

Section A: Multiple Choice Question

1. Which of the following statements best describes variable costs?
 - 1) Costs that remain fixed in total, but vary on a per unit basis.
 - 2) Costs that remain constant in total and on a per unit basis.
 - 3) Costs that vary in total and fixed on a per unit basis.
 - 4) None of the above-mentioned alternatives

Answer 3

2. Complete the following statement: "... costs vary in...to changes in production."
 - 1) Fixed, a constant manner
 - 2) Variable, direct proportion
 - 3) Fixed, proportion
 - 4) Variable, an inverse manner

Answer 2

3. Which of the following costs could contain both variable and a fixed cost element with respect to the total output of the company?
 - 1) Sales commissions
 - 2) Direct material
 - 3) Manufacturing overhead
 - 4) Administrative salaries

Answer 3

4. A sunk cost is:
 - 1) a cost that may be saved by not adopting alternative.
 - 2) a cost that may be shifted to the future with little or no effect on current operations.
 - 3) a cost which does not entail any Rand outlay but which is relevant to the decision-making process.
 - 4) a cost that cannot be avoided because it has already been incurred.

Answer 4

Use the information in below to answer multiple choice questions 5 – 9:

EU Limited uses a perpetual inventory system. The company recorded the following purchases, issues and returns in respect of material **item IQ201** during June 2012:

DATE	PARTICULARS
1	Purchases: 1 200 kg @ R1,32 per kg
2	Issued 1600 kg
4	Purchases: 2 000 kg @ R1,38 per kg
11	Returned to supplier: 50 kg (invoice of the 4th June)
15	Issued: 600 kg
18	Returned to stores: 100 kg (issued on the 15th June)
21	Purchases: 3 000 kg @ R1,44 per kg
25	Issued: 1 600 kg

There were 1 000 kg valued at R1 200 available on 31 May 2012.

5. If the FIFO method of inventory valuation is used, the total value of the issue made on the 2nd would be:
- 1) R2 112
 - 2) R1 992
 - 3) R1 920
 - 4) None of the above-mentioned alternatives

Answer 2

6. The transaction on the 11th can be recorded as follows:
- 1) Minus 50 kg @ R1,38 per kg in the purchases column
 - 2) Minus 50 kg @ R1,38 per kg in the issues column
 - 3) Plus 50 kg @ R1,38 per kg in the purchases column
 - 4) None of the above-mentioned alternatives

Answer 3

7. If the FIFO method of valuation is used the issue on the 25th would be:

- 1) 1 600 kg @ R1,32 per kg
- 2) 100 kg @ R1,32 per kg and 1 500 units @ R1,38 per kg
- 3) 1 600 kg @ R1,38 per kg
- 4) None of the above-mentioned alternatives

Answer 2

8. The transaction on the 18th June results in the:

- 1) decrease of inventory balance in the stores
- 2) increase of inventory balance in the stores
- 3) same balance as that of the 8th June
- 4) None of the above-mentioned alternatives

Answer 2

9. The journal entry for recording the transaction that occurred on the 18th June would be recorded as follows:

- 1) Dr Work in process account and Cr Raw materials inventory account
- 2) Dr Raw materials inventory account and Cr Work in process account
- 3) Dr Raw materials inventory account and Cr Finished goods inventory account
- 4) None of the above-mentioned alternatives

Answer 2

WORKINGS FOR 5 - 9

INVENTORY LEDGER CARD USING FIRST-IN-FIRST-OUT (FIFO) METHOD

Date	Purchases			Issues			Balance		
	Quantity	Price	Amount	Quantity	Price	Amount	Quantity	Price	Amount
06/2012		R	R		R	R		R	R
Opening							1 000	1,20	1 200
01	1 200	1,32	1 584				1 000	1,20	1 200
							1 200	1,32	1 584
02				1 000	1,20	1 200			
				600	1,32	792	600	1,32	792
04	2 000	1,38	2 760				600	1,32	792
							2 000	1,38	2 760
11	(50)	1,38	(69)				600	1,32	792
							1 950	1,38	2 691
15				600	1,32	792	1 950	1,38	2 691
18				(100)	1,32	(132)	100	1,32	132
							1 950	1,38	2 691
21	3 000	1,44	4 320				100	1,32	132
							1 950	1,38	2 691
							3 000	1,44	4 320
25				100	1,32	132			
				1 500	1,38	2 070	450	1,38	621
							3 000	1,44	4 320
							3 450		4 941

Use the information below to answer multiple choice questions 10 – 15:

Mr Gcokama Mbatha is employed by Inono Limited. Mr Mbatha is directly involved in manufacturing the company's leading cleaning product.

