



Accounting

SELF STUDY GUIDE
BOOKLET 5
COST ACCOUNTING
PAPER 2

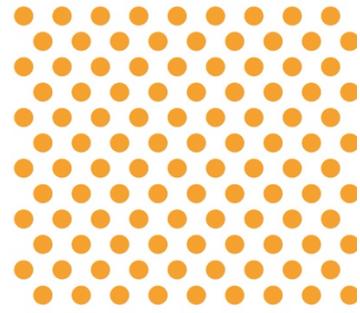


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1. INTRODUCTION

The declaration of COVID-19 as a global pandemic by the World Health Organisation led to the disruption of effective teaching and learning in many schools in South Africa. The majority of learners in various grades spent less time in class due to the phased-in approach and rotational/ alternate attendance system that was implemented by various provinces. Consequently, most schools were not able to complete all the relevant content designed for specific grades in accordance with the Curriculum and Assessment Policy Statements in most subjects.

As part of mitigating against the impact of COVID-19 on the current Grade 12, the Department of Basic Education (DBE) worked in collaboration with subject specialists from various Provincial Education Departments (PEDs) developed this Self-Study Guide. The Study Guide covers those topics, skills and concepts that are located in Grade 12, that are critical to lay the foundation for Grade 12. The main aim is to close the pre-existing content gaps to strengthen the mastery of subject knowledge in Grade 12. More importantly, the Study Guide will engender the attitudes in the learners to learning independently while mastering the core cross-cutting concepts.

2. HOW TO USE THIS SELF STUDY GUIDE?

1. This Study Guide address content and offer strategies to understand the different aspects of assessing Cost Accounting in a piecemeal approach, with consolidation activities to conclude.
2. The explanations and activities are intended to supplement the work you may have covered in class or have gained from textbooks and not replace them.
3. Activities proceed from the short, simple focused examples to more complex calculations and interpretation of transactions of a manufacturing business.
4. It is important to allocate sufficient time to:
 - Carefully read the explanations provided; underline or highlight key concepts, difficult vocabulary, important dates, and relevant amounts.
 - Interrogate the worked examples to gain an understanding of the message being conveyed or the sequence of events being illustrated.
5. Attempt the activities on your own; make constant reference to the explanatory notes but avoid referring to the suggested answers before attempting to answer an activity.
6. Compare your answers to the suggested answers and do your corrections in a different colour-ink pen. Note that you will learn more by discovering your weaknesses (when you get things wrong) and trying to understand why you're thinking was out of line with what was expected.
7. The activities provided may not be sufficient to perfect your skills. Always refer to similar questions from past examination papers for this purpose. Repetitive practice is always valuable.
8. Familiarize yourself with the use of Answer Books and prepared writing material as this is the trend with all accounting examinations.

PRE-AMBLE:

- The Cost Accounting is covered in Term 2 and may be integrated with other topics such as inventory valuation, financial indicators, etc.
- It will feature in the Accounting P2 (Managerial Accounting, Internal Auditing).
- This topic focus mainly on calculations, internal control, ethics, analysis and interpretation of unit costs and break-even point.

3. COST ACCOUNTING

A BASIC EXPLANATION

- “Costing” may be described as the value placed on the use of resources with the **purpose of making a profit**.
- Cost Accounting includes all costs incurred to **manufacture and sell a product or provide a service**.
- The management of the business will require this information to enable them to determine the markup to be added to the cost to arrive at the selling prices of products or services.
- To remain competitive, the business must be able to provide products or services at prices lower than competitors.
- It is therefore important that management are clear about the cost of each product it sells or each service it provides.

NOTE: The following concepts are provided to assist you with understanding of calculations and interpretation of financial information of a manufacturing concern.

3.1 KEY CONCEPTS.

Direct material	Refers to the raw material used during the manufacturing process to manufacture finished products. They form an integral part of the manufactured product, for example, milk is the raw material used in the manufacturing of cheese.
Direct labour	Refers to the costs that are incurred to pay workers who are working in the factory. If the employer has made further contributions (fringe benefits) above basic wages and salaries the direct labour costs will increase.
Prime Cost	Refers to the SUM of direct material cost and direct labour cost.

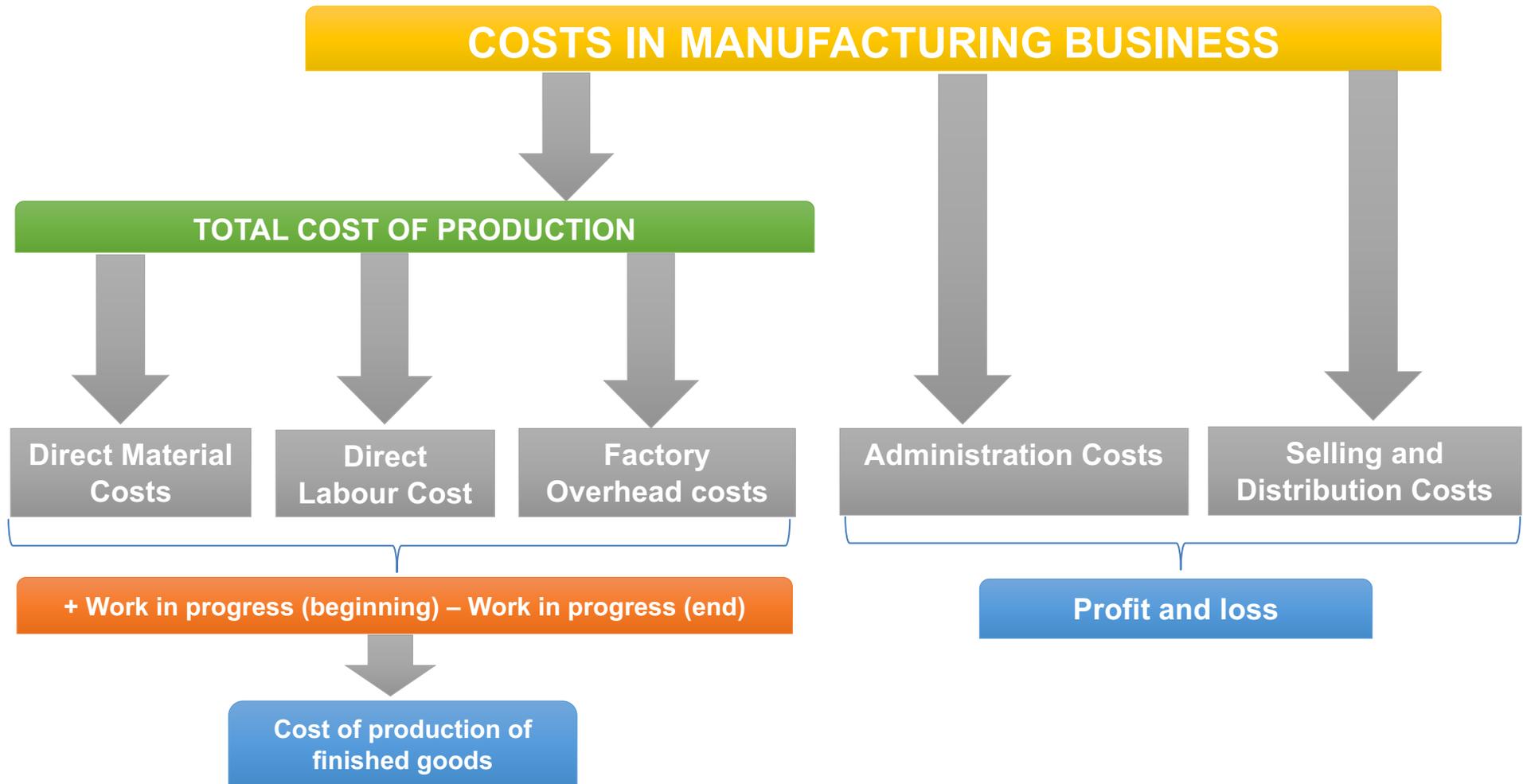
Factory Overheads	<p>Are all other costs (excluding direct material and labour) incurred in the manufacturing process that cannot be directly allocated to a specific product. These may include the following:</p> <ul style="list-style-type: none"> - Indirect material (consumable stores) which consists of supplementary materials, for example, cleaning products, colouring matter, glue, screws, lubricants. - Indirect labour which includes all wages and salaries that are not directly related to the manufacturing process, for example, wages for cleaning staff, salary for factory foremen, wages for security personnel employer contributions that increase labour costs (pension, medical, unemployment insurance fund). - Depreciation factory equipment or vehicles - Insurance (portion allocated for the factory) - Rent expense (portion allocated for the factory), - Water and electricity (portion allocated for the factory) - Telephone (portion allocated for the factory).
Total manufacturing cost	Refers to the sum of direct material, direct labour and factory overheads.
Work-in-progress	Consists of incomplete products that are at different stages of production at any given moment.
Finished goods	Are products that have been through the manufacturing process and are ready for sale.
Total cost of production of finished goods	Equals total manufacturing cost PLUS opening inventory of work-in-progress LESS closing inventory of work-in-progress.
Cost of sales	Refers to the cost of finished goods that have already been sold.

PRIOR KNOWLEDGE (Content you would have covered in the previous Grades)

- Concepts on manufacturing business as introduced in Grade 10.
- General Ledger accounts as introduced in Grade 11.
- An understanding to prepare the general ledger accounts and differentiate between stock and cost accounts.

OVERVIEW OF THE TOPIC

PRODUCTION COST STATEMENT AND ABRIDGED STATEMENT OF COMPREHENSIVE INCOME (INCOME STATEMENT)



Notes to the Production Cost Statement and Ledger Accounts

1. Direct material costs

	R
Balance at the beginning of the year	1 000
Net Purchases 2 200 + 1 800 – 600	3 400
Carriage on purchases	1 600
Customs duties	0
	6000
Less: Balance at the end of the year	(1 500)
Direct material costs	4 500

DR	DIRECT MATERIAL COSTS		CR
Balance	1 000	Creditors control	600
b/d	2 200	Work in progress	4 500
Bank	1 800	Balance	c/d 1 500
Creditors' control	1 600		
Carriage on purchases	6 600		6 600
	350		
Balance			
b/d			

Kindly note the following:

- Net purchases = (Purchases – returns)
- Carriage on purchases refers to the costs incurred for transportation of raw materials.
- Customs duties OR import duties are the costs incurred for raw material purchased from a foreign country.

2. Direct labour costs

	R
Factory wages	8 000
Pension fund contributions (portion by the factory)	420
Medical aid contributions (portion by the factory)	500
UIF contributions (portion by the factory)	80
Direct labour cost	9 000

DR	DIRECT LABOUR COSTS		CR
Bank	8 000	Work-in-Progress	9 000
Pension fund contribution	420		
Medical aid contribution	500		
UIF contribution	80		
	9 000		
			9 000

When you are required to calculate direct labour cost always remember that **Direct Labour cost** = normal (or basic) wage + overtime wage + employers' contribution (fringe benefits)

Normal wage = number of employees x number of hours worked x normal or basic wage rate

Overtime = number of employees x number of hours worked x overtime wage rate

3. Factory overhead costs

	R
Indirect material (opening balance+ purchases – closing bal.)	300
Indirect labour (salaries of supervisor, cleaner etc.)	700
Depreciation (on factory machines and vehicles only)	450
Maintenance: (on factory machines and vehicles only)	150
Rent expenses (factory portion only)	600
Water and electricity (factory portion only)	200
Factory overhead cost	2 400

DR		FACTORY OVERHEADS COSTS		CR
Indirect material	300	Work-in-Progress		2 400
Indirect labour	700			
Depreciation	450			
Maintenance	150			
Rent expenses	600			
Water and electricity	200			
	2 400			2 400

NOTE: Do not include costs that are not related to factory production such as advertising, selling and distribution, bad debts, etc.

