INSTRUCTIONS

- Answer ALL the questions in blue or black ink only. **NO PENCIL.**
- Start each question on a new page, number the answers correctly and clearly.
- Write clearly, and neatly showing all your workings/assumptions.
- Work with at least four (4) decimal places in all your calculations and only round off only final answers to two (2) decimal places.
- Questions relating to this examination may be raised in the initial 30 minutes after the start of the examination. Thereafter, candidates must use their initiative to deal with any perceived errors or ambiguities and any assumptions made by the candidate should be clearly stated.

PERMISSIBLE MATERIALS

- Silent, non-programmable calculators

THIS QUESTION PAPER CONSISTS OF 4 PAGES (excluding this front page)

QUESTION 1**20 Marks**

Specialization Ltd manufactures and sells two types of products: Alpha and Beta. The products are similar, but each is targeted to a different segment in the market. Specialization Ltd sells Alpha product and Beta product for N\$200 and N\$400, respectively. Some of the company's directors are skeptical of the selling prices stated that the selling prices are below cost price. The following shows the total operating costs.

Variable costs

| Product | Alpha (N\$) | Beta (N\$) |
|------------------|-------------|------------|
| Direct Materials | 37.50 | 40 |
| Direct Labour | 62.50 | 80 |
| Marketing costs | 10.00 | 50 |

Other operating costs

| | (N\$) |
|-------------------------------------|---------|
| Manufacturing overheads | 250 000 |
| Administration and selling expenses | 93 600 |

You are given the following additional information:

1. The production overheads are both fixed and variable.
2. 90% of the total production overheads are common/ fixed costs. The variable portion is 10% of the sales of each individually product sold.
3. Administration and selling expenses are common/fixed costs.

| Product | Alpha (N\$) | Beta (N\$) |
|---------------------|-------------|------------|
| Production quantity | 4 000 | 2 500 |
| Sales quantity | 3 000 | 2 000 |

You are required to:

- (a) Calculate break-even-point in units. (12)
- (b) Calculate the break-even-point in units for each product individually. (4)
- (c) Calculate break-even-point in sales dollars. (4)

QUESTION 2**[32 Marks]**

Beauty (PTY) Ltd has recently started making two types of special face cream using the juice from aloe plants. The products are sold in small bottles and are called "AloeZap and AloeCure". The manufacture is a complicated process for which the company currently uses a direct/margin costing system, but management is considering implementing an absorption costing system.

Details of the product AloeCure for the last two periods, i.e. 2021 and 2022 are as follows:

| BEAUTY (PTY) Ltd | | |
|---|---------------|----------------|
| | 2021 | 2022 |
| Volume units | 1 200 | 1 500 |
| | N\$ | N\$ |
| Sales | 600 000 | 750 000 |
| Operating costs: | | |
| Direct material cost per unit | N\$50 | N\$50 |
| Direct labour costs per unit | N\$100 | N\$100 |
| Variable production overheads per unit | N\$15 | N\$15 |
| Depreciation: Office building | 142 500 | 142 500 |
| Mixed administration and distribution costs | 84 000 | 90 000 |
| Net profit | <u>94 500</u> | <u>189 000</u> |

Beauty (PTY) Ltd has estimated that fixed production overheads related to AloeCure product for the year 2023 is N\$82 500. Beauty (PTY) Ltd has estimated that 1 650 AloeCure products will be produced for the year 2023. Fixed production overheads costs are allocated on the basis of production units. The company financial period ends on 31 May each year. During 2023, 1 800 AloeCure products were produced, and fixed production overheads costs amounted to N\$95 000 were actually incurred.

During the year 2023, Beauty (PTY) Ltd sold 1 700 aloeCure products. There were 100 aloeCure products in the storeroom on 31 May 2023.