The normal working week of the company is 45 hours. Mr Mbatha's basic wage rate is R45 per hour. The company pays its employees normal time and a half for any work in excess of 45 hours per week. In the week ended 15 January 2012, Mr Mbatha worked a total of 49 hours.

Additional information:

1. Mr Mbatha makes the following contributions:
 - Pension fund 8% of normal wage
 - Medical Aid 6% of normal wage
 - UIF 1% of gross wage

 2. The company makes the following contributions:
 - Pension fund 15% of normal wage
 - Medical aid 9% of normal wage
 - UIF 1% of gross wage

 3. SARS tables shows that Mr Mbatha must pay PAYE at 20% of his taxable income.
10. The gross wage for the week ended 15 January 2012 is:
- 1) R2 025,00
 - 2) R1 620,00
 - 3) R2 295,00
 - 4) None of the above-mentioned alternatives

Answer 3

11. The employee pension contribution amounts to:
- 1) R108,00
 - 2) R162,00
 - 3) R183,60
 - 4) None of the above-mentioned alternatives

Answer 2

12. Taxable income for the week ended 15 January 2012 is:

- 1) R2 295,00
- 2) R2 133,00
- 3) R1 512,00
- 4) None of the above-mentioned alternatives

Answer 2

13. The PAYE payable in the week ended 15 January 2012 amounts to:

- 1) R405,00
- 2) R459,00
- 3) R426,60
- 4) None of the above-mentioned alternatives

Answer 3

14. The medical aid employee contribution amounts to:

- 1) R121,50
- 2) R137,70
- 3) R81,00
- 4) None of the above-mentioned alternatives

Answer 1

15. Net wage payable to Leo in the week ended 15 January 2012 is:

- 1) R1 036,80
- 2) R1 723,00
- 3) R1 561,95
- 4) None of the above-mentioned alternatives

Answer 3

WORKINGS FOR QUESTION 10 - 15

	R
Normal wage (R45 x 45 hours)	2 025,00
Overtime (R45 x 1,5 x 4 hours)	270,00
Gross wage	2 295,00
<u>Less:</u> Pension fund (R2 025 x 8%)	(162,00)
Taxable income	2 133,00
<u>Less:</u> Sundry deductions	(571,05)
PAYE (R2 133 x 20%)	426,60
Medical aid (R2 025 x 6%)	121,50
UIF (R2 295 x 1%)	22,95
Net wage	<u>1 561,95</u>

Use the information below to answer multiple choice questions 16 – 18:

Gcabashe Limited is a manufacturing company whose total overhead costs fluctuate from month to month according to the number of units produced. The company incurred the following costs during the first five months of 2012:

Month	Number of units	Total costs
		R
January	2 000	91 100
February	3 000	104 000
March	4 200	123 000
April	3 600	115 000
May	1 500	82 500

16. Using the high-low method, the variable cost per unit...

- 1) R15,00
- 2) R5,00
- 3) R2,50
- 4) None of the above-mentioned alternatives

Answer 1

17. Fixed cost will be same at both the highest and the lowest production level. The total fixed costs for per month would therefore be equal to...

- 1) R10 000
- 2) R99 800
- 3) R60 000
- 4) None of the above-mentioned alternatives

Answer 3

18. If the estimated production for June 2012 was 4 800 units, how much was the total cost the June 2012?
- 1) R132 000
 - 2) R60 000
 - 3) R72 000
 - 4) None of the above-mentioned alternatives

Answer 1

WORKINGS FOR QUESTION 16 -18

Using the high-low method:

<u>Variable cost</u>	=	<u>difference between highest and lowest cost</u> <u>difference in highest and lowest related units</u>
	=	$\frac{R123\ 000 - R82\ 500}{4\ 200 - 1\ 500}$
	=	R15 per unit

Fixed cost

Using formula, $y = a + bx$ (highest observation)

$$R123\ 000 = a + (R15 \times 4\ 200)$$

$$a = R123\ 000 - R63\ 000$$

$$a = R60\ 000$$

OR

$$a = R82\ 500 - (R15 \times 1\ 500) \text{ (lowest observation)}$$

$$a = R60\ 000$$

Therefore, total fixed costs = R60 000

Use the information below to answer multiple choice questions 19 – 20:

Impinda Limited uses a predetermined overhead rate based on direct labour cost. Budgeted manufacturing overhead for the year was estimated at R252 000, but the actual manufacturing overhead incurred amounted to R257 000. Actual direct labour cost amounted to R440 000.