4. Cost of finished goods sold

	R
Opening stock of finished goods sold	2 000
Cost of finished goods produced during the year 4 500 + 9 000 + 2 400	15 900
Cost of goods available for sale	17 900
Closing stock of finished goods	(1 700)
Cost of finished goods sold	16 200

DR		FINISHED GOODS		CR
Balance	b/d	2 000	Cost of sales	16 200
Work in progress		15 900	Balance	c/d
		17 900		1 700
				17 900
Balance	b/d	1 700		

3.2 WHAT IS PRODUCTION COST STATEMENT?

A Production Cost Statement (PCS) is a summary of the **ledger accounts** that are prepared in a **manufacturing business** to calculate the total cost of production. PCS consists mainly of **THREE costs**, namely, **Direct material costs**, **Direct labour costs** and **Factory overheads costs**.

PRIOR KNOWLEDGE (*Content you would have covered in the previous Grades*)

- In Grade 11 you learnt to draw general ledger accounts and then used this information to prepare the Statement of Comprehensive Income.
- In Grade 11 general ledger accounts of a manufacturing business were prepared and the same procedure is followed when preparing the PCS.
- PCS can be prepared using **TOP-DOWN** approach as well as **BOTTOM-UP** to calculate the missing amounts. The basic format of the PCS is provided below:

Production Cost Statement for the year ended..			Refer to concepts above for detailed explanation
Direct material costs	1	xxx	← Material issued for production
Direct labour costs	2	xxx	← Costs incurred to compensate factory workers
Primary costs		xxx	← Direct material PLUS direct labour cost
Factory overhead costs	3	xxx	← All other costs involved in the manufacturing process which increase the cost of producing the product.
Total manufacturing costs		xxx	← Prime cost PLUS Factory overheads costs
Work-in-progress at the beginning of the year		xxx	← Opening stock
Work-in-progress during the year		xxx	← Total manufacturing overheads PLUS Work in progress at the beginning
Work-in-progress at the end of the year		(xxx)	← Closing stock* (always subtracted)
Cost of production of finished goods		xxx	



In the Work-in-Progress Account, the finished goods stock amount must be the same as the **total cost of production of finished goods** as illustrated above.

DR		WORK-IN-PROGRESS STOCK ACCOUNT			CR
Balance	b/d	XXX	Finished Goods stock		XXX
Direct materials cost		XXX			
Direct Labour cost		XXX			
Factory overheads		XXX	Balance	c/d	XXX
		XXX			XXX
Balance	b/d	XXX			

Illustration of a production process for a dress



Direct raw material stock



**Issued to
production**



Direct labour



Factory overhead costs
(Factory cleaners, indirect material etc)



administration



Selling and distribution

NOTE:

Administration costs and Selling and distribution are costs that are independent of the production and incurred throughout the production process.

BASELINE ACTIVITY

- Classify the costs by making a tick in the appropriate columns.

DESCRIPTION OF THE COSTS	DIRECT MATERIAL COSTS	INDIRECT MATERIAL COSTS	DIRECT LABOUR COSTS	INDIRECT LABOUR COSTS
Transport costs paid for raw materials purchased				
Factory worker making the chairs				
Consumable stores bought to be used in a factory				
Medical aid contributions paid on behalf of the workers in the production process.				
Security guards in the manufacturing business				

- Match the different costs in column A with an explanation in column B.

	COLUMN A	COLUMN B	
1	Factory overheads	A	Compensation cost of employees who are producing goods.
2	Direct labour costs	B	Purchase costs of raw materials to be used in the production process.
3	Administration costs	C	Marketing-related costs incurred to ensure that the finished products reach the intended customers.
4	Direct material costs	D	Indirectly related to the production process yet necessary.
5	Selling and distribution costs	E	Originate from materials purchased from the foreign country.
6	Customs duties	F	Costs incurred for day to day running of the manufacturing concern.

SUGGESTED ANSWER

- Classify the costs by making a tick in the appropriate columns.

DESCRIPTION OF THE COSTS	DIRECT MATERIAL COSTS	INDIRECT MATERIAL COSTS	DIRECT LABOUR COSTS	INDIRECT LABOUR COSTS
Transport costs paid for raw materials purchased	X			
Payment of a factory worker making the chairs			X	
Consumable stores bought to be used in a factory		X		
Medical aid contributions paid on behalf of the workers in the production process.			X	
Security guards in the manufacturing business				X

- Match the different costs in column A with the definition in column B.

	Column A	Column B
1	Factory overheads	D
2	Direct labour costs	A
3	Administration costs	F
4	Direct material costs	B
5	Selling and distribution costs	C
6	Customs duties	E

WORKED EXAMPLE 1:

The information relates to Buhle Manufacturers.

REQUIRED:

Complete the Direct Material Cost note.

INFORMATION

Stock balances:

	28 February 2021	29 February 2020
Raw Material Stock	22 600	25 400

Additional transaction for the year:

- Purchases for the year consists of the following:
Cash R12 000
Credit R6 000
- Carriage on purchases amounted to R900.
- Raw materials amounting to R1 500 were damaged in transit and returned to the suppliers.

SUGGESTED ANSWER:

1. Direct Material Cost	
Raw material opening stock balance	25 400
Net purchases (12 000 + 6 000 – 1 500)	16 500
Carriage on purchases	900
Less:Raw material - closing stock balance	(22 600)
Direct Material Cost	20 200

Note: If raw materials have been imported you must ADD **Customs duties** to increase the cost of buying raw materials.

WORKED EXAMPLE 2:

The information relates to Pooh Bear Manufacturers.

REQUIRED:

- Calculate the Direct Labour Cost.
- Calculate the Indirect Labour Cost.

INFORMATION

Uncle who is the owner, employs the following individuals:

Details	Number of employees	Normal time for the year	Overtime (per year)	
			Hours	Rate per hour
Employees in the production process	3	R96 000 (per employee)	110 hours (each employee)	R140
Factory foreman	1	R156 000	-	-
Cleaner	1	R48 000	-	-
Security (Factory)	2	R60 000	-	-

The following deductions were made from each employee's wages:

- SARS(PAYE), 25% of total gross wage.
- Medical aid, 12% of wages (normal time).
- Pension fund, 10% of wages (normal time).
- Unemployment Insurance Fund, 1% of total gross wage (including overtime).

The employer contributes the following:

- Medical aid, 10% of wages (normal time).
- Unemployment Insurance Fund on a rand-for-rand basis.

NOTE: The factory cleaner hours are shared in a ratio 60:40 between the factory and administration, respectively.

SUGGESTED ANSWER:

DIRECT LABOUR COST	ANSWER
R 288 000 (96 000 x 3) Normal time	R 366 342
<u>R 46 200</u> (110 x 140 x 3) Overtime	
R 334 200	
R 28 800 (288 000 x 10%) Medical aid contributions	
R 3 342 (334 200 x 1%) UIF contributions	

INDIRECT LABOUR COST	ANSWER
R 156 000 Factory foreman	R304 800
R 28 800 (R48 000 x 60/100) Cleaner	
R 120 000 (R60 000 x 2) Security	

Refer to the concepts as explained above for distinction between **direct** and **indirect** labour costs



WORKED EXAMPLE 3:

The information relates to Tiger Manufacturers

REQUIRED:

Complete the Factory Overheads Cost note.

INFORMATION:

A. Stock on hand:

	30 April 2021	1 March 2020
Indirect material stock (consumable stores)	2 000	8 000

B. The bookkeeper calculated the costs below before considering additional information:

Factory foreman	108 000
Depreciation	60 000
Rent expenses	132 000
Water and electricity	67 200
Insurance	68 000

C. Additional information:

- Consumable stores bought during the year, R12 000.
- Agreement was reached with labour unions to increase salaries of all factory employees by 5% effective from 1 April 2021. However, due to lockdown disturbances increment was not yet effected on the last day of the financial year.
- 80% of depreciation was for factory and the rest for selling and distribution.
- Rent is divided between different sections as illustrated below:

	Factory	Sales	Office
Floor space	800 m ²	300 m ²	100 m ²

- Water and electricity amounting to R4 800 is still outstanding for April 2021. Water and electricity is divided in a ratio of 3:2 between factory and administration.
- Insurance includes an annual premium of R15 600 for the period 1 July 2020 to 30 June 2021. A quarter relates to administration and the rest to factory.

SUGGESTED ANSWER:

FACTORY MATERIAL COST		
Indirect material	$8\ 000 + 12\ 000 - 2\ 000$	18 000
Indirect labour	$108\ 000 + 450 (108\ 000/12 = 9\ 000 \times 5/100)$	108 450
Depreciation	$60\ 000 \times 80\%$	48 000
Rent expenses	$132\ 000 \times 800/1\ 200$	88 000
Water and electricity	$(67\ 200 + 4\ 800) \times 3/5$	43 200
Insurance	$(68\ 000 - 2\ 600) \times 3/4$	49 050
		354 700

Note:

- Indirect material: Only material *used* is recorded as a final amount, calculated using the following formula (where: **Indirect material used** = Open balance + purchases – returns - closing balance).

CALCULATION OF TOTAL COST OF PRODUCTION OF FINISHED GOODS

Tabile Manufacturers sells one type of containers. Their mark-up is **50%** on cost.

Use the finished goods ledger account to calculate total cost of production of finished goods.

	31 March 2021	1 April 2020
Work in progress	15 000	20 000
Finished goods	70 000	90 000

Sales for the year amounts to R600 000

Tabile Manufacturers sells one type of containers.

Use of total number of units produced and unit cost to calculate total cost of production of finished goods.

	31 March 2021	1 April 2020
Work in progress	15 000	20 000

Tabile Manufacturers produced 15 200 containers at a unit price of R25.

Production Cost Statement	
Work in process (beginning)	20 000
Work-in-Progress during the year	375 000
Work in progress (end)	(15 000)
Total cost of production of finished goods (70 000 + 400 000 (600 000 x100/150) – 90 000)	380 000

Production Cost Statement	
Work in process (beginning)	20 000
	375 000
Work in progress (end)	(15 000)
Total cost of production of finished goods (15 200 x R25)	380 000

Use the finished goods ledger account to calculate total cost of production of finished goods

Total units produced **MULTIPLY** by unit cost

ACTIVITY 2

2.1 Choose the correct word(s) from those given in brackets. Write only the word(s) next to the question number (2.1.1–2.1.4) in the ANSWER BOOK.

2.1.1 The wages of factory cleaners are classified as (direct labour/factory overhead) cost.

2.1.2 Factory rent is a (fixed/variable) cost.

2.1.3 Packing materials used are regarded as a/an (selling and distribution/administration) cost.

2.1.4 Break-even point refers to the (minimum/maximum) number of units that must be produced and sold to cover all costs. (4 x

1)

(4)

2.2 INFINITY HATS

The information relates to Infinity Hats, a business that manufactures one type of hat. The financial year ended on 28 February 2021.

REQUIRED:

2.2.1 Prepare the Factory Overhead Cost Note.

(14)

2.2.2 Complete the Production Cost Statement for the year ended 28 February 2021.

(10)

2.2.3 Infinity Hats are considering importing raw materials at a lower price than they are currently paying.

Provide TWO points they should consider before deciding.

