UNIVERSITY EXAMINATIONS

UNIVERSITEITSEKSAMENS

UNISA university of south africa

MAC2601

May/June 2015

PRINCIPLES OF MANAGEMENT ACCOUNTING

Duration : 2 Hours

100 Marks

EXAMINATION PANEL AS APPOINTED BY THE DEPARTMENT.

Use of a non-programmable pocket calculator is permissible.

Closed book examination.

This examination question paper remains the property of the University of South Africa and may not be removed from the examination venue.

[TURN OVER]

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This examination question paper consists of eight (8) pages.

PLEASE NOTE:

(a) This examination question paper is available in both English and Afrikaans.
(b) This examination question paper consists of FIVE (5) questions.
(c) Ensure you are handed the correct answer book (green) by the invigilator.
(d) Start each question on a new page.
(e) Answer all the questions.
(f) Show all your calculations.
(g) Please write legibly in black or blue ink (the use of a pencil or red pen is not permissible.)

Suggested timetable:

Question	Subject	Marks	Time in minutes
1	Cost-volume-profit analysis; probabilities (Two independent parts.)	20	24
2	Process costing	20	24
3	Direct and absorption costing and cost estimation techniques	20	24
4	Relevant costing; budgeting (Two independent parts.)	20	24
5	Multiple-choice questions	20	24

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QUESTION 1 **(20 marks / 24 minutes)**

This question consists of **two independent parts** and **both** must be answered.

PART 1.1 **(14 marks / 17 minutes)**

Mafikeng Manufacturers (Pty) Ltd manufactures a single product and has the following budgeted information available for the 2016 financial year:

Break-even point in units	6 000 units
Selling price per unit	R120
Variable cost per unit	R30
Opening inventory	-
Closing inventory	-

REQUIRED

Note: Each sub-question is independent of the previous sub-question unless it is stated otherwise.

(a) Calculate the **budgeted** total fixed costs for the 2016 financial year. (3)

(b) Calculate the actual contribution in **Rand** if 7 500 units are actually produced and sold. (2)

(c) Calculate the margin of safety in **units** if 8 000 units are actually produced and sold. (1)

(d) Calculate the margin of safety **ratio** in percentage if 10 000 units are actually produced and sold. (2)

(e) Calculate the number of units that will have to be sold to arrive at a target (expected) profit of R90 000 for the 2016 financial year. Assume total fixed costs are as calculated in (a). (3)

(f) Calculate the new break-even point in **Rand** if the selling price increases by 25% and the total fixed cost now amounts to R600 000. (3)

PART 1.2 **(6 marks / 7 minutes)**

You are the management accountant of Teamwork Technology Services (Pty) Ltd and have been provided with the following estimates pertaining to the 2016 financial year:

Possible outcome number	Value (contribution in Rand)	Probability
1	R100 000	30%
2	R120 000	20%
3	R220 000	15%
4	R350 000	10%
5	R60 000	?

There are no other possible outcomes for the above scenario.

REQUIRED

(a) Calculate the expected value of contribution for the 2016 financial year. (5)

(b) Determine the contribution value that is most likely to occur in the 2016 financial year. (1)

[TURN OVER]

QUESTION 2 **(20 marks / 24 minutes)**

Process Perfect Limited manufactures a single product and uses a process costing system. The company recorded the following information for the month of April 2015:

	Units
Opening work in progress ("**opening WIP**") (1 Apr.): 55% complete	18 000
Closing work in progress ("**closing WIP**") (30 Apr.): 70% complete	20 000
New units put into production in April 2015	80 000
Completed in April 2015	70 000

Additional information:

- Normal losses are estimated at 3% of the units that reaches/passes the wastage point.
- Normal losses occur when the process is 60% complete.
- Raw materials are added at the beginning of the process and conversion takes place evenly throughout the process.
- Cost information was as follows:

	R
Opening WIP	
Raw materials	144 000
Conversion	49 500
Added in April 2015	
Raw materials	426 400
Conversion	235 850

REQUIRED

(a) Prepare the **quantity statement** for April 2015 based on the **weighted average** method of inventory valuation. (6)

(b) Prepare the **production cost statement** for April 2015 based on the **weighted average** method of inventory valuation. (3)

(c) State whether each of the following statements is **true/false**:

(i) In the above scenario, a portion of the rand value of the normal loss will be allocated to closing inventory in the cost allocation statement. (1)

(ii) In the above scenario, abnormal losses will be written off as a period cost and not included in the valuation of inventory. (1)

(iii) Abnormal losses are sometimes also referred to as "controllable losses". (1)

(d) Assume now that losses occur when the process is 90% complete. Prepare the **quantity statement** for April 2015 based on this new wastage point and the first-in-first-out (**FIFO**) **method** of inventory valuation. (8)

QUESTION 3 **(20 marks / 24 minutes)**

Phembani (Pty) Ltd manufactures and sells model locomotives to hobby shops. The selling price per model locomotive in 2015 was R500 and is expected to increase by 10% per year from 2016. There was no opening inventory at the beginning of 2015.