During the year the company had applied manufacturing overheads of R264 000

19. The budgeted direct labour cost is equal to:

- 1) R509 000
- 2) R420 000
- 3) R176 000
- 4) None of the above-mentioned alternatives

Answer 2

20. The amount of the over/under-applied overheads is equal to:

- 1) R7 000 (under applied)
- 2) R7 000 (over applied)
- 3) R5 000 (over applied)
- 4) R5 000 (under applied)

Answer 2

WORKINGS FOR QUESTION 19 -20

$$\begin{aligned} \text{❖ Predetermined overhead rate} &= \frac{\text{applied overheads}}{\text{actual direct labour costs}} \\ &= \frac{\text{R264 000}}{\text{R440 000}} \\ &= 60\% \end{aligned}$$

$$\begin{aligned} \text{Therefore, budgeted direct labour cost} &= \frac{\text{budgeted overheads}}{\text{predetermined overhead rate}} \\ &= \frac{\text{R252 000}}{60\%} \\ &= \text{R420 000} \end{aligned}$$

$$\begin{aligned} \text{❖ Actual overheads – applied overheads} & \\ &= \text{R257 000 – R264 000} \\ &= \text{R7 000 over applied} \end{aligned}$$

Use the information below to answer multiple choice questions 21 – 26:

Papi, a 16 year-old boy, intends to sell fruits. You had a meeting with him and he provided you with the following forecast for one month:

	Total R	Per Unit R
Sales (500 units).....	4 000	8,00
Variable cost per unit.....	2 000	4,00
Fixed cost per month.....	800	

21. The marginal income per unit is:

- 1) R8,00
- 2) R4,00
- 3) R6,40
- 4) None of the above-mentioned alternatives

Answer 2

22. The marginal income ratio is:

- 1) 80%
- 2) 50%
- 3) 20%
- 4) None of the above-mentioned alternatives

Answer 2

23. Break-even point in sales units is:

- 1) 200 units
- 2) 125 units
- 3) 300 units
- 4) None of the above-mentioned alternatives

Answer 1

24. Break-even point in sales value is:

- 1) R4 000
- 2) R3 200
- 3) R1 600
- 4) None of the above-mentioned alternatives

Answer 3

25. The number of units Papi must sell in order to earn a net income of R3 000, is:
- 1) 950 units
 - 2) 750 units
 - 3) 1 250 units
 - 4) None of the above-mentioned alternatives

Answer 1

26. If the sales volume increases by 20% with no change in total fixed costs, the change in the net income would be:
- 1) R2 400
 - 2) R1 800
 - 3) R400
 - 4) None of the above-mentioned alternatives

Answer 3

CALCULATIONS USED TO ANSWER QUESTIONS 21 TO 26

$$\begin{aligned}\text{Marginal income per unit} &= R8 - R4 \\ &= R4\end{aligned}$$

$$\begin{aligned}\text{Marginal income ratio} &= R4/R8 \\ &= 50\%\end{aligned}$$

$$\begin{aligned}\text{Break-even units} &= \text{fixed costs} / \text{marginal income per unit} \\ &= R800/R4 \\ &= 200 \text{ units}\end{aligned}$$

$$\left. \begin{array}{l} \text{Break-even value} \\ \\ \text{Alternatively:} \end{array} \right\} \begin{aligned} &= \text{fixed costs} / \text{marginal income ratio} \\ &= R800/ 50\% \\ &= R1\,600 \\ \\ &= \text{selling price per unit} \times \text{break-even units} \\ &= R8 \times 200 \text{ units} \\ &= R1\,600 \end{aligned}$$

$$\begin{aligned}\text{Target units} &= (\text{fixed costs} + \text{target profit}) / \text{marginal income per unit} \\ &= (R800 + R3\,000) / R4 \\ &= 950 \text{ units}\end{aligned}$$

$$\begin{aligned}\text{Change in income} &= \text{increase in marginal income by: } [(500 \text{ units} \times 20\%) \times R4] \\ &= R400\end{aligned}$$

Use the information below to answer multiple choice questions 27 – 31:

27. The sales figure for May is equal to:

- 1) R360 000
- 2) R250 000
- 3) R300 000
- 4) None of the above mentioned alternatives

Answer 2

28. The total receipts for June is equal to:

- 1) R267 500
- 2) R250 000
- 3) R266 000
- 4) None of the above mentioned alternatives

Answer 1

29. The total payments for June is equal to:

- 1) R70 000
- 2) R120 000
- 3) R200 000
- 4) None of the above mentioned alternatives