(4)

INFORMATION:			
A.	EXTRACT FROM STOCK RECORDS ON 28 FEBRUARY 2021:		
		2021	2020
	Work-in-progress	R94 000	R?
	Indirect factory materials	R8 750	R5 950
B.	TRANSACTIONS/INFORMATION FOR YEAR ENDED 28 FEBRUARY 2021:		
	Raw materials issued for production		R?
	Indirect materials purchased		36 000
	Salaries and wages		2 900 000
	Rent expense		291 000
	Insurance		49 200
	Telephone allocated to the administration section		28 800
	Sundry factory expenses		189 856
C.	45% of salaries and wages are paid to employees who work directly in the production process and 10% must be allocated as the salary of the factory foreman.		
D.	Rent expense must be distributed according to floor space used. The factory occupies 2 400 m ² . Selling and distribution and the administration sections occupy the remaining 600 m ² .		
E.	The insurance premium has been paid up to 31 May 2021. Insurance is shared between factory, selling and distribution and the administration sections in the ratio 4 : 4 : 2.		
F.	20% of the telephone expense must be allocated to the factory. The remaining amount is shared equally between selling and distribution and the administration sections.		
G.	40 000 hats were produced during the financial year at a cost of R120 per hat.		

3.3 Break-even point

Refers to the point at which revenue of a manufacturing business is equal to its costs. At the break-even point, there is no **profit** or **loss** made as the total revenue is **equal** to the total costs.

To calculate the break-even point, you need to have information relating to the following:

- Fixed costs
- Variable costs
- Selling price of the product

NOTE: The calculation of BEP includes a simple yet very significant calculation for the denominator i.e. **Selling price per unit less Variable cost per unit**. The answer to this calculation is referred to as the **Contribution per unit**. This can be expressed using the following formula:

$$\text{Contribution per unit} = \text{Selling price per unit} - \text{variable cost per unit}$$

There are many formulas to be applied when calculating certain amounts such as:

Break-even point Formula is:

$$\frac{\text{Total Fixed Costs}}{\text{Selling price per unit} - \text{Variable costs per unit}}$$

Unit cost of production

$$\frac{\text{Total cost of production of finished goods}}{\text{Number of units produced}}$$

NOTE: *Practical example* to strengthen understanding of BEP

- If the Selling price is R900 per unit and the Variable costs are R500 per unit, the Contribution per unit is R400 (i.e. R900 less R500).
- The **selling price** will increase the profit, but the **variable costs** will decrease profit, so the **Contribution** is the *net* effect.
- You are expected to understand that the Contribution is the net Rand amount that each unit produced contributes towards covering the **Fixed costs**.
- If the Fixed costs are R12 000 and the contribution per unit is R400 (as calculated) then:
 - If only 1 unit is produced, the loss made will be R11 600 (i.e. **Fixed costs less R400**).
 - If 2 units are produced, the loss will be R11 200 (i.e. **Fixed costs less R800**).
 - If 3 units are produced, the loss will be R8 400 (i.e. **Fixed costs less R1 200**) etc.
- The business will have to produce 30 units* for the total Contribution to be equal to the total Fixed costs i.e. $R12\,000 \div R400 = 30$ units (i.e. $R400 \times 30 \text{ units} = R12\,000$)*. This is the **BEP** at which the business will make no profit and no loss i.e. it breaks even. If you understood the above explanation, you could easily use Contribution per unit to calculate other figures as suggested in the **bullets** below:

- For the calculation of **expected profit on additional units produced**, fixed costs are irrelevant as they remain constant (i.e. there is no increase in Fixed costs due to increased production).
- The only relevant items are the Selling Price (R900) and the Variable costs per unit (R500) which are represented by the net effect for Contribution per unit of R400. It is not necessary to calculate or use total Rand amounts in this case. For example, If production is 20 units **more** than BEP (i.e. if total production is $30 + 20 = 50$ units), expected profit will be $20 \times R400 = R8\ 000$
- If production is 70 units **more** than BEP (i.e. if total production is $30 + 70 = 100$ units), expected profit will be $70 \times R400 = R28\ 000$.

USE OF CONTRIBUTION PER UNIT IN CALCULATING PRODUCTION TARGETS

- In a calculation such as this, Fixed costs are **again** irrelevant as they remain constant (i.e. there is no increase in Fixed costs due to increased production).

For example,

- To make a profit of R6 000, **extra** units of production will be $R6\ 000 \div R400 = 15$ units (i.e. if total production is $30 + 20 = 50$ units)
- To make a profit of R120 000, **extra** units of production will be $R120\ 000 \div R400 = 150$ units (i.e. if total production is $30 + 150 = 180$ units).

NOTE: For the purpose of **examinations**, all costs are either **Fixed** (i.e. Factory overheads & Administration costs) or **Variable** (i.e. Direct materials, Direct labour and Selling/Distribution costs). It must be assumed that Fixed costs will remain constant for at least one financial year, and that Variable costs are in direct proportion to the number of units produced.

PRIOR KNOWLEDGE (*Content you would have covered in previous Grades*)

- Manufacturing concepts as explained in Grade 10.
- Calculation of Break- even point in Grade 11.

DIFFERENCES BETWEEN FIXED AND VARIABLE COSTS

FIXED COSTS	VARIABLE COSTS	
<ul style="list-style-type: none"> These are costs that do not change even if the quantities produced by the factory increase or decrease. They are not output dependent 	<ul style="list-style-type: none"> These are costs that change depending on the number of units produced. They are output dependent. 	<p style="text-align: center;">THINGS TO REMEMBER</p> <p style="text-align: center;">↓</p> <div style="border: 1px solid #0070c0; border-radius: 15px; background-color: #0070c0; color: white; padding: 10px; text-align: center; margin-bottom: 10px;"> For exam purposes, it will be assumed that all factory overhead costs and administration costs are Fixed costs, unless otherwise stated. </div> <p style="text-align: center;">↓</p> <div style="border: 1px solid #0070c0; border-radius: 15px; background-color: #0070c0; color: white; padding: 10px; text-align: center;"> For exam purposes, it will be assumed that raw materials, direct labour and selling and distribution costs are variable costs, unless otherwise stated. </div>
IMPORTANT		
<ul style="list-style-type: none"> The Fixed costs per unit increase with a decrease in the number of units produced. The Fixed costs per unit decrease with an increase in the number of units produced. The Total Fixed costs remain constant irrespective of the number of units produced. 	<ul style="list-style-type: none"> The total variable costs increase with an increase in the number of units production. The total variable costs decrease with a decrease in the number of units produced. The total variable costs vary directly with the number of units produced 	

3.4 ANALYSIS AND INTERPRETATION

NOTE: Master calculations and thereafter interpret the amounts and/or answers as calculated. In the table below guidance on how to **comment** and **interpret** information is provided for you:

<p>With regards to Unit Costs:</p>	<ul style="list-style-type: none"> • COMPARE: Current year to previous year • TREND: Was there an Increase or Decrease? (Amount/%) • COMMENT: Possible explanation/reasons for the trend • ADVICE: What must the manager DO?
<p>With regards to Unit Costs:</p>	<ul style="list-style-type: none"> • COMPARE: Current year to previous year • TREND: Was there an Increase or Decrease? (Amount/%) • COMMENT: Possible explanation/reasons for the trend • ADVICE: What must the manager DO?
<p>About the Break-even point:</p>	<ul style="list-style-type: none"> • COMPARE: Current year to previous year <i>Number of units produced against BEP</i> <i>BEP of this year against last year</i> <i>Units produced this year against last year</i> • TREND: Better than/worse than; more than/less than • COMMENT: <i>Satisfied/Not Satisfied</i> <i>Are we making a profit/loss?</i> <i>Is the actual production too close to the BEP?</i> <i>How can we manage expenses?</i>

- RELATED QUESTIONS:
- **Integration with other topics/sections (Inventory valuation)**
 - **Calculating wastage (if metres used; fabric; timber)**
 - **Ethical issues (quality of the products)**
 - **Internal control (stock missing)**
 - **Problem solving (comparing TWO products)**

BASELINE ACTIVITY

Buhle Manufacturers produces hand sanitiser



REQUIRED:

Calculate how many hand sanitiser must she sell before making profit.

The following information was found in her books.

Selling price per sanitiser	R25
Total Fixed cost	R60
Variable cost	R 10
Total production cost is $R60 + R10 = R70$	

NOTE: The cost of R70 is more than the selling price of one bottle of sanitiser (R25). It is therefore important to establish how many bottles must she sell before a profit can be made.

Total Fixed cost + Total Variable cost

Selling price - total production cost

UNITS SOLD	PRODUCTION COSTS		TOTAL PRODUCTION COST	SELLING PRICE OF THE UNITS SOLD	PROFIT
	FIXED COST	VARIABLE COST			
1	R60	+ R10	= R70	R25	(R45)
2	R60	+ R20	= R80	R50	(R30)
3	R60	+ R30	= R90	R75	(R15)
4	R60	+ R40	= R100	R100	0
5	R60	+ R50	= R110	R125	R15
6	R60	+ R60	= R120	R150	R30
7	R60	+ R70	= R130	R175	R45

If only one bottle is sold, she is making a **loss** of R45.

When four are sold, the cost is equal to the selling price [100 – 100] and therefore zero profit (being the **break-even point**.)

When five are sold the business starts to make a **profit** of R15.

WORKED EXAMPLE 1

REQUIRED:

Use the information given below to calculate Break-even-Point

INFORMATION

Sun Manufacturers manufactures hand cream and provides the following information:

Total fixed cost	R14 400
Total variable costs	R10 800
Fixed costs per unit	R24
Variable cost per unit	R18
Total costs	R25 200
Total cost per unit	R42
Number of units produced	600
Selling price per unit	R50

SUGGESTED ANSWER

$$\begin{aligned}\text{Break-even point} &= \frac{\text{Total fixed costs}}{\text{SP/U} - \text{VC/U}} \\ &= \frac{14\,400}{50 - 18} \\ &= \mathbf{450 \text{ units}}\end{aligned}$$

WORKED EXAMPLE 2

REQUIRED:

Use the information given below and comment on the business' present production level.

INFORMATION

1. Production and sales information of Bobby Enterprises	February 2021
Number of finished boxes of pet pellets produced and sold	30 000
BEP	14 250 units

SUGGESTED ANSWER

- The business is producing 30 000 units – they are above the BEP which means that the business will be making a profit.
- The business has produced 15 750 units above the BEP.

WORKED EXAMPLE 3*2020 Examination guidelines adapted***BB BUCKETS**

The business produces plastic buckets.

You are provided with information for the financial year ended 28 February 2021.

INFORMATION:**A. Production, sales, and profit:**

- 10 000 buckets were produced during the 2021 financial year.
- The selling price per bucket is R93,00.
- Net profit for the 20.9 financial year per the Income Statement is R280 000.

B.

COST CATEGORIES	TOTAL	PER UNIT
VARIABLE COSTS	R430 000	R43,00
Direct materials	R240 000	R24,00
Direct labor	R130 000	R13,00
Selling & distribution	R60 000	R6,00
FIXED COSTS	R220 000	R22,00
Factory overheads	R180 000	R18,00
Administration	R40 000	R4,00
	R650 000	R65,00

REQUIRED:

- (a) Calculate the break-even point.
- (b) Provide a calculation to show that the net profit of R280 000 is correct.
- (c) Calculate:
 - The increase in profit if an extra 600 buckets are produced.
 - The total profit that will be earned if an additional 600 buckets are produced.
- (d) Calculate:
 - The number of additional units that need to be produced to increase the net profit by R75 000.
 - The total number of units that need to be produced to increase the net profit by R75 000.