You have been supplied with the following further information regarding **unit** movements (2015: actual; 2016: budgeted):

Year	Manufactured	Sold	Closing inventory
2015	1 300 units	1 000 units	?
2016	1 400 units	1 500 units	?

[TURN OVER]

Rendani van Tonder, the Chief Financial Officer of Phembani, presented you with the following cost information. The company's financial year-end is 31 December.

	R 2015	R 2016
Variable cost per unit:		
Direct material	100,00	120,00
Direct labour	30,00	35,00
Variable manufacturing overheads	20,00	25,00
Variable selling costs	2,00	2,50
Fixed costs in total:		
Fixed manufacturing overheads	60 000,00	66 000,00
Fixed selling costs	94 000,00	100 000,00
Fixed administrative overheads	46 000,00	48 000,00

Additional information:

Phembani (Pty) Ltd uses the **weighted average** method of inventory valuation.

REQUIRED

Prepare the budgeted statement of comprehensive income for the year ended 31 December 2016 according to:

(a) The direct costing method. (10)
(b) The absorption costing method. (10)

Round to two decimals throughout your calculations.

QUESTION 4 **(20 marks / 24 minutes)**

This question consists of **two independent parts** and **both** must be answered.

PART 4.1 **(10 marks / 12 minutes)**

Home Decorations (Pty) Ltd manufactures and sells four different home décor products. The company is currently planning for the 2016 financial year and has made the following estimates:

	Clock	Lamp	Scatter cushion	Cake stand
Demand (units)	8 000	6 000	10 000	2 000
Contribution per unit (R)	R100	R400	R150	R120
Required labour hours per unit	1,2	1,0	2,0	0,8

Additional information:

- All resources are freely available except for labour hours that are limited to 12 400 for the 2016 financial year.
- You have already identified labour hours as limiting factor and calculated the shortage.

REQUIRED

(a) Calculate the optimal production mix for the 2016 financial year. Round to two decimals throughout your calculations. (10)

PART 4.2 **(10 marks / 12 minutes)**

Moodlely Blankets (Pty) Ltd buys and sells blankets. The company management accountant prepared the following budgeted contribution statement for June 2015:

		R
Sales		1 500 000
Less: Variable cost		890 000
Opening inventory	125 000	
Purchases	950 000	
Less: Closing inventory	(210 000)	
Variable selling costs	25 000	
Contribution		610 000
Less: Fixed costs		105 000
Production overheads	35 000	
Administration overheads	70 000	
Net profit before tax		505 000

Additional information:

- The opening bank balance on 1 June 2015 is expected to be R150 000.
- Cash sales will amount to 60% of total sales for June. In July 2015, cash sales as a percentage of total sales are expected to increase to 70%.
- 80% of inventory purchased in June will be on a cash basis. It is expected that 90% of July inventory purchases will be on a cash basis. All June credit purchases will only be paid in July or August.
- The company's total credit purchases in May amounted to R300 000. 90% of May credit purchases will be settled in June and the remaining balance has to be settled in July.
- Cash receipts in June in respect of credit sales of May amounted to R200 000.
- Total depreciation amounts to R10 000 per month and is included in the budgeted fixed costs above.
- All other expenses in the above contribution statement will be incurred on a cash basis.
- In June 2015, the company is expected to settle a liability of R34 000 in cash.

REQUIRED:

(a) Prepare a cash budget for June 2015 and calculate the expected closing balance in the bank account as at 30 June 2015. Ignore taxation. (10)

QUESTION 5 **(20 Marks / 24 minutes)**

Answer the following multiple-choice questions by simply writing down the number of each sub-question and the corresponding correct alternative for each sub-question in your answer book, eg. 1.a. **Please note: Where there is an option e. available, you should NOT select it if your answer is different from one of the other options only due to rounding.**

1) In which one of the following situations will it be the most likely that a management accountant will recommend the use of a process costing system instead of a job costing system? (2)

a. Where each product unit produced is unique.
b. Where the production process is both specialised and once-off.
c. Where homogeneous products are sold in a general market.
d. Where products are manufactured according to different client requirements using the same production facilities.