Answer 2

30. The total cost of sales for June is equal to:

- 1) R70 000
- 2) R80 000
- 3) R200 000
- 4) None of the above mentioned alternatives

Answer 3

31. The total cash generated in June is determined to be:

- 1) R147 500
- 2) R 99 500
- 3) R10 000
- 4) None of the above mentioned alternatives

Answer 1

CALCULATIONS USED TO ANSWER QUESTIONS 27 TO 31

Sales figure (May):

R300 000/120%

= R250 000

Sales collections (June):

May sales: 250 000 x 47% = R117 500

June sales: R300 000

+ Cash receipts: R300 000 x 50% = R150 000
= R267 500

Total payments:

R80 000 + R40 000 = R120 000

Cost of sales (June):

R300 000 x 100/150 = R200 000

Total cash generated:

R267 500 – R120 000 = R147 500

32. Which one of the following statements is true?

The total manufacturing costs in the statement of cost of goods manufactured and sold comprises:

- 1) direct materials, direct labour and actual manufacturing overheads
- 2) direct materials, direct labour and budgeted manufacturing overheads
- 3) direct materials, direct labour and applied manufacturing overheads
- 4) indirect materials, direct labour and actual manufacturing overheads

Answer 3

33. There are two acceptable methods for closing out any balance of under- or over applied overhead. One method involves allocation, whereas the other closes any balance directly to ...

- 1) finished goods inventory
- 2) cost of goods sold
- 3) cost of goods manufactured
- 4) work in process inventory

Answer 2

34. Cost of goods manufactured and sold is determined by adding...
- 1) current costs to work-in-process
 - 2) prime costs plus factory overheads plus work-in-process
 - 3) (1) and (2)
 - 4) None of the above-mentioned alternatives

Answer 3

35. Units of products that are partially completed and that will require further work before they are ready for sale to customers, is called:
- 1) finished goods inventory
 - 2) raw material inventory
 - 3) work in process inventory
 - 4) None of the above-mentioned alternatives.

Answer 3

36. Completed products, but not yet sold, is called:
- 1) finished goods inventory
 - 2) raw material inventory
 - 3) work in process inventory
 - 4) None of the above-mentioned alternatives.

Answer 1

37. The level where marginal income is equal to fixed costs is:
- 1) Cost-volume profit point
 - 2) Margin of safety
 - 3) Break-even point
 - 4) Variable expenses ratio

Answer 3

38. If Q equals the level of output, P is the selling price, V is variable cost per unit, and F is the fixed cost, then the break-even point in units is:
- 1) $Q/(P-V)$
 - 2) $F/(P-V)$
 - 3) $V/(P-V)$
 - 4) $F/[Q (P-Q)]$

Answer 2

39. If sales volume increases and all other factors remain constant, then the:
- 1) margin of safety will increase
 - 2) break-even point will increase
 - 3) marginal income ratio will decrease
 - 4) net income will decrease

Answer 1

40. Which one of the following statements is true?
- 1) The production budget is typically prepared prior to sales budget.
 - 2) The master budget is a network consisting of many separate budgets that are interdependent.
 - 3) When preparing a materials purchase budget, desired closing inventory is deducted from the total needs of the period to arrive at materials to be purchased.
 - 4) The cash budget is developed from the budgeted income statement.

Answer 2

SECTION B: STRUCTURED QUESTIONS

Question 1

Classify each of the following costs as being either fixed **(F)** or variable **(V)** with respect to the number of units produce:

- 1.1.1 Factory supervisor's salary
- 1.1.2 Paper used in textbook production
- 1.1.3 Factory insurance
- 1.1.4 Screws used in furniture production
- 1.1.5 Rent on factory building
- 1.1.6 Wages paid to workers assembling a product
- 1.1.7 Wood used in furniture production
- 1.1.8 Lubricants for machines
- 1.1.9 Depreciation on factory machinery
- 1.1.10 Glue used in textbook production.

Note: Write down only the highlighted letters **(F)** and **(V)** which represent fixed and variable, respectively.

Answers

- 1.1.1 F^
- 1.1.2 V^
- 1.1.3 F^
- 1.1.4 V^
- 1.1.5 F^
- 1.1.6 V^
- 1.1.7 V^
- 1.1.8 V^
- 1.1.9 F^
- 1.1.10 V^

Question 2

Given below is the information taken from the records of Ercitsheni Limited for the year ended 28 February 2011:

Inventories	01 March 2010	28 February 2011
	R	R
Raw materials	15 000	20 000
Work in process	35 000	41 000
Finished goods	22 000	38 000

Additional information:

- Raw materials to the value of R190 000 were issued to production.
- Current manufacturing costs comprising of direct material, direct labour and applied manufacturing overheads, amount to R626 000.
- Manufacturing overheads applied to production amount to 60% of conversion costs.
- Actual manufacturing overhead costs incurred in the current period amount to R260 000. Manufacturing overhead variances are adjusted against the cost of goods sold.