SUGGESTED ANSWER

(a) Calculate the break-even point:

$$\frac{R220\,000}{R93,00 - R43,00} = \frac{R220\,000}{R50,00} = 4\,400 \text{ units}$$

(b) Provide a calculation to show that the net profit of R280 000 is correct:

$$(10\,000 \times R93,00) - R650\,000 = R280\,000$$

OR: $(10\,000 - 4\,400) \times R50 = R280\,000$

(c) Calculate the increase in profit if an additional 600 buckets are produced:

See (a) above

$$600 \text{ units} \times R50 = R30\,000$$

Calculate the total profit that will be earned if an additional 600 buckets are produced:

See above

$$R280\,000 + R30\,000 = R310\,000$$

(d) Calculate the number of additional units that need to be produced to increase the net profit by R75 000:

$$\frac{R75\,000}{R50} = 1\,500 \text{ units}$$

See (a) above

Calculate the total number of units that need to be produced to increase the net profit by R75 000:

$$10\,000 + 1\,500 = 11\,500 \text{ units}$$

4. CONSOLIDATION ACTIVITIES

ACTIVITY 3

NSC Nov 2018 adapted

3.1 Indicate whether the following statements are **TRUE or FALSE**. Write only 'true' or 'false' next to the question numbers (3.1.1 to 3.1.3) in the ANSWER BOOK.

3.1.1 Bad debts are an administration cost.

3.1.2 Indirect labour is a factory overhead cost.

3.1.3 Rent expense is a fixed cost. (3)

3.2 KRIGE SHIRTS

The business manufactures shirts. The financial year-end is 31 July 2020.

REQUIRED:

3.2.1 Refer to Information C.

Calculate direct labour cost. (9)

3.2.2 Production Cost Statement for the year ended 31 July 2020 (12)

INFORMATION:

A.	31 JULY 2020	1 AUGUST 2019
Work-in-progress stock balance	?	R35 570

B. Raw materials issued to factory: R528 300

C. Direct labour:

Number of factory workers	4
Normal time expected per worker per year	1 960 hours
Normal time rate	R90 per hour
Bonuses to workers: 12% of normal wages	
NOTE: One worker worked only 1 680 hours and received a reduced bonus of R12 146.	

- D. Factory overheads** were calculated at R360 880 for the year. However, this excludes insurance of R48 750 paid for the period 1 August 2019 to 31 August 2020. Insurance must be allocated to the factory, administration, and sales in the ratio 4: 3: 2.
- E. Production for the year:** 17 500 shirts at a cost of R95 per shirt

ACTIVITY 4

NSC Nov 2019 adapted

MANUFACTURING

INFORMATION:

Sihle Sangweni owns **two separate factories** that manufacture products according to orders received. There is no work-in-progress stock. The year-end is 28 February 2021.

4.1 DESKS FACTORY

REQUIRED:

- 4.1.1 Complete the Factory Overhead Cost Note. (8)
- 4.1.2 Calculate the total cost of production of finished goods. (5)
- 4.4.2 Sihle wants to produce an additional 1 500 desks, while maintaining the selling price and costs.
- Calculate the additional profit he can expect. (4)

4.2 CHAIRS FACTORY

REQUIRED:

- 4.2.1 Provide a calculation to confirm the break-even point for 2021. (4)
- 4.2.2 Comment on the break-even point and the production level achieved. Quote figures. (4)
- 4.2.3 Raw material consists of wood only. In 2021 the cost is R120 per square metre (m²) and 1,2 m² of wood is needed to make one chair.
- During the year, 22 000 m² wood was dispatched to the factory. Sihle feels that the wood raw material was not well controlled.
- Provide a calculation to support his opinion. (4)
 - Identify TWO possible causes of this problem. Provide a solution for EACH. (4)

- 4.3.4 Give TWO reasons for the increase in direct labour cost. Provide a solution for EACH.
Note that wages and salaries increased by 5% in the current financial year. (4)

INFORMATION:

A. DESKS FACTORY

Extract of pre-adjustment amounts on 28 February 2021

	R
Indirect labour	296 500
Depreciation of factory plant	166 000
Advertising	24 500
Water and electricity	248 000
Rent expense	345 600
Insurance allocated to sales department	12 600
Factory sundry expenses	107 700

Adjustments to factory overheads for desks:

- Water and electricity for February 2021, R18 000, must be considered. 80% is allocated to the factory. The balance is an administration cost.
- Rent must be allocated according to floor area:
Factory: 810 m² Office: 180 m² Sales department: 90 m²
- 75% of insurance must be allocated to the factory. The balance applies to the sales department.

B. INFORMATION FOR BOTH FACTORIES

COSTS		DESKS		CHAIRS	
		2021		(Unit costs)	
		AMOUNT	PER UNIT	2021	2020
Variable	Direct material	R3 060 000	R340	R165	R124
	Direct labour	?	R160	R90	R70
	Selling and distribution	R720 000	R80	R50	R60
	Total variable costs		R580	R305	R250
Fixed	Factory overheads			R76	R75
	Administration	R360 000	R40	R20	R18
SELLING PRICES					
Per unit		R750		R390	R370
UNITS					
Produced and sold		9 000		16 000	15 000
Break-even point		8 471		18 071	12 400

ACTIVITY 5

NSC Feb/Mar 2018 adapted

5.1 GLAMOUR DRESS CREATIONS

Glamour Dress Creations manufactures one type of ladies' dress. The financial year ended on 28 February 2021.

REQUIRED:

5.1.1 Prepare the Production Cost Statement for the year ended 28 February 2021. (21)

5.1.2 Calculate the net profit for the year ended 28 February 2021. (7)

INFORMATION:

A. Stock balances, among others, were taken from the General Ledger:

	28 FEBRUARY 2021	1 MARCH 2020
Work-in-process stock	?	R76 000
Finished goods stock	R190 000	R110 000

B. Information extracted from the financial records on 28 February 2021:

Administration cost	R259 010
Raw/Direct material cost	918 550
Factory overhead cost	227 240
Selling and distribution cost	410 000
Net wages paid to factory workers (direct labour)	753 300
SARS: PAYE	48 600
UIF deductions	1%
Sales	?
Cost of sales	1 860 000

C. The following information has not been considered:

- A problem was identified regarding the valuation of the closing stock of raw materials: 5 000 metres of material on hand, with a unit cost of R2,75 per metre, were erroneously recorded as R3,80 per metre. This must be corrected.

- Rent expense was omitted from the figures above. Total rent paid for the financial year amounted to R87 100. The rent for March 2021 has been paid in advance. The rent was increased by R650 on 1 December 2020. 80% of this expense must be allocated to the factory and the balance must be regarded as an office expense.
- The employer contributes 1% to UIF on behalf of the employees.

D. The business uses a mark-up percentage of 75% on cost. During the financial year special discounts of R85 000 were offered to cash customers who bought in bulk.

5.2 LIGHTING SOLUTIONS

George Mkize is the owner of Lighting Solutions, a manufacturing business that produces one type of energy-saving light bulb. The financial year ended on 31 December 2021.

NOTE:

- Production is based on orders received; therefore, there are no balances for work-in-process.
- The current inflation rate is 8%.

REQUIRED:

- 5.2.1 Calculate the factory overhead cost per unit for the year ended 31 December 2021. (2)
- 5.2.2 Explain why George would not be concerned about the 28,1% increase in total variable cost from R936 000 to R1 200 000. (3)
- 5.2.3 Give TWO reasons for the increase in the selling and distribution cost per unit. (2)
- 5.2.4 George wants to know if the production level for this financial year is satisfactory.
- Calculate the break-even point for the year ended 31 December 2021. (4)
 - Comment on the production level for 2021. State TWO points. Quote figures. (4)
- 5.2.5 Lighting Solutions are considering importing raw materials because it is cheaper and of a higher quality. Name TWO aspects that they must consider before finalising their decision. (2)

INFORMATION:

Information from the records of Lighting Solutions on 31 December:

	2021		2020	
	TOTAL (R)	UNIT COST (R)	TOTAL (R)	UNIT COST (R)
Fixed costs:	575 000	11,50	428 400	10,20
Factory overhead cost	395 000	(3.2.1)	310 800	7,40
Administration cost	180 000		117 600	2,80
Variable costs:	1 200 000	24,00	936 600	22,30
Direct material cost	435 000	8,70	344 400	8,20
Direct labour cost	560 000	11,20	441 000	10,50
Selling and distribution cost	205 000	4,10	151 200	3,60
Selling price per unit	R45,00		R41,50	
Number of units produced and sold	50 000		42 000	
Break-even point (units)	?		22 313	

ACTIVITY 6

NSC Nov 2017 adapted

6.1 GYMWEAR MANUFACTURERS

Gymwear Manufacturers is owned by Jan Fiks. They produce shoes and shirts for gym training. Jan requires assistance in interpreting his 2020 results. Note that one pair of shoes comprises one unit.

REQUIRED:

- 6.1.1 **Shirts:** (4)
- Calculate the break-even point for shirts.
 - Jan is not satisfied with the variable costs per unit, even though the total variable costs per unit decreased by R6.
 - Identify ONE variable cost (with figures) that has not been well controlled. Give TWO possible reasons for this problem.
 - Explain why Jan might be concerned about the large decreases in the other TWO variable costs. (4)
- (4)
- Jan does not understand why the unit cost of production has increased when neither his fixed costs nor the variable costs have increased. Explain why this is so. State ONE point (with figures). (4)
- 6.1.2 **Shoes:**
- Calculate the % increase in the selling price of shoes. (3)
 - Jan decided to improve the quality of the shoes and to export them. Explain how the direct material costs and the selling and distribution costs were affected by this decision. Provide figures. (4)
 - Jan was concerned that the increase in price would have a negative impact on the business. Explain whether his concern was justified. State TWO points. (4)

INFORMATION

	SHIRTS		SHOES	
	2020	2019	2020	2019
Break-even point	?	11 522	3 842	4 317
Units produced and sold	16 100	25 000	7 750	6 500
Net profit	R500 400	R620 000	R2 379 750	R1 183 000
Selling price per unit	R302	R290	R1 640	R1 260
Selling price of competitors	R310	R290	R1 100	R1 250
Total fixed costs (factory overhead and administration)	R530 000	R530 000	R2 340 000	R2 340 000
Total fixed cost per unit	?	?	R302	R360
Total variable costs per unit	R238	R244	R1 031	R718
Direct material costs per unit	R92	R116	R456	R330
Direct labour costs per unit	R131	R100	R381	R360
Selling and distribution costs per unit	R15	R28	R194	R28
Unit cost of production	R242	R228	R1 100	R1 004

ACTIVITY 7

NW Prelim 2019 adapted

7.1 N'SYNC MANUFACTURERS

You are provided with information relating to N'Sync Manufacturers, a business manufacturing heart rate monitors for athletes. The financial year ends on 28 February 2021.

REQUIRED:

- 7.1.1 Calculate the value of the raw material on hand on 28 February 2021, using the weighted-average method. (4)
- 7.1.2 Calculate the value of the direct material issued for production. (3)
- 7.1.3 Prepare the note for Factory overhead cost. (12)

- 7.1.4 Prepare the Production Cost Statement for the year ended 28 February 2021.
Show all calculations in brackets.

(14)

INFORMATION:

A.

STOCK ON HAND	28 FEBRUARY 2021	29 FEBRUARY 2020
	R	R
Indirect material cost	2 730	4 500
Work-in-progress	?	65 050
Finished goods	80 500	101 450

B. Direct material:

	UNITS	TOTAL AMOUNT
Stock on hand 1 March 2020	500	55 000
Purchases:	9 020	1 135 000
Jun 2020	1 250	137 500
Sept 2020	4 560	592 800
Dec 2020	3 210	404 700
Total available for production	9 520	1 190 000
Stock on hand 28 February 2021	560	?

