



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

**FACULTY OF COMMERCE, HUMAN SCIENCE AND EDUCATION
DEPARTMENT OF ECONOMICS, ACCOUNTING & FINANCE**

QUALIFICATION: BACHELOR OF ACCOUNTING	
QUALIFICATION CODE: 07BGAC	LEVEL: 6
COURSE CODE: CMA612S	COURSE NAME: COST & MANAGEMENT ACCOUNTING 202
SESSION: JANUARY/FEBRUARY 2025	PAPER: PRACTICAL AND THEORY
DURATION: 3 HOURS	MARKS: 100

SECOND OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINERS:	M Modestus, H Namwandi & E Kangootui
MODERATOR:	P Erkie

INSTRUCTIONS	
<ul style="list-style-type: none">• This question paper is made up of four (4) questions.• Answer All the questions in blue or black ink only.• You are advised to pay due attention to expression and presentation. Failure to do so will cost you marks.• Start each question on a new page in your answer booklet and show all your workings.• Questions relating to this paper may be raised in the initial 30 minutes after the start of the paper. Thereafter, candidates must use their initiative to deal with any perceived error or ambiguities and any assumption made by the candidate should be clearly stated.	

PERMISSIBLE MATERIALS

Non-programmable calculator

THIS QUESTION PAPER CONSISTS OF 7 PAGES (Including this front page)

Question 1**(25 mark)**

Nakara Cotton Ltd. buys and sells leather jackets. The manager prepared the following budgeted contribution statement of comprehensive income for the month of March.

	N\$
Sales	1 200 000
Less: Variable cost	(1 075 000)
Opening inventory	100 000
Purchases	1 075 000
Closing inventory	(175 000)
Variable selling costs	<u>75 000</u>
Contribution	125 000
Les: Fixed cost	(145 000)
Production overheads	100 000
Administration	<u>45 000</u>
Net loss before tax	(20 000)

Additional information:

- Bank opening balance is N\$120 000.
- Cash sales amounted to 70% of total sales for this month.
- Selling price per unit equals N\$120.
- 60% of inventory purchased in this month is on a cash basis.
- Nakara Cotton Ltd. plans to achieve a closing inventory level of 17,5% of units sold in this month.
- Cash payments in March to settle February credit purchases amounted to N\$312 000.
- Cash receipts in March in respect of credit sales of February amounted to N\$390 000.
- The variable cost per unit remained the same from February to March.
- Depreciation on both production and other assets amounts to N\$12 000 per month.
- The company use the FIFO method to inventory
- All other expenses are incurred on a cash basis.

REQUIRED:		Marks
(a)	Calculate the budgeted number of units purchased, on hand, and sold for March.	(5)
(b)	Calculate the total variable cost per unit.	(3)
(c)	Prepare a cash budget for March and calculate the estimated closing balance in the bank account	(13)
(d)	Briefly outline the four steps in formulating the Zero-Base Budgeting	(4)
Show all your workings!		
Total		25

Question 2**(30 marks)**

Taurus Pty. Ltd manufactures a range of industrial cleaning products from its automated factory in Windhoek. The company has recently introduced a just-in-time system for raw material purchases.

The company uses a standard absorption costing system for planning and control purposes although this system is now under review.

The following budget data relate to the production of one of its major product CP1 for August.

The product is manufactured by mixing two raw materials ETH1 and RXY2.

Standard cost per kg of Product CP1

	Quantity	Cost/kg	Cost
Raw material input:			
ETH1	0.30kg	N\$18.00	N\$5.40
RXY2	0.70kg	N\$6.00	N\$4.20
Raw material cost per kg of input			N\$9.60
Yield			96%
Raw materials cost per kg of output			N\$10.00
Fixed production overheads per kg of output			N\$4.00
Total standard cost per kg of output			N\$14.00

Budget data for product CP1 for the period is detailed below:-

- Sales – 72 000kg
- Production - 70 000kg
- Opening inventory – 2 000kg of CP1 (valued at N\$28 000)
- Selling price per kg - N\$20.00
- Fixed production overheads - N\$280 000

The fixed production overhead absorption rate is based on the budgeted number of kilograms produced.

Actual data for product CP1 for the period was as follows:

- Sales – 71 000kg
- Production – 69 000kg
- Selling price per kg - N\$20.30
- Fixed production overheads incurred - N\$278 000
- Cost per kg of ETH1 - N\$18.10
- Cost per kg of RXY2 - N\$5.80
- Input of ETH1 - 22 100kg
- Input of RXY2 – 47 900kg

REQUIRED:		Marks
(a)	Produce a statement that reconciles the budgeted and actual profit for CP1 for August showing the variances in as much detail as possible.	(25)
(b)	Discuss three reasons why the use of a standard costing system is considered inappropriate in a company that operates in an advanced manufacturing technology environment.	(5)
Show all your workings!		
Total		30

Question 3

(20 marks)

A company has developed a new product. Details are as follows:

Selling price and product life cycle

The product will have a life cycle of 10 000 units. It is estimated that the first 9 000 units will be sold for N\$124 each and then the product will enter the "decline" stage of its life cycle. It is difficult to forecast the selling price for the 1 000 units that will be sold during this stage.