REQUIRED:

Calculate the following costs:

- | | |
|---|------|
| 1.2.1 Raw material purchased | (3) |
| 1.2.2 Direct labour costs charged to production | (3) |
| 1.2.3 Costs of goods manufactured | (3) |
| 1.2.4 Cost of goods sold | (6) |
| | {15} |

Answer

1.2.1

	R
Closing raw material inventory	✓20 000
Add: Issued to production	✓190 000
Available for use	<u>210 000</u>
Less: Opening raw material	✓(15 000)
Purchases	<u>195 000</u>

(3)

1.2.2

	R
Current manufacturing costs	✓626 000
Less: Direct material	✓190 000
Conversion costs	<u>436 000</u>
∴ Direct labour (R436 000 x 40%)✓	<u>174 400</u>
	(3)

1.2.3

	R
Opening WIP	✓35 000
Add: Current manufacturing costs	✓626 000
Total manufacturing costs	<u>661 000</u>
Less: Closing WIP	✓41 000
Cost of goods manufactured	<u>620 000</u>
	(3)

1.2.4

	R
Opening finished goods	✓22 000
Add: Cost of goods manufactured	✓620 000
Goods available for sale	<u>642 000</u>
Less: Closing finished goods	✓38 000
Cost of goods sold at normal	<u>604 000</u>
Less: over applied overheads*	✓1 600
Cost of goods sold at actual	<u>602 400</u>
* [(R436 000 x 60%) – R260 000] ✓✓	
	(6)

Question 3

Isigayo Limited's factory comprises two production departments, Milling and Finishing, and two service departments Maintenance and Administration. The following estimated data are provided:

	Production department		Service Department	
	Milling	Finishing	Maintenance	Administration
Budgeted overheads.....	R624 000	R480 000	R240 000	R180 000
Machine hours.....	30 000	20 000		
Area occupied (square metres).....	6 300	2 700	1 200	900
Number of employees.....	150	100	40	30

Additional information:

- Maintenance department cost is allocated based on area occupied.
- Administration department cost is allocated based on number of employees.
- Production overheads are calculated based on machine hours.

REQUIRED:

Using the direct method, calculate the production overhead recovery rates for the Milling and Finishing departments. {10}

Answer

	Milling	Finishing	Maintenance	Administration
Primary allocation	✓R624 000	✓R480 000	✓R240 000	✓R180 000
Secondary allocation: Maintenance	✓168 000	✓72 000	(R240 000)	-
Administration	✓108 000	✓72 000	-	(R180 000)
	R900 000	R624 000	-	-

Overhead recover rate

$$\begin{aligned} \text{Milling} &= \text{R}900\,000 / 30\,000 \text{ MH} \\ &= \text{R}30 \text{ per machine hour} \end{aligned}$$

$$\begin{aligned} \text{Finishing} &= \text{R}624\,000 / 20\,000 \text{ MH} \\ &= \text{R}31,20 \text{ per machine hour} \end{aligned}$$

{10}

Question 4

Sondoda Limited uses a perpetual inventory system. The company concluded the following transactions for material SOS1 during May 2011:

- 01 Opening balance of materials: 1 000 units at R1 per unit.
- 03 Purchased 1 200 units at R1,10 per unit.
Transport cost (to be capitalised) R50.
- 04 Issued 1 600 units to production.
- 06 Purchased 2 000 units at R1,15 per unit
- 07 Returned to supplier, 60 defective units (bought on 6th May)
- 08 Issued 600 units to production.
- 09 Returned to stores 100 excess units (from the issue of the 8th May).
- 10 Purchased 3 000 units at R1,20 per unit
- 15 Issued 1 600 units to production.