C. Other costs:

	R
Direct labour cost	467 720
Factory overhead cost	616 280
Selling and distribution cost	16% of sales
Administration cost	92 500
Sales	6 282 375
Cost of finished goods sold	2 512 950

D. The following items must still be taken into account:

- Indirect material

Indirect material bought during the year was R260 000.

At the end of the year it was discovered that indirect material in the factory costing R1 750 had been stolen. The material is insured and the insurance will pay out R1 130 in March 2021. No entries have been made to record this theft. The net loss on the theft must be treated as an Administration cost.

Indirect material used is divided between the factory, administration and selling and distribution departments in the ratio of 1 : 1 : 3.

- The monthly insurance premium increased by 10% on 1 January 2021. Insurance paid for the year amounted to R124 992 and this included insurance paid in advance for March and April 2021. Insurance of R59 520 was allocated to selling and distribution, and R7 440 to administration.
- Salary and wage expenses were incurred:

Direct Labour	Gross salaries and wages	Deductions	CONTRIBUTIONS	
			Medical aid	UIF
Factory	312 850	15 750	7 002	2 428

ACTIVITY 8

Limpopo Prelim 2019 adapted

8.1 **Chunky Chairs produces kitchen chairs. The financial year ended on 31 May 2019.**

REQUIRED

8.1.1 Calculate the total purchases of raw material for the financial year ended 31 May 2019. (4)

8.1.2 Complete the Production Cost Statement on 31 May 2019. (9)

8.1.3 Calculate the following for the financial year ended 31 May 2019:

- Number of units sold during the year (5)
- Cost of sales (5)
- Net profit for the year (8)

INFORMATION

A. The business uses the FIFO-method to value their stock and the periodic inventory system.

B. **Balances:**

	31 MAY 2019	1 JUNE 2018
Raw material stock	?	R325 000
Work in Progress	R94 000	?
Finished Goods	?	R285 000
	9 500 units	15 000 units

C. Carriage on raw materials amounted to R27 000 for the year.

D. Raw Material available for production was R1 450 000, while raw materials used in the factory were R1 140 000.

E. Salaries and wages amounted to R650 000 for the year. 40% of this was wages of workers who worked on the chairs. The rest was divided equally between Factory overheads and Administrative cost.

F. 80 000 chairs were completed during the year at a unit cost of R21,25.

G. Sales: chairs were sold at R42,50 per unit.

H. After all expenses above were taken into account, the Distribution cost was R625 600 and Administrative cost R787 400.

8.2 Glitterati Bags manufactures exclusive evening handbags.

REQUIRED

8.2.1 Calculate the following:

(a) the variable cost per unit. (4)

(b) the breakeven point. (5)

8.2.2 After an analysis of cost and efficiency, the internal auditor is concerned about a few points. Refer to **Information C** and answer the following questions:

(a) **Direct material:** Identify ONE problem and suggest ONE possible solution for the problem. (2)

- (b) **Direct labour and Sewing machine maintenance:** Identify TWO different problems with each item and suggest a solution for EACH separate problem.

(8)

INFORMATION

A. The business manufactured and sold 23 400 handbags during this year. The bags were sold at R299 each.

B. **Analysis of cost:**

	TOTAL	PER UNIT
Direct Material	R1 989 000	R85
Direct Labour	R2 527 200	R108
Factory Overhead	R842 400	R36
Administrative cost	R538 200	R23
Selling and distribution	R795 600	R34

C. After an analysis of cost and efficiency, the internal auditor is concerned about the following points:

- **Direct material:**
 - 50 cm of material is needed to produce one handbag.
 - It was determined that 1 meter of material was used per handbag.
- **Direct labour:**
 - 8 workers are employed that produce the handbags.
 - The average production per worker is 2 925 handbags.
 - The wage records reflected that one worker, Tarren, produced 2 100 handbags and she earned the highest overtime pay.
- **Sewing machines maintenance:**
 - The maintenance cost increased significantly in the last year.
 - The maintenance on two workers' machines, those of Roger and Gary, were three times higher than the other machines.

ACTIVITY 9

NSC Nov 2014 Adapted

9.1 BEN'S CATERING

Ben Khulamo owns a small business that produces pies and doughnuts which he supplies to local school tuck shops. The financial year ended on 28 February 2021.

NOTE:

Where comments/explanations are required below, quote figures, unit costs or financial indicators to support your opinions.

REQUIRED:

- 9.1.1 Identify ONE unit cost for doughnuts and TWO-unit costs for pies that were major problems in 2021, considering that the inflation rate was 5%. For each unit cost identified, give a possible cause of the problem, and give advice on how to rectify it. (12)
- 9.1.2 Ben feels that he can produce and sell more doughnuts. Calculate the number of extra doughnuts he must produce and sell to make an additional profit of R15 000. Assume that the unit costs and selling price for 2021 remain unchanged. (4)
- 9.1.3 Ben is concerned about the financial performance of his business and the fact that a new competitor has opened in the area.
- Name the product which has been negatively affected by the new competitor.
 - Comment on how this would have affected the net profit on this product. (5)

INFORMATION	DOUGHNUTS		PIES	
	2021	2020	2021	2020
Total units produced & sold	55 000 units	51 000 units	35 000 units	44 000 units
Break-even point (units)	21 667 units	24 074 units	38 095 units	18 519 units
Ben's selling price per unit	R8,00	R7,00	R12,50	R12,00
Selling price of competitor	R8,60	-	R12,50	-
VARIABLE COSTS PER UNIT	R5,00	R4,30	R8,30	R5,85
Direct material cost per unit	R1,95	R2,05	R5,05	R2,20
Direct labour cost per unit	R1,90	R1,55	R2,20	R2,60
Selling & distribution cost per unit	R1,15	R0,70	R1,05	R1,05
FIXED COSTS PER UNIT	R1,18	R1,27	R4,57	R3,64
Factory overhead cost per unit	R0,67	R0,78	R3,38	R2,50
Administration cost per unit	R0,51	R0,49	R1,19	R1,14

5. ANSWER BOOK

ACTIVITY 1

PRODUCTION COST STATEMENT OF ROCKY MANUFACTURES FOR THE YEAR ENDED 30 APRIL 2021		
	Note	R
Direct material costs	1	
Direct labour costs	2	
Primary costs		
Factory overhead costs	3	
Total manufacturing costs		
Work-in-process at the beginning of the year		
Work-in-process at the end of the year		
Cost of production of finished goods		

NOTES TO THE PRODUCTION COST STATEMENT

1. DIRECT MATERIAL COSTS	R
Balance at the beginning of the year	
Net purchases	
Carriage on purchases	
Less: Balance at the end of the year	
Direct material costs	

2. DIRECT LABOUR COSTS	R
Factory wages	
UIF contributions	
Direct labour costs	

3. FACTORY OVERHEADS COSTS	R
Indirect materials	
Indirect labour	
Rent expenses	
Depreciation	
Insurance	
Factory overheads costs	

4. COST OF FINISHED GOODS SOLD	R
Opening stock of finished goods sold	
Cost of finished goods produced during the year	
Closing stock of finished goods	
Cost of finished goods sold	

ACTIVITY 2

2.1

	2.1.1		
	2.1.2		
	2.1.3		
	2.1.4		
			4

2.2

2.2.1 Factory Overhead Cost Note

		14

**3.2.2 PRODUCTION COST STATEMENT FOR THE YEAR ENDED
31 JULY 2020**

Direct material cost	528 300	
Prime cost		
Total production cost		
Work-in-progress (1 August 2019)		
Cost of production of finished goods		

12

ACTIVITY 4

MANUFACTURING

4.1 DESKS FACTORY

4.1.1

Factory Overhead Cost Note		
Indirect labour	R 296 500	
Depreciation on factory plant	166 000	

8

4.1.2	Calculate the total cost of production of finished goods.	
	Workings	Answer

5

4.4.2	Sihle wants to produce an additional 1 500 desks. Calculate the additional profit he can expect.	
	Workings	Answer

4

4.2 CHAIRS FACTORY

4.2.1	Provide a calculation to confirm the break-even point for 2021.	
	Workings	Answer

4

4.2.2	Comment on the break-even point and the production level achieved. Quote figures.

4

4.2.3

**Sihle feels that wood raw material was not well controlled.
Provide a calculation to support his opinion.**

--	--	--

4

**Identify TWO possible causes of this problem.
Provide a solution for EACH.**

	POSSIBLE CAUSES	SOLUTION FOR EACH
Cause 1		
Cause 2		

4

4.2.4

**Give TWO reasons for the increase in direct labour cost.
Provide a solution for EACH.**

	REASONS	SOLUTION FOR EACH
Reason 1		
Reason 2		

4

ACTIVITY 5

5.1 GLAMOUR DRESS CREATIONS

5.1.1 PRODUCTION COST STATEMENT FOR THE YEAR ENDED 28 FEBRUARY 2021.

Prime cost	
Total manufacturing cost	
Work-in-progress (1 March 2020)	76 000
Production cost of finished goods	

21

5.1.2

Calculate the net profit for the year ended 28 February 2021.

--

7

5.2 **LIGHTING SOLUTIONS**

5.2.1

Calculate the factory overhead cost per unit for the year ended 31 December 2021.

--

2

5.2.2

Explain why George would not be concerned about the 28,1% increase in total variable cost from R936 000 to R1 200 000.

--

3

5.2.3

Give TWO reasons for the increase in the selling and distribution cost per unit.

--

2

5.2.4

Calculate the break-even point for the year ended 31 December 2021.

4

Comment on the production level for 2021. State TWO points. Quote figures.

4

5.2.5

Lighting Solutions are considering importing raw materials because it is cheaper and of a higher quality. Name TWO aspects that they must consider before finalising their decision.

2

ACTIVITY 6

6.1 GYMWEAR MANUFACTURERS

6.1.1 Shirts:

Calculate the break-even point for shirts.

4

Identify ONE variable cost (with figures) that has not been well controlled. Give TWO possible reasons for this problem.

ONE VARIABLE COST WITH FIGURES	REASONS
	Reason 1:
	Reason 2:

4

Explain why Jan might be concerned about the large decreases in the other TWO variable costs.

4

Jan does not understand why the unit cost of production has increased when neither his fixed costs nor the variable costs have increased. Explain why this is so. State ONE point (with figures).

4

6.1.2 Shoes:

Calculate the % increase in the selling price of shoes.

3

Jan decided to improve the quality of the shoes and to export them. Explain how the direct material costs and the selling and distribution costs were affected by this decision. Provide figures.

4

Jan was concerned that the increase in price would have a negative impact on the business. Explain whether his concern was justified. State TWO points.

Point 1:

Point 2:

4

ACTIVITY 7

7.1 N'SYNC MANUFACTURERS

7.1.1 Calculate the value of the raw material on hand on 28 February 2021, using the weighted-average method.

Calculation	Answer

4

7.1.2 Calculate the value of the direct material issued for production.

Calculation	Answer

3

7.1.4 PRODUCTION COST STATEMENT ON 28 FEBRUARY 2021

	R
Direct material cost	
Direct labour cost	
Prime cost	
Factory overhead cost	
Manufacturing cost	
Work-in-progress: Beginning	65 050
Work-in-progress: End	
Total cost of production	

14

ACTIVITY 8

8.1.1

Calculate the total purchases of raw material for the financial year ended 21 May 2020.

--

4

8.1.2

Production Cost Statement	
	1 140 000
Prime cost	
Total cost of production	1 712 000
Total cost of production of complete products	

9

8.1.3

Calculate the following for the financial year ended 31 May 2020:

Number of units sold during the year.

5

Cost of Sales

5

Calculate the Net Profit for the year ended 31 May 2020.