Requirements:

- (a) Prepare Beauty (PTY) Ltd Statement of Profit or Loss for year ended 31 May 2023 according to direct costing approach. You should clearly indicate variable costs and fixed costs. (12)
- (b) Prepare Beauty (PTY) Ltd Statement of Profit or Loss for year ended 31 May 2023 according to absorption costing approach. (14)
- (c) What are the assumptions of cost volume profit (CVP) analysis concerning the costs? (6)

QUESTION 3**[27 Marks]**

Let's Go-Ahead Ltd manufactures three products, A, B, and C, using the same plant and process. Over the past years, the company has been using full absorption costing and absorbing overheads based on direct labour hours. Selling prices are then determined using cost plus 20% pricing. Total production volumes for A, B, and C for the current period are 5 000 units, 500 units and 7 000 units, respectively. The following information relates to a production period:

| Product | A | B | C |
|-------------------------------|--------|--------|----------|
| Direct material cost per unit | N\$50 | N\$160 | N\$220 |
| Direct labour per unit | ½ hour | ½ hour | 1 ½ hour |
| Machine time per unit | ¼ hour | 1 hour | ½ hour |
| Direct labour cost per unit | N\$30 | N\$120 | N\$120 |

Total production overhead recorded by the cost accounting system is analysed under the following headings:

| Cost Pools | N\$ | Cost Drivers |
|-------------------------|----------------|---------------------------|
| Machine set up Costs | 360 000 | Number of set-ups |
| Material ordering costs | 450 000 | Number of material orders |
| Machine running costs | 131 250 | Machine hours |
| Material handling costs | <u>13 750</u> | Materials movements |
| Total cost | 955 000 | |

These overhead costs are absorbed by products on a machine hour rate of N\$48 per hour.

However, investigation into the production overhead activities for the period reveals the following totals:

| Product | Number of set-ups | Number of material orders | Number of times material was handled |
|---------|-------------------|---------------------------|--------------------------------------|
| A | 60 | 40 | 10 |
| B | 20 | 10 | 30 |
| C | 70 | 50 | 15 |

The company wants to boost sales revenue to increase profits but has a limited capacity to utilize the option of increased volume. The finance manager suggested a move towards activity-based costing (ABC), away from full absorption costing. It is believed that this will alter the cost of the products, which may in turn result in different prices and hopefully increased profits.

You are required to:

- Calculate sales price per unit of each product using Let's Go-Ahead Ltd's current method of absorption costing. (6)
- Calculate the full production cost per unit of each product using activity-based costing. (15)
- Explain the terms " Activity-based costing" , "cost drivers" and state two examples of cost drivers. (6)

QUESTION 4**[11 Marks]**

Panduleni Ltd manufactures a product that passes through one department on a continuous process basis. The product uses various raw materials that are issued to the Production department at the beginning of the process. Labour and overhead costs are added continuously throughout the process.

The following data summarizes the firm's actual production for the year ended 31 May 2023.

| | |
|---|-----------|
| Opening work in progress (WIP): | |
| Direct materials | N\$40 000 |
| Conversion costs | N\$50 000 |
| Number of units (on average complete 60% (material) & 70% conversion) | 10 000 |

Production data for the year ended 31 May 2023:

| | |
|--|------------|
| Input units | 50 000 |
| Output units transferred to finished goods | 40 000 |
| Direct materials | N\$75 000 |
| Conversion costs | N\$155 000 |
| Closing WIP units ((on average complete 60% (material) & 40% conversion) | 5 000 |
| No losses are expected during the period. | |

You are required to:

- Calculate the equivalent units produced in terms of direct materials and conversion costs for the year ended 31 May 2023, and determine **the equivalent unit product cost** using the FIFO method. (5)
- Calculate the equivalent units produced in terms of direct materials and conversion costs for the year ended 31 May 2023, and determine **the equivalent unit product cost** using the FIFO method and the weighted average method. (6)

QUESTION 5**[10 Marks]**

Helao Ltd manufactures two joint products, X and Y. The joint cost of manufacture is N\$130 000 and 2 000 units of product X together with 4 000 units of product Y are manufactured. The company uses physical/quantity basis for allocating joint costs.

The company can sell both products at split-off point. Product x has a saleable value of N\$25 per unit and product Y a value of N\$30 per unit. Alternatively, the company can process both products beyond split-off point as follows:

Incremental/Separable costs:

| Product | X | Y |
|--------------------------|-----------|-----------|
| Direct material per unit | N\$20 | N\$7.5 |
| Direct labour cost | N\$20 000 | N\$20 000 |

Product X and Y can be sold at N\$40 per unit and N\$50 per unit, respectively.

You are required to: Determine whether the company should sell its products at split-off point or process the products further. (10)

End of Question Paper