REQUIRED:

Using the first-in-first-out (FIFO) method of inventory valuation, calculate the cost of material SOS1 issued to production during May 2011 {10}

Answer

Date	Purchases	Issues	Balance
1			1 000 units @ R1,00 = R1 000
3	1 200 units @ R1,14* = R1 370 [^]		1 000 units @ R1,00 = R1 000 1 200 units @ R1,14 = R1 370
4		1 000 units @ R1,00 = R1 000✓ 600 units @ R1,14 = R684✓	600 units @ R1,14 = R684
6	2 000 units @ R1,15 = R2 300 [^]		600 units @ R1,14 = R684 2 000 units @ R1,15 = R2 300
7	(60 units @ R1,15 = R69) ✓ [^]		600 units @ R1,14 = R684 1 940 units @ R1,15 = R2 231
8		600 units @ R1,14 = R684✓	1 940 units @ R1,15 = R2 231
9		(100 units @ R1,14 = R114)✓ [^]	1 940 units @ R1,15 = R2 231 100 units @ R1,14 = R114
10	3 000 units @ R1,20 = R3 600 [^]		1 940 units @ R1,15 = R2 231 100 units @ R1,14 = R114 3 000 units @ R1,20 = R3 600
15		100 units @ R1,14 = R114✓ 1 500 units @ R1,15 = R1 725✓	440 units @ R1,15 = R506 3 000 units @ R1,20 = R3 600
Cost of material issued:		R4 093[^]	

* $(R50/1200) + 1,10 = R1,142$ (rounded to two decimals)

Question 5

Majakathata Limited manufactures and sells a single product. The company budgeted to produce and sell 10 000 units at R150 per unit.

The following expenses will be incurred to produce and sell each unit of finished products:

	R
Direct materials.....	45
Direct labour.....	30
Variable manufacturing overhead.....	15
Variable selling and administrative costs.....	10
Fixed expenses (in total).....	440 000

5.1 Calculate the following:

- 5.1.1 Marginal income per unit. (2½)
- 5.1.2 Break-even in sales units and value. (5)
- 5.1.3 Margin of safety ratio. (4)
- 5.1.4 Number of units that must be sold to earn a profit of R85 000 (3½)

5.2 Draw a break-even graph which represents the data calculated in 5.1. Your graph should clearly show the following:

- (i) Break-even point
- (ii) Total revenue line
- (iii) Total costs line
- (iv) Fixed costs line

(5)

Answer

5.1.1

	Per unit
	R
Sales	^ 150
Less: Variable costs	100
Direct materials	^ 45
Direct labour	^ 30
Manufacturing overhead costs	^ 15
Selling and administrative costs	^ 10
Marginal income	<u>50</u>

(2½)

$$\begin{aligned}
 5.1.2 \quad \text{Break-even sales (units)} &= \frac{\text{Total fixed expenses}}{\text{Marginal income per unit}}^{\wedge} \\
 &= \frac{R440\,000\checkmark}{R50\checkmark} \\
 &= 8\,800 \text{ units} \\
 \\
 \text{Break-even sales (rands)} &= \text{break-even sales (units)} \times \text{selling price per unit}^{\wedge} \\
 &= 8\,800\checkmark \times R150\checkmark \\
 &= R1\,320\,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Alternatively, Break-even sales (rands)} &= \frac{\text{Total fixed expenses}}{\text{Marginal income ratio}}^{\wedge} \\
 &= \frac{R440\,000\checkmark}{33,33\%\checkmark} \\
 &= R1\,320\,132 \text{ (difference due to rounding off)}
 \end{aligned}$$

$$*(50/150) \times 100$$

(5)

$$\begin{aligned}
 5.1.3 \quad \text{Margin of safety ratio} &= \frac{\text{Sales units} - \text{break-even units}}{\text{Sales}} \times 100^{\wedge} \\
 &= \frac{\checkmark^{\wedge}10\,000 \text{ units} - 8\,800 \text{ units}\checkmark}{10\,000 \text{ units}\checkmark} \times 100 \\
 &= 12\%
 \end{aligned}$$

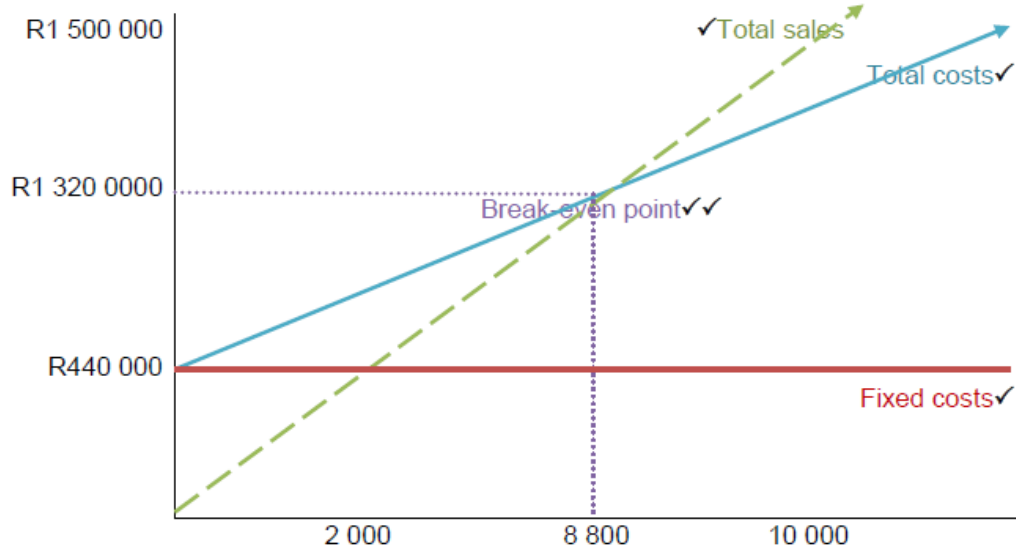
$$\begin{aligned}
 \text{Alternatively,} &= \frac{\text{Sales revenue} - \text{break-even value}}{\text{Sales revenue}} \times 100^{\wedge} \\
 &= \frac{\checkmark^{\wedge}1\,500\,000 - R1\,320\,000\checkmark}{1\,500\,000\checkmark} \times 100 \\
 &= 12\%
 \end{aligned}$$