8

8.2.1

Calculate the following:

(a)	the variable cost per unit.
-----	-----------------------------

4

(b)	the breakeven point.
-----	----------------------

5

8.2.2

After an analysis of cost and efficiency, the internal auditor is concerned about a few points. Refer to Information C and answer the following questions:

(a) Direct material

Problem	Solution

2

(b) Direct labour

Problem	Solution

4

Sewing machine maintenance:

Problem	Solution

4

ACTIVITY 9

9.1 BEN'S CATERING

9.1.1 Identify ONE unit cost for doughnuts and TWO-unit costs for pies that were major problems in 2021, considering that the inflation rate was 5%.

ONE unit cost for doughnuts (Quote figures.)	Problem and advice
TWO-unit costs for pies (Quote figures.)	Problem and advice

9.1.2

Calculate the number of extra doughnuts he must produce and sell to make an additional profit of R15 000. Assume that the unit costs and selling price for 2021 remain unchanged.

--	--

4

9.1.3

Name the product which has been negatively affected by the new competitor.

Comment on how this would have affected the net profit on this product.

--

5

6. SUGGESTED ANSWERS AND MARKING GUIDELINES

ACTIVITY 1

Production Cost Statement of Rocky Manufactures for the year ended 30 April 2021			
	Note	R	
Direct material costs	1	334 000	✓
Direct labour costs	2	189 880	✓
Primary costs	DM + DL	523 880	✓
Factory overhead costs	3	95 070	✓
Total manufacturing costs	PC + FO	618 950	✓
Work-in-process at the beginning of the year		12 400	✓
		631 350	
Work-in-process at the end of the year		(25 350)	✓
Cost of production of finished goods		606 000	✓

NOTES TO THE PRODUCTION COST STATEMENT

1. Direct material costs	R	
Balance at the beginning of the year	20 400	✓
Net purchases (124 000✓ + 192 600✓ – 4 500✓)	312 100	✓
Carriage on purchases	24 000	✓
Less: Balance at the end of the year	(22 500)	✓
Direct material costs	334 000	✓

2. Direct labour costs	R	
Factory wages	188 000	✓
UIF contributions	1 880	✓
Direct labour costs	189 880	✓

3. Factory overheads costs	R	
Indirect materials (1 600✓ + 5 300✓ – 1 950✓)	4 950	✓
Indirect labour (62 000 + 620)	62 620	✓✓
Rent expenses	2 850	✓
Depreciation	21 300	✓

Insurance	3 350	✓
Factory overheads costs	95 070	☑

4. Cost of finished goods sold	R	
Opening stock of finished goods sold	15 300	✓
Cost of finished goods produced during the year	606 000	☑
Closing stock of finished goods	(18 800)	✓
Cost of finished goods sold	602 500	☑

ACTIVITY 2

2.1.1	<u>factory overhead</u> cost ✓		
2.1.2	<u>fixed</u> cost ✓		
2.1.3	<u>selling and distribution</u> cost ✓		
2.1.4	minimum ✓		4

2.2

2.2.1 Factory Overhead Cost Note

Indirect factory materials (5 950 + 36 000 – 8 750)	33 200	✓✓	
Salaries and wages (2 900 000 x 10%)	290 000	✓✓	
Rent expense (291 000 x 240/300)	232 800	✓✓	
Insurance (49 200 ✓ x 12/15 ✓ x 4/10 ✓) (49 200 – 9 840) or 39 360 two marks	15 744	☑*	
Telephone (28 800 x 20/40) / 57 600 X 20/80	14 400	✓✓	
Sundry factory expenses	189 856	✓	
	776 000	☑*	14

2.2.2 Production Cost Statement for the year ended 28 February 2021

Direct materials cost	2 743 000	<input checked="" type="checkbox"/>	
Direct labour cost (2 900 000 x 45%)	1 305 000	<input checked="" type="checkbox"/>	
Prime cost	4 048 000	<input checked="" type="checkbox"/>	
Factory overhead cost	776 000	<input checked="" type="checkbox"/>	
Total manufacturing cost	4 824 000		
Work-in-process at beginning	70 000	<input checked="" type="checkbox"/>	
	4 894 000	<input checked="" type="checkbox"/>	
Work-in-process at end	(94 000)	<input checked="" type="checkbox"/>	
Cost of production of finished goods (40 000 x 120)	4 800 000	<input checked="" type="checkbox"/>	10

ACTIVITY 3

3.1

3.1.1	False	<input checked="" type="checkbox"/>	
3.1.2	True	<input checked="" type="checkbox"/>	
3.1.3	True	<input checked="" type="checkbox"/>	3

3.2 KRIGE SHIRTS

3.2.1

Calculate direct labour cost.

$3 \checkmark \times 1\,960 \checkmark \times 90 \checkmark$	529 200	three marks
529 200 (normal time) x 12%	63 504	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> if 12% of normal time
$1 \times 1\,680 \times 90$	151 200	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
	12 146	<input checked="" type="checkbox"/>
	<u>756 050</u>	<input checked="" type="checkbox"/>

$529\,200 \times 112\%$

$592\,704 + 151\,200 + 12\,146 = 756\,050$

five marks two mark one mark one method mark

705 600	-25 200	63 504	
$(4 \times 1\,960 \times 90) - 90(1\,960 - 1\,680) + (3 \times 1\,960 \times 12\%) + 12\,146 = 756\,050$			
three marks	two marks	two method marks	one mark
one method mark			

705 600	84 672	-25 200	- 9 022
$(4 \times 1\,960 \times 90) + (705\,600 \times 12\%) - 90(1\,960 - 1\,680) - (21\,168 - 12\,146) = 756\,050$			
three marks	two marks	two method marks	one mark
one method mark			

9

3.3.2

Compare and comment on the break-even point and the production level achieved over the last two years. Quote figures.

Comparison of the BEP with the level of production of 2020 ✓✓ Figures ✓

Comparison of 2017 and 2020 BEP and/or production ✓✓ Figures ✓

Compulsory response

see 3.3.1

Business produced 63 units (15%) more than the BEP (420 – 357)

OR:

The business made a profit on only 63 units (420 – 357) compared to 105 units last year (540 – 435)

Other optional responses:

- BEP decreased from 435 units in 2017 to 357 units in 2020 (78 units; 17,9%)
- The business produced 120 units (22,2%) less than last year (540 – 420)

6

3.3.3

Give TWO reasons for the increase in direct material cost. Suggest ONE way to control this cost.

REASONS:

Any TWO valid reasons. ✓✓ ✓✓

Inflationary increases / transport costs / increase in fuel price / scarcity.

Wastage due to poor workmanship.

Theft of material (in the factory) due to poor internal controls.

VAT increased to 15%

Change in exchange rate (if raw materials imported)

Changed suppliers (more expensive) / Better quality raw materials

SUGGESTION:

Any ONE valid suggestion ✓

Look for cheaper suppliers without compromising quality.

Negotiate transport and delivery discounts.

Take advantage of bulk discounts.

Recycle waste material / use off-cuts

Train and supervise workers to minimise wastage.

Control stock regularly to identify shortages.

Buy stock as required to avoid stock piling and possible theft.

5

ACTIVITY 4

4.1 DESKS FACTORY

4.1.1	Factory Overhead Cost Note	
	Indirect labour	R 296 500
	Depreciation on factory plant	166 000
	Water and electricity (248 000 + 18 000) x 80% or – 53 200 198 400 + 14 400	212 800✓☑*
	Factory rent (345 600 x 810/1080) or – 83 200	259 200✓☑*
	Insurance (12 600 x 75/25) or x 3 OR 50 400 – 12 600	37 800✓☑*
	Factory sundry expenses	107 700✓
		1 080 000☑*

8

4.1.2	Calculate the total cost of production of finished goods.	
	Workings	Answer
	<p style="text-align: center;">9 000 x 160 two or no marks</p> <p>3 060 000 + 1 440 000 + 1 080 000</p> <p style="text-align: center;">✓ ✓✓ ☑ see 4.1.1</p> <p>OR: units DMC/u DLC/u FOHC/u</p> <p style="text-align: center;">620 three marks three</p> <p>marks</p> <p style="text-align: center;">9 000 x (340 + 160 + 120) 4.1.1 ÷ 9 000) + 500</p> <p style="text-align: center;">one mark one mark one mark one method mark see</p> <p>4.1.1 ÷ 9 000</p>	<p style="text-align: center;">R5 580 000</p> <p style="text-align: center;">☑</p> <p style="text-align: center;">one part correct</p>

5

4.4.2

Sihle wants to produce an additional 1 500 desks. Calculate the additional profit he can expect.	
Workings	Answer
<p>Extra units x Contribution per unit 750 one mark – 580 one mark [340+160+80] 1 500 ✓ x 170 ✓✓</p> <p>OR: two marks one mark 510 000 + 240 000 + 120 000 1 125 000 – 870 000</p> <p>OR: (Total units x Contribution per unit) – Fixed costs – Original profit</p> <p>one mark one mark one mark for both = –1 530 000 (10 500 x 170) – 1 440 000 – 90 000 1 785 000 two marks</p> <p>OR: (BEP units x Contribution per unit) – Fixed costs – Original profit</p> <p>one mark one mark one mark Note: 4th option due to possible ambiguity</p> <p>(9 971 x 170) – 1 440 000 1 500 more than BEP instead of 1 695 070 or 1 695 000 two marks 1 500 more than current production'</p>	<p>Correct operation & one part correct <input checked="" type="checkbox"/> R255 000</p> <p>OR: R255 070 Due to rounding off BEP</p>
	4

4.2 CHAIRS FACTORY

4.2.1

Provide a calculation to confirm the break-even point for 2021.	
Workings	Answer
<p>16 000 x 96 or 1 536 000 two marks <u>1 216 000 ✓ + 320 000 ✓</u> 390 ✓ – 305 ✓ 85 two marks</p> <p>OR:</p> <p>Sales VC FC 7 047 690 – 5 511 655 – 1 536 000</p>	<p>18 071</p> <p>OR: 0 or 35</p>
	4

4.2.2

Comment on the break-even point and the production level achieved. Quote figures.	If
differences are shown for figures, this carries two marks	
Comment on BEP ✓ Figures ✓ Comment on production ✓ Figures ✓	
Produced 16 000 units but BEP is 18 071(or see 4.2.1) units so they will make a loss	
Produced 2 071 less than BEP so they will make a loss.	
Production increased from 15 000 to 16 000 units (by 1 000)	
BEP increased from 12 400 to 18 071 units (by 5 671)	
In 2018 they made a profit on 2 600 units.	