Sub-question 2 relates to the following scenario:

The following information pertains to Leaf Extracts Shampoo (Pty) Ltd for the 2015 financial year:

	Budgeted	**Actual**
Overheads	R480 000	R520 000
Number of litres produced		
Jasmine Shampoo	14 000 litres	13 500 litres
Mint Shampoo	4 000 litres	4 500 litres
Total machine hours for production		
Jasmine Shampoo	28 000 machine hours	30 000 machine hours
Mint Shampoo	4 000 machine hours	3 800 machine hours

Budgeted figures for 2015 are representative of a normal, average year. Overheads are allocated on the basis of machine hours (normal average long-term capacity per year).

2) The total applied overheads for product Mint Shampoo for the year was: (2)

a. R 57 000
b. R101 333
c. R106 667
d. R120 000

Sub-questions 3 - 6 relate to the following scenario:

Bathawk (Pty) Ltd is the manufacturer of a product called FlyTech. The following information is available in terms of the month of April 2015:

	R
Standard variable direct **material** cost per unit (4kg per unit)	112
Actual variable direct **material** cost in total (6 000kg)	162 000
Standard variable manufacturing **overheads** per unit	70
Actual variable manufacturing **overheads** per unit	65
Actual **output** in units (produced and sold)	1 200
Budgeted **output** in units	1 000
Actual **selling price** per unit	480
Standard **selling price** per unit	500

Variable manufacturing **overheads** vary with production.

3) The material purchase price variance in total for April 2015 is: (2)

a. R6 000 (unfavourable)
b. R6 000 (favourable)
c. R138 000 (unfavourable)
d. R138 000 (favourable)
e. None of the above

4) The total material variance for April 2015 is: (2)

a. R33 600 (unfavourable)
b. R33 600 (favourable)
c. R27 600 (unfavourable)
d. R27 600 (favourable)
e. None of the above

5) The variable manufacturing overhead efficiency variance in total for April 2015 is: (2)

a. R6 000 (favourable)
b. R5 000 (favourable)
c. R1 000 (unfavourable)
d. Rnil
e. None of the above

6) The selling price variance in total for April 2015 is: (2)

a. R24 000 (unfavourable)
b. R24 000 (favourable)
c. R20 000 (unfavourable)
d. R20 000 (favourable)
e. None of the above

Sub-questions 7 - 8 relate to the following scenario:

Date	**Transaction**	**Details**
April 2015		
01	Opening inventory	1 000 units @ R10 each
05	Purchases	2 000 units @ R8 each
	Freight costs paid: R1 000	
07	Purchases	500 units @ R11 each
10	Issues	3 200 units to production

7) The total value of inventory at close of business on **10 April 2015** according to the **FIFO** method of inventory valuation was: (2)

a. R3 300
b. R2 400
c. R2 550
d. R3 000

8) The value of **one unit** of inventory at close of business on **5 April 2015** according to the **weighted average** method of inventory valuation was: (2)

a. R10,00
b. R 9,00
c. R 9,25
d. R 8,50

9) A fellow student has requested you to list the factors that probably contributed to the complex manufacturing environment that led to many companies opting for activity-based costing (ABC) instead of traditional costing. You are considering the following possibilities:

(i) Wider product ranges
(ii) More overheads being driven by production volumes
(iii) Increased dumping
(iv) More focus on quality

Indicate the correct combination of factors: (2)

a. (ii) and (iii)
b. (i) and (iv)
c. (i) and (iii)
d. (i), (iii) and (iv)

Sub-question 10 relates to the following scenario:

T. Thavhani (Pty) Ltd manufactures two products, Thophi and Tshidzimba, in a joint process. After the split-off point, each product is then separately processed further (at a cost of R5 per unit for Thophi and R2 per unit for Tshidzimba) before being marketed. The total joint costs amounted to R1 200 000 for the year. 50 000 units of Thophi and 75 000 units of Tshidzimba were manufactured and sold during the year.

10) According to the physical standard method, the amount of joint costs for the year to be allocated to product Thophi and Tshidzimba respectively will be: (2)

a. Thophi (R730 000) and Tshidzimba (R870 000)
b. Thophi (R800 000) and Tshidzimba (R400 000)
c. Thophi (R480 000) and Tshidzimba (R720 000)
d. Thophi (R320 000) and Tshidzimba (R480 000)