(4)

$$\begin{aligned}
 5.1.4 \quad \text{Target profit sales units} &= \frac{\text{Fixed expenses} + \text{Target profit}^{\wedge}}{\text{marginal income per unit}} \\
 &= \frac{R440\,000\checkmark + R85\,000\checkmark}{R50\checkmark} \\
 &= 10\,500 \text{ units}
 \end{aligned}$$

(3½)

5.2



(5)

Question 6

Ngengebule Limited is a company that makes and sells stationery and other school supplies.

The company is planning its cash needs for the months ending July. The following information is available to assist in preparing a cash budget for the month of June.

1. Budgeted income statement

	May	June	July
Sales	420 000	310 000	500 000
<u>Less: cost of sales (purchases)</u>	<u>200 000</u>	<u>180 000</u>	<u>210 000</u>
Gross profit	220 000	230 000	290 000
<u>Less: operating expenses:</u>	<u>150 000</u>	<u>130 000</u>	<u>134 000</u>
Selling expenses	80 000	70 000	65 000
*Administrative expenses	70 000	60 000	69 000
Net income	70 000	100 000	156 000

*Includes depreciation of R5 000 per month.

2. 75% of sales are on credit.
3. Credit sales are collected over a three-month period in the following pattern:
 - 20% in the month of sale.
 - 60% in month following the month of sale.
 - 18% in the second month following the month of sale.
 The remaining balance will be bad debts.
4. The company allows 1% discount on accounts paid in the month of sale.
5. Machinery costing R60 000 will be purchased for cash in July.
6. Dividends of R20 000 will be declared and paid in July.
7. 70% of purchases are on credit and are paid in the following pattern:
 - 40% in the month of purchase.
 The remaining balance is paid in the following month.
8. The company is liable to pay taxation at the end of July to amount of R30 000.
9. Interest is received on a monthly basis. R90 000 is invested at 10% per annum.
10. The bank had an unfavourable bank balance of R10 000 at end of June.

REQUIRED:

Prepare a cash budget for the month of July.

Answer

NGENGEBULE LIMITED

Cash budget for the month ending 31 July

	R
Opening balance	(10 000)
Cash inflows:	
Cash sales (w1)	125 000
Collection from customers (w2)	270 450
Interest received (w3)	750
Total cash available	386 200
Less: cash outflows	
Cash purchases (w4)	436 400
Creditors payments (w5)	63 000
	134 400

Selling expenses

Administrative expenses (69 000 – 5 000)

Machinery purchases

Dividends

Taxation

Net cash position

65 000

64 000

60 000

20 000

30 000

(50 200)

Workings:

(W1)	May	June	July
Total sales	420 000	310 000	500 000
Cash sales (25%)	105 000	77 500	125 000
Credit sales (75%)	315 000	233 500	375 000

(w2) Collection from customers- July

May: $R315\,000 \times 18\% = R56\,700$

June: $R232\,500 \times 60\% = R139\,500$

July: $R375\,000 \times 99\% \times 20\% = R74\,250$

Total = R270 450

W3 interest received $R90\,000 \times 10\% \times 1/12 = R750$

W4 Creditors payments

	May	June	July
Total purchases	200 000	180 000	210 000
Credit purchases	140 000	126 000	147 000
Cash purchases	60 000	54 000	63 000

Creditors payments

June: $R126\,000 \times 60\% = R75\,600$

July: $R147\,000 \times 40\% = R58\,800$

Total = R134 400

Question 7

Tshepo Komane is an accomplished violinist and a permanent member of the Tshwane Symphony Orchestra (TSO). He started making full size, high quality violins that he supplies to the Gauteng market in his spare time two years ago. In order for him to increase his production of violins, he contracted three of his friends and fellow violinists at the TSO to assist him during times that they are not committed to the TSO.