4

4.2.3

Sihle feels that wood raw material was not well controlled. Provide a calculation to support his opinion.	
	(16 000 x 1,2)
METRES	22 000m ✓ – 19 200m ✓✓ = 2 800m wasted <input checked="" type="checkbox"/> one part correct
CHAIRS	22 000/1,2 18 334 – 16 000 = 2 334 fewer chairs OR two marks one mark one mark
COSTS	22 000 x 120 19 200 x 120 2 640 000 – 2 304 000 = 336 000 extra cost OR R165 – R144 = R21 per unit extra one mark two marks one method mark

4

Identify TWO possible causes of this problem. Provide a solution for EACH.		
	POSSIBLE CAUSES	SOLUTION FOR EACH
✓ ✓ Two valid & different causes with solutions ✓ ✓	Wastage / Unskilled workers / Poor control	Train workers; supervise regularly Use technology (stencils / templates)
	Theft of wood	Internal controls / stock counts / supervision / buy in smaller quantities / install cameras
	Poor quality wood	Source other suppliers

4

4.2.4

Give TWO reasons for the increase in direct labour cost. Provide a solution for EACH.		
	REASONS ✓ ✓	SOLUTION FOR EACH ✓ ✓
✓ ✓ Two valid & different reasons with solutions ✓ ✓	Load shedding	Generator or solar power /
	Workers dissatisfied (with wages or conditions) / Protests	Engagement / communicate with union
	Overtime	Restrict overtime / employ more workers (avoid overtime)
	Inefficient / slow workers / Lack of supervision	Pay per unit produced / improve monitoring procedures / training programme
		4

ACTIVITY 5

5.1 GLAMOUR DRESS CREATIONS

5.1.1 PRODUCTION COST STATEMENT FOR THE YEAR ENDED 28 FEBRUARY 2021.

Raw/Direct materials cost (918 550 ✓ + 5 250 ✓✓)	923 800	☑*
Direct labour cost (753 300 ✓ + 48 600 ✓ + 8 100 ✓ + 8 100 ☑) OR: Solve for Y $y = 753\,300 + 48\,600 + (0,01y)$ $y = 810\,000$ DLC = 810 000 + 8 100 OR 753 300+48 600+801 900 = 99% DLC = 101% 801 900 x 101/99	818 100	☑*
Prime cost	1 741 900	☑
Factory overhead cost (227 240 ✓ + 63 960 ✓✓✓✓) [(87 100– 7 150) x 80%]	291 200	☑*
Total manufacturing cost	2 033 100	☑
Work-in-process (1 March 2020)	76 000	
	2 109 100	
Work-in-process (28 February 2021)	(169 100)	☑
Cost of production of finished goods (1 860 000 + 190 000 – 110 000)	1 940 000	✓✓☑*
		21

5.1.2

Calculate the net profit for the year ended 28 February 2021.

$$\begin{array}{r}
 79\,950 \times 20\% \\
 3\,170\,000 \checkmark\checkmark - 1\,860\,000 \checkmark - 410\,000 \checkmark - (259\,010 \checkmark + 15\,990 \checkmark) \\
 \text{or } - 259\,010 - 15\,990 \\
 \phantom{\text{or }} 275\,000 \\
 = 625\,000 \checkmark
 \end{array}$$

7

5.2 LIGHTING SOLUTIONS

Calculate the factory overhead cost per unit for the year ended 31 December 2021.

$$395\,000 / 50\,000 = R7,90 \checkmark\checkmark$$

5.2.2

Explain why George would not be concerned about the 28,1% increase in total variable cost from R936 600 to R1 200 000.

Any valid comment $\checkmark\checkmark$ compared to inflation rate \checkmark

The variable cost per unit increased up by 7,6% $\checkmark\checkmark$ which is less than inflation rate \checkmark

An additional 8 000 units were produced (19% increase in production)

There was an increase in units produced and therefore greater profits.

3

5.2.3

Give TWO reasons for the increase in the selling and distribution cost per unit.

TWO valid reasons $\checkmark \checkmark$

- Advertising costs may have increased
- Increase in fuel price
- Commission to sales staff increased
- Due to inflation

Do not accept increased sales / increased delivery expenses

2

5.2.4

Calculate the break-even point for the year ended 31 December 2021.

$$\begin{array}{r}
 575\,000 \checkmark \\
 45 \checkmark - 24 \checkmark \\
 21 = 27\,381 \text{ units } \checkmark \text{ (accept } 27\,380,9)
 \end{array}$$

4

Comment on the production level for 2021. State TWO points. Quote figures.

Comparison figures not necessary but may enhance answer

Explanation ✓ ✓ must compare BEP with level of production figures ✓ ✓

- The business produced and sold 50 000 units. This is 8 000 units more than the production achieved in the previous financial year (42 000 units).
- The business produced 22 619 (50 000 – 27 381) units more than the BEP.
- There is an increase of (22 619 – 19 687) 2 932 units over the BEP when compared to the previous financial year.

4

5.2.5

Lighting Solutions are considering importing raw materials because it is cheaper and of a higher quality. Name TWO aspects that they must consider before finalising their decision.

Any TWO relevant aspects ✓ ✓

- Fluctuation in exchange rates (impact on cost/selling price)
- Additional / increasing import costs (transportation and custom duties)
- Time delays (availability and/or delivery)
- Support for local suppliers (impact on the local economy)
- Not easy to return damaged goods

2

Activity 6

6.1 GYMWEAR MANUFACTURERS

6.1.1 Shirts:

<p>Calculate the break-even point for shirts.</p> <p>$530\ 000 \div (302 - 238) = 8\ 281,25 / 8\ 282 / 8\ 281 / 8281,3$</p> <p>✓ ✓ ✓ <input checked="" type="checkbox"/> one part correct; do not accept R or c</p>							
<p>Identify ONE variable cost (with figures) that has not been well controlled. Give TWO possible reasons for this problem.</p>							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; padding: 5px;">ONE VARIABLE COST WITH FIGURES</th> <th style="text-align: center; padding: 5px;">REASONS</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;"> Variable cost ✓ Figures ✓ </td> <td style="padding: 5px; text-align: center;"> ✓ ✓ Any two <u>different</u> reasons </td> </tr> <tr> <td style="padding: 5px; vertical-align: top;"> Direct labour cost Increased by R31 (31%) (from R100 to R131) </td> <td style="padding: 5px; vertical-align: top;"> Expected responses: <ul style="list-style-type: none"> Negotiated wage increase / applied minimum wage / inflation / increased salary scales (for qualifications) Paid bonuses to some workers Excessive overtime Lack of productivity (inefficiency) of workers Inexperienced / poorly trained workers High staff turnover rate Old equipment affects productivity Work hours lost due to training time (workers paid for training) / due to load-shedding (power-cuts) / due to paid sick leave Errors in calculation of wages (over-paid) <p>Do not accept: More workers; Absent workers; Poor budgeting</p> </td> </tr> </tbody> </table>	ONE VARIABLE COST WITH FIGURES	REASONS	Variable cost ✓ Figures ✓	✓ ✓ Any two <u>different</u> reasons	Direct labour cost Increased by R31 (31%) (from R100 to R131)	Expected responses: <ul style="list-style-type: none"> Negotiated wage increase / applied minimum wage / inflation / increased salary scales (for qualifications) Paid bonuses to some workers Excessive overtime Lack of productivity (inefficiency) of workers Inexperienced / poorly trained workers High staff turnover rate Old equipment affects productivity Work hours lost due to training time (workers paid for training) / due to load-shedding (power-cuts) / due to paid sick leave Errors in calculation of wages (over-paid) <p>Do not accept: More workers; Absent workers; Poor budgeting</p>	
ONE VARIABLE COST WITH FIGURES	REASONS						
Variable cost ✓ Figures ✓	✓ ✓ Any two <u>different</u> reasons						
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4	

4	

Explain why Jan might be concerned about the large decreases in the other TWO variable costs.

Explanations on the two VC's ✓ State or imply what the concern is ✓ ✓

Comment on DMC	Using cheaper material	Inferior quality.
	Economising on material	May affect the quality of the product
Comment on S&DC	Reduced advertising or reduced commission / reduced remuneration of salespersons	May cause sales to drop / may demotivate salespersons
	Reduced distances for deliveries / discontinuing the service in certain areas	Leads to loss of customers
	Out-sourcing / using cheaper service providers	Might be inferior and negatively affect business in future

4

Jan does not understand why the unit cost of production has increased when neither his fixed costs nor the variable costs have increased. Explain why this is so. State ONE point (with figures).

Any one explanation ✓✓ Figures ✓✓

Expected responses:

- No economies of scale / decrease in production by 8 900 units (25 000 to 16 100)
- Lower production increased FC per unit by R11,72 or 55,2% (R21,20 to R32,92)

4

6.1.2 Shoes:

Calculate the % increase in the selling price of shoes.

$$\begin{array}{r}
 1\ 640 - 1\ 260 \\
 \underline{\quad 380 \checkmark} \times \frac{100}{1\ 260 \checkmark} \quad 1
 \end{array}
 \qquad
 \text{OR } 130,2\% - 100\% = 30,2\%$$

= 30,2% ✓

3

Jan decided to improve the quality of the shoes and to export them. Explain how the direct material costs and the selling and distribution costs were affected by this decision. Provide figures.

- DMC increased ✓ from R330 to R456 (by R126/by 38%/38,2%) ✓
- S&DC increased ✓ from R28 to R194 (by R166/by 593%/592,8%) ✓

4

Jan was concerned that the increase in price would have a negative impact on the business. Explain whether his concern was justified. State TWO points.

Reasons (any two) ✓ ✓ State NO concern OR imply NO concern in explanation or by using figures ✓ ✓

- Sales increased (by 1 250 units) / customers still supported the business (despite increase in price)
- Net profit increased (by R1 196 750) / price did not negatively affect sales)
- BEP decreased (due to increased contribution per unit) by 475 units / The business now exceeds BEP by bigger margin (3 908 units).

4

ACTIVITY 7

7.1 N'SYNC MANUFACTURERS

7.1.1	Calculate the value of the raw material on hand on 2021, using the weighted-average method.	28 February
	Calculation	Answer
	(55 000 + 1 135 000) <u>1 190 000</u> ✓ 9 520 ✓ x 560 ✓ (9 020 + 500) OR 125 two marks x 560 one mark	70 000 ✓*

4

7.1.2

Calculate the value of the direct material issued for production.	
Calculation	Answer
(55 000 + 1 135 000) 1 190 000 ✓ – 70 000 ✓* (see 7.1.1)	1 120 000 ✓*
OR (9 520 – 560) x 125	

3

7.1.3 Prepare the note for Factory overhead cost.

	R
Factory overhead cost	616 280
Indirect material [(4 500 ✓ + 260 000 ✓ - 2 730 ✓) x 1/5 ✓] - 1750 ✓	50 604 ✓*
Insurance (124 992 - 19 096 ✓✓) - 59 520 ✓ - 7 440 ✓	38 936 ✓*
	705 820 ✓*

12

7.1.4 PRODUCTION COST STATEMENT ON 28 FEBRUARY 2021

	R
Direct material cost (see 7.1.2)	1 120 000 ✓*
Direct labour cost 467 720 ✓ + 312 850 ✓ + (7 002 + 2 428) ✓	790 000 ✓*
Prime cost (DMC + DLC)	1 910 000 ✓*
Factory overhead cost	705 820 ✓*
Manufacturing cost (PC + FOHC)	2 615 820 ✓*
Work-in-progress: Beginning	65 050
	2 680 870 ✓*
Work-in-progress: End (Balancing figure)	(188 870) ✓*
Total cost of production 2 512 950 ✓ + 80 500 ✓ - 101 450 ✓	2 492 000 ✓*

14

ACTIVITY 8

8.1.1 Calculate the total purchases of raw material for the financial year ended 21 May 2020.

1 450 000 ✓ – 27 000 ✓ – 325 000 ✓ = 1 098 000 ✓ one part correct

4

8.1.2 Production cost statement for the year ended 31 May 2020

Direct material		1 140 000
Direct labour (650 000 x 40%)		✓✓ 260 000
Prime cost	DM + DL	✓1 400 000
Factory overhead cost figure	balancing	✓ 312 000
Total cost of production		1 712 000
Work in process (1 June 2018)	balancing	✓ 82 000
	TCP + WIP begin	✓ 1 794 000
Work in process (31 May 2020)		✓✓ (94 000)
Total cost of production of complete products		✓✓ 1 700 000
	80 000 x 21,25	

9

8.1.3 Calculate the following for the financial year ended 31 May 2020:

Number of units sold during the year.