Costs

Labour will be paid at N\$12 per hour. Other variable costs will be N\$38 per unit. Fixed costs will total N\$80 000 over the life cycle of the product. The labour rate and both fixed and variable costs will not change throughout the product's life cycle.

Learning curve

The first batch of 100 units will take 1 500 labour hours to produce. There will be an 85% learning curve that will continue until 6 400 units have been produced. Batches after this level will each take the same amount of time as the 64th batch. The batch size will always be 100 units.

Note: The learning index for an 85% learning curve is -0.2345

Ignore the time value of money.

REQUIRED:		Marks
(a)	Calculate the cumulative average time per batch for the first 64 batches.	(3)
(b)	Calculate the time taken for the 64th batch.	(4)
(c)	Calculate the average selling price of the final 1 000 units that will allow the company to earn a total profit of N\$100 000 from the product.	(7)
(d)	Explain any three uses of the learning curve	(6)
Show all your workings!		
Total		20

Question 4**(25 Marks)**

Brown Ltd is a company which has in inventory some materials of type XY which cost N\$150,000 but which are now obsolete and have a scrap value of only N\$42,000. Other than selling the material for scrap there are only two alternative uses for them.

Alternative 1

Converting the obsolete materials into a specialized product which would require the following additional work and materials.

Material A	600 units
Material B	1 000 units
Direct labour:	
5 000 hours unskilled	
5 000 hours semi-skilled	
5 000 hours highly skilled	15 000 hours
Extra selling and delivery expenses	N\$54 000
Extra advertising	N\$36 000

The conversion would produce 900 units of saleable product and these could be sold for N\$600 per unit.

Material A is already in inventory and is widely used within the firm. Although present inventories together with orders already planned will be sufficient to facilitate normal activity, any extra material used by adopting this alternative will necessitate such materials being replaced immediately. Material B is also in inventory but it is unlikely that any additional supplies can be obtained for some considerable time because of an industrial dispute. At the present time material B is normally used in the production of product Z which sells at N\$780 per unit and incurs total variable cost (excluding material B) of N\$420 per unit. Each unit of product Z uses four units of material B.

The details of materials A and B are as follows:

	Material A (N\$)	Material B (N\$)
Acquisition cost at time of purchase	200 per unit	20 per unit
Net realizable value	170 per unit	36 per unit
Replacement cost	180 per unit	-

Alternative 2

Adapting the obsolete materials for use as a substitute for a sub-assembly which is regularly used within the firm. Details of extra work and materials required are:

Material C	1 000 units
Direct labour:	
4 000 hours unskilled	
1 000 hours semi-skilled	
4 000 hours highly skilled	9 000 hours

1,200 units of the sub-assembly are regularly used per quarter at a cost of N\$1,800 per unit. The adaptation of material XY would reduce the quantity of the subassembly purchased from outside the firm to 900 units for the next quarter only. However, as the volume purchased would be reduced some discount would be lost, and the price of those purchased from outside would increase to N\$2,100 per unit for that quarter.

Material C is not available externally but is manufactured by Brown Ltd. The 1,000 units required would be available from inventories but would be produced as extra production. The standard cost per unit of material C would be as follows:

	N\$
Direct labour, 6 hours unskilled labour	36
Raw materials	26
Variable overheads, 6 hours at N\$2	12
Fixed overhead, 6 hours at N\$6	<u>36</u>
	110

The wage rates and overhead recovery rates for Brown Ltd are:

Variable overhead	N\$2 per direct labour hour
Fixed overhead	N\$6 per direct labour hour
Unskilled labour	N\$6 per direct labour hour
Semi-skilled labour	N\$8 per direct labour hour
Highly skilled labour	N\$10 per direct labour hour

The unskilled labour is employed on a casual basis and sufficient labour can be acquired to exactly meet the production requirements. Semi-skilled labour is part of the permanent labour force but the company has temporary excess supply of this type of labour at the present time. Highly skilled labour is in short supply and cannot be increased significantly in the short term; this labour is presently engaged in meeting the demand for product L which requires 4 hours of highly skilled labour. The contribution from the sale of one unit of product L is N\$48.

REQUIRED:		Marks
(a)	For each of the alternatives 1 and 2, prepare a cost-benefit analysis based on a schedule of relevant costs. Your answer should include a conclusion as to whether the inventories of material XY should be sold, converted into a specialized product (alternative 1) or adapted for use as a substitute for a sub-assembly (alternative 2).	(20)
(b)	Briefly define the following relevant costing terms: <ul style="list-style-type: none"> i. Sunk costs ii. Opportunity cost iii. Relevant costs iv. Committed Costs v. Notional Costs 	(1) (1) (1) (1) (1)
Show all your workings!		
Total		25

THE END