The violins are made from several pieces of maple, ebony and spruce wood. The bows are made, using Brazilian wood and horsehair as well as some mother-of-pearl and a silver ring to keep the horsehair in place and prevent it from tangling.

Tshepo imports all the components that he requires for making the violins and bows from a luthier in London. When he started making violins the exchange rate between the South African rand and the British pound was R13 for £1. Since then the value of the rand has deteriorated to such an extent that it currently is R22 for £1. This has resulted in an increase in the total cost of all the components to make one violin with a bow to R5 260.

Shipping charges, import duties and value-added tax paid on imports during the year 1 March 2016 to 28 February 2017 amounted to R6 480. Tshepo is not registered with the South Africa Revenue Service (SARS) for value-added tax (VAT) purposes.

Tshepo buys violin cases locally at a cost of R350 per case. The price of the violin cases has been stable for the past two years.

Inventories at the beginning and end of the financial year under review were as follows:

	Opening inventory	Closing inventory
Finished goods (violin sets) *	2 sets at R22 000 each	3 sets
Work in progress	0	0
Direct materials:		
Packs of imported components	0	2 packs
Violin cases	10 cases	15 cases

*A violin set consists of one violin and one bow packed in a violin case.

During the year the violins and bows started and completed were produced as follows:

Tshepo 3
Dewald 2
Mpule 2
Rina 3

How many violin sets were sold during the year? (2)

Answer

Violins sold = Opening inventory + Production – closing stock+

$$= 2 \text{ sets} + 10 \text{ sets} - 3 = 9 \text{ violin sets were sold}$$

How many packs of components were imported during the year? (2)

Answer

Total sets produced during the year = 10

Therefore packs of components = 10(used in production) + 2 (closing stock) = 12

Calculate the total cost of the components that were used in production during the year. (Hint: first calculate the cost of the imports and then deduct the cost attached to the closing inventory.) (4)

Total cost of components imported = $12 \times 5\,260$ (cost of components per violin set) + 6 480(import charges) = 69 600

Cost per component = $69\,600/12 = 5\,800$

Cost of closing stock of components = $5\,800 \times 2 = 11\,600$

Cost of components used in the production process = $69\,600 - 11\,600 = 58\,000$

Calculate the total cost of the violin cases that were used in production during the year. (3)

Answer

Total sets produced during the year = 10

Total cost of violin cases = 10×350 (cost per case) = 3 500

It takes one person 100 hours to make one violin with a bow. Tshepo pays himself and his friends R60 per hour (each) for making the violins.

Calculate the total cost of the labour of the four friends during the year. (3)

	Violins	Total hours @100/ Violin	Total cost @60 per hour
Tshepo	3	300	18,000.00
Dewald	2	200	12,000.00
Mpule	2	200	12,000.00
Rina	3	300	18,000.00
	Total cost		60,000.00

Indirect materials used in the production of the violins (glue, varnish, oil and resin) are purchased locally. The value of indirect materials on hand was R210 in the beginning of the year and R280 at the end of the year. The total value of indirect materials purchased during the year was R950.

Calculate the total cost of the indirect materials (variable production overheads) used in production during the year. (3)

Cost of indirect material consumed = Opening inventory + Purchased – closing stock

$$= 210 + 950 - 280 = R880$$

For the purposes of his violin-making business, Tshepo hires a basement in Sunnyside. He pays R10 000 per month rent for the facility. The rent includes any costs for electricity and water. Tshepo also pays insurance against fire and theft of R300 per month.

Calculate the total fixed production overheads for the year. (2)

Total fixed overheads = rent + insurance = (10 000 x 12) + (300 x 12) = R123 600

For the purposes of his violin-making business, Tshepo hires a basement in Sunnyside. He pays R10 000 per month rent for the facility. The rent includes any costs for electricity and water. Tshepo also pays insurance against fire and theft of R300 per month.

Calculate the total fixed production overheads for the year.

(2)

	Total cost	units produced	cost per unit
Direct material: Componets	58,000.00	10	5,800.00
Direct material: Cases	3,500.00	10	350.00
Direct Labour	60,000.00	10	6,000.00
Indirect materials	880.00	10	88.00
Fixed Overheads	123,600.00	10	12,360.00
Total input cost	245,980.00		24,598.00