15 000 ✓ + 80 000 ✓ – 9 500 ✓ = 85 500 ✓✓

Cost of Sales

285 000 ✓ + 1 700 000 ✓ – (9 500 ✓ x 21,25 ✓) = 1 783 125 ✓

Or: The Finished Goods Stock account

5

5

--

Calculate the Net Profit for the year ended 31 May 2020.		
Sales (85 500 ✓ see 2.1.3 x 42,50 ✓)		✓ 3 633 750
Cost of Sales	see 2.1.3	✓ (1 783 125)
Gross profit	operation	✓ 1 850 625
Less: Distribution cost		✓ (625 600)
Less: Administrative cost		✓ (787 400)
Net profit		✓ 437 625

8

8.2.1

Calculate the following:	
(a)	<p>variable cost per unit.</p> <p>85 ✓ + 108 ✓ + 34 ✓ = 227 ✓</p> <p>OR:</p> $\frac{1\,989\,000\checkmark + 2\,527\,200\checkmark + 795\,600\checkmark}{23\,400} = 227 \text{ per unit } \checkmark$
(b)	<p>breakeven point.</p> $\frac{842\,400\checkmark + 538\,200\checkmark\checkmark\checkmark\checkmark\checkmark\checkmark}{299\checkmark - 227\checkmark\checkmark \text{ see (a) above}}$ <p>= 19 175 units □</p>

4

5

8.2.2

<p>After an analysis of cost and efficiency, the internal auditor is concerned about a few points. Refer to Information C and answer the following questions:</p>							
(a)	<p>Direct material:</p> <table border="1"> <thead> <tr> <th>Problem</th> <th>Solution</th> </tr> </thead> <tbody> <tr> <td>Material is wasted ✓</td> <td>Use templates when cutting / train workers to work efficiently ✓</td> </tr> </tbody> </table>	Problem	Solution	Material is wasted ✓	Use templates when cutting / train workers to work efficiently ✓		
	Problem	Solution					
Material is wasted ✓	Use templates when cutting / train workers to work efficiently ✓						
(b)	<p>Direct labour:</p> <table border="1"> <thead> <tr> <th>Problem</th> <th>Solution</th> </tr> </thead> <tbody> <tr> <td>Tarren is not producing enough (2 100 from 2 925) ✓</td> <td>Give her daily targets / bring in commission if they reach a certain goal / any acceptable or correct answer ✓</td> </tr> <tr> <td>Tarren works the most overtime and still does not reach the average production number / slow worker / exploits overtime ✓</td> <td>Only approve overtime if daily target has just been missed / count and compare the number of bags she produces every hour / any acceptable or correct answer ✓</td> </tr> </tbody> </table>	Problem	Solution	Tarren is not producing enough (2 100 from 2 925) ✓	Give her daily targets / bring in commission if they reach a certain goal / any acceptable or correct answer ✓	Tarren works the most overtime and still does not reach the average production number / slow worker / exploits overtime ✓	Only approve overtime if daily target has just been missed / count and compare the number of bags she produces every hour / any acceptable or correct answer ✓
	Problem	Solution					
	Tarren is not producing enough (2 100 from 2 925) ✓	Give her daily targets / bring in commission if they reach a certain goal / any acceptable or correct answer ✓					
	Tarren works the most overtime and still does not reach the average production number / slow worker / exploits overtime ✓	Only approve overtime if daily target has just been missed / count and compare the number of bags she produces every hour / any acceptable or correct answer ✓					
<p>Sewing machine maintenance:</p> <table border="1"> <thead> <tr> <th>Problem</th> <th>Solution</th> </tr> </thead> <tbody> <tr> <td>Machines are old / needs to be replaced ✓</td> <td>Replace the machines / buy newer and more productive machines / any acceptable or correct answer ✓</td> </tr> <tr> <td>Roger and Gary cannot work the machines properly / lack of training ✓</td> <td>Train them again / move them to another part of the production line / any acceptable or correct answer ✓</td> </tr> </tbody> </table>		Problem	Solution	Machines are old / needs to be replaced ✓	Replace the machines / buy newer and more productive machines / any acceptable or correct answer ✓	Roger and Gary cannot work the machines properly / lack of training ✓	Train them again / move them to another part of the production line / any acceptable or correct answer ✓
Problem	Solution						
Machines are old / needs to be replaced ✓	Replace the machines / buy newer and more productive machines / any acceptable or correct answer ✓						
Roger and Gary cannot work the machines properly / lack of training ✓	Train them again / move them to another part of the production line / any acceptable or correct answer ✓						
<p> </p>							

2

4

4

ACTIVITY 9

9.1 BEN'S CATERING

9.1.1 Identify ONE unit cost for doughnuts and TWO unit costs for pies that were major problems in 2021, considering that the inflation rate was 5%.

Identify cost ✓ ✓ ✓ Figures ✓ ✓ ✓ Problem ✓ ✓ ✓ Valid advice ✓ ✓ ✓

ONE unit cost for doughnuts (Quote figures.)	Problem and advice Both must be specific, not general FC & VC & general expenses
<p>Variable costs now R5,00 / R4,30 → R5,00 (16,3%)</p> <p>OR</p> <p>Direct labour cost now R1,90 / R1,55 → R1,90 (+ 23%)</p> <p>OR</p> <p>Selling & distribution cost now R1,15 R0,70 → R1,15 (+ 64%)</p> <p>Do not accept Administration cost</p>	<p>Must mention either DLC or S&DC</p> <p>Possible cause of the problem: Workers are not operating efficiently/Wages increased/More overtime</p> <p>Advice: Assess the efficiency of workers/Offer incentives/Time and motion studies/Restrict overtime/Train workers to be more efficient/Improve supervision</p> <p>OR</p> <p>Possible cause of the problem: Salespersons not efficient/Transport costs increased/Bad debts/Theft of fuel/Increase in fuel prices</p> <p>Advice: Offer commission on sales/Look for cheaper forms of transport/Training/ Plan trips better</p>
TWO unit costs for pies (Quote figures.)	Problem and advice Both must be specific, not general FC & VC

<p>Direct material cost now R5.05 / R2,20 → R5,05 (+ 130%)</p>	<p>Must cover DMC</p> <p>Possible cause of the problem: Lack of expertise of workers/Poor quality raw materials/Increased raw materials cost/Theft of raw materials/Wastage</p> <p>Advice: Investigate causes of wastage/Look for a cheaper supplier/Better quality of raw material/Better training/Improve security</p>
<p>Factory overhead cost now R3,38 R2,50 → R3,38 (+ 35%)</p> <p>Do not accept Administration cost</p>	<p>Possible cause of the problem: Low production increased fixed cost per unit/ Increase in certain costs, e.g. rent</p> <p>Advice: Increase units produced to reduce unit cost/Advertise the product better/Diversify the range/Economise on expenses, e.g. rent/water/ electricity</p>

9.1.2

Calculate the number of extra doughnuts he must produce and sell to make an additional profit of R15 000. Assume that the unit costs and selling price for 2021 remain unchanged.

15 000 ✓ / 3,00 ✓✓
= 5 000 extra units ✓

OR

FC = 55 000 x R1,18
= R64 900 (is the rounded off figure)

To cover = R64 900 + 15 000
= R79 900

Units needed = R79 900 / R3
= 26 633 (new BEP)

BEP = 21 667

Extra needed = 4 966
(difference due to rounding off)

21 667 x 3 = 65 001 (Fixed costs)

(65001 + 15 000)/3 = 26 667

26 667 – 21 667 = 5 000

OR

FC	Exis NP	Extra NP
64 900	+ 100 100	+ 15 000
(R8 – R5) R3,00		

= 60 000 to be made

– 55 000 currently made

= 5 000 units extra

OR

Sales 55 000 x R8 = R440 000

COS 55 000 x R5 = R275 000

GP = R165 000

Target = **R180 000**

÷ Contribution **R3,00**

= 60 000 units

Making 55 000

Additional = **5 000 units**

4

9.1.3

Name the product which has been negatively affected by the new competitor.

Pies ✓

Comment on how this would have affected the net profit on this product.

✓✓ **Sales & production decreased** (44 000 → 35 000 units) / Ben has had to limit his price (to R12,50) / Reduction in price led to decrease in contribution (R6,15 → R4,20)

✓ **Production** is less than **BEP**

✓ This means that a **loss will be made** on the pies.

5

7. EXAMINATION GUIDANCE

- Familiarize yourself with the use of fractions, ratios and/or percentages to calculate costs for the different components or departments in a manufacturing environment.
- Understand the different cost categories, different stock accounts as well as unit cost analysis.
- Be able to calculate the additional units that the business needs to produce to achieve an additional profit by simply using the contribution per unit to arrive at the answer.
- Obtain a series of short activities from the previous question papers to make effective calculations determining the additional units required for a projected increase in profit,
- You may also make the converse calculation (to the bullet above) by determining the additional profit that will be earned by an increase in units produced and used.
- Calculate and comment on the break-even point and the level of production.
- Write more informal tests on the interpretation of unit costs and how to use unit costs to identify problems or economies of scale and to predict future results.
- You should be able to analyse and interpret information on different products or different financial periods. The objective is to calculate percentage increases or decreases, identify problems and offer practical solutions or advice.
- Practice a variety of activities to expose yourself to the different questioning techniques.

8. GENERAL STUDY AND EXAMINATION TIPS

- Note that Accounting is now assessed in TWO papers.
 - P1 Financial Reporting and Evaluation 150 marks 2 hours
 - P2 Managerial accounting and internal controls 150 marks 2 hours
- It is important to be familiar with the specific content for each paper so that you can plan effectively after the Preparatory Examinations.
- Obtain the 2021 Examination Guidelines, exemplar papers and many past examination papers to form the basis of your study programme.
- Prepare a functional study timetable and focus on specific topics at different intervals. Align this to time management; exploring short-cuts for calculations, frequently asked predictable questions and recommended responses for interpretive questions.
- Pay close attention to the language used in past papers such as key vocabulary and action verbs.
- For calculations, always show all workings – they carry many part marks.
- Become familiar with the structure and layout of Questions. They follow the same pattern which is: Appetizer, Required, Information.
- Note that the ANSWER BOOK is a vital part of the Question Paper, as many amounts and details will be included for most Questions. This is a time-saving device. Ensure that you include these amounts in your final answers, where relevant.
- Always arrive at least 30 minutes before the commencement of the paper. You will then be able to easily take care of all the administration requirements and to make effective use of your 10 minutes reading time.
- Use the reading time to get a global picture of the paper and identify where you wish to start (according to your strengths). You already have the ANSWER BOOK to assist in this regard. Simply go to the relevant pages for that Question.
- You can also answer the sub-questions in any order; always inserting what is given, working from the simple to the more challenging.
- Write legibly and neat; markers must have clear understanding of the answers you provided.
- Keep your comments short and to-the-point. The mark allocation is your guide about the length of your response.
- Have your own stationery and a good calculator (even a spare – just in case).

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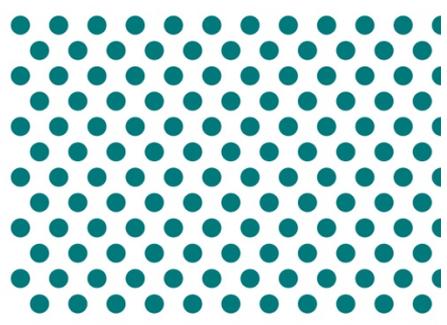
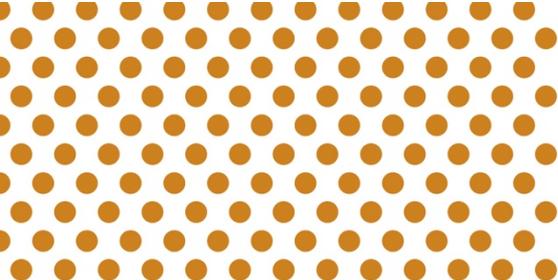
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