UNIVERSITY EXAMINATIONS

UNIVERSITEITSEKSAMENS

UNISA university of south africa

MAC2601

May/June 2014

PRINCIPLES OF MANAGEMENT ACCOUNTING

Duration : 2 Hours

100 Marks

EXAMINERS :
FIRST : MR LA JONKER MR M RAMALEBA
SECOND : PROF M STEYN

Use of a non-programmable pocket calculator is permissible.

Closed book examination.

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THIS PAPER CONSISTS OF 9 PAGES

INSTRUCTIONS:

N.B.:
1. This paper consists of SEVEN (7) questions.
2. All questions must be answered.
3. Basic workings, where applicable, must be shown.
4. Ensure that you are handed the correct examination answer book (blue for accounting) by the invigilator.
5. EACH QUESTION ATTEMPTED MUST START ON A NEW (SEPARATE) PAGE.
6. The required percentage to pass this module is 50%.

PROPOSED TIMETABLE:

Question	Subject	Marks	Time in minutes
1	Multiple Choice Questions (MCQ)	20	24
2	Standard costing	10	12
3	Nature and behaviour of costs	10	12
4	Sensitivity analysis	15	18
5	Direct and absorption costing	20	24
6	The process costing system	15	18
7	The activity-based costing (ABC) system	10	12
		100	**120**

<u>Question 1</u> (20 marks, 24 minutes)

Gupta Gate (Pty) Ltd manufactures and sells bullet proof vests. The following information is available for 2013 (actual) and 2014 (budget).

	2013	**2014**
Production (units)	2 000	3 000
Sales (units)	1 800	2 500
Opening inventory (Beginning of 2013) (units)	1 500	
	R	**R**
Variable cost per unit:		
Manufacturing	25	28
Direct labour	10	15
Selling cost	5	5.5
	40	38.5
Fixed costs:		
Manufacturing overheads	25 000	39 000
Selling and administrative costs	25 000	28 500

Additional information:

Selling price per unit per bullet proof vest is R125 for 2013 and R135 for 2014

1.1 Calculate the value of closing stock at the end of 2013 for financial accounting purposes i.e. for IFRS purposes

a) R80 000
b) R59 500
c) R80 750
d) R75 800

1.2 Calculate the value of closing stock at the end of 2013 using the direct costing method.

a) R50 000
b) R68 000
c) R95 500
d) R59 500

1.3 Calculate net profit before tax using the direct costing method (FIFO) (2014 period)

a) R163 250
b) R162 350
c) R188 500
d) R 229 850

1.4 You have been provided with the following statements regarding absorption costing method which is used for IFRS purposes

i. Absorption costing is superior to variable costing method and results in continuous growth of the company
ii. Absorption costing method includes both variable and fixed manufacturing costs in the product cost
iii. Absorption costing may be used to manage and control effectively selling and administration costs of the company
iv. When absorption costing method is used, budgeted fixed manufacturing costs are recovered on the basis of budgeted number of units manufactured during the period or budgeted total production hours

Indicate which of the following statements are true:

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

1.5 Whilst sitting at home preparing for MAC2601 exam you received a call from a fellow student asking you to verify the following statements regarding direct costing terminologies:

(i) Fixed cost does not remain constant in total regardless of changes in the level of activity or volume within the relevant range and in a specific time frame
(ii) Conversion cost is the total costs incurred when converting raw material into finished products
(iii) The high low method is predominantly used by big companies listed on the JSE (Johannesburg Stock Exchange)
(iv) Administrative costs are costs incurred in directing and controlling the organisation

Indicate which of the following statements are true:

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

The following information can be used to answer question 1.6 and 1.7.

Boom Ltd sells African herbs that are patented under their name. The company has the following information available.

	R
Sales price per unit	15,00
Direct material per unit	7,50
Direct labour per unit	5,00
Fixed admin and overhead cost	30 000
Current monthly profit	12 000

1.6 What will the breakeven sales value be?

a) R12 000
b) R180 000
c) R252 000
d) R30 000

1.7) At the start of the new month, Boom Ltd will be subject to a government levy of R2 for each unit sold. The company is currently operating at maximum capacity. With what percentage should the company increase the sales price if it still wants to achieve the same monthly profit? (Round to two decimals)

a) 13,33%
b) 16,67%
c) 11,76%
d) 14,71%

Use the following information to answer question 1.8 to 1.10:

The company you work for, FFE (Pty) Ltd, trades in red headwear. The director asked you to compile a flexible budget for different sales levels. The following is the flexible budget of FFE (Pty) Ltd:

Output (units)	**10 000**	**12 000**
Sales	200 000	240 000
Cost of sales	150 000	180 000
Fixed cost	25 000	25 000
Profit	25 00	35 000

1.8 What will the budgeted profit / (loss) be if the company sold 4 000 units?

a) Profit of R5 000
b) Profit of R25 000
c) Loss of R5 000
d) Loss of R25 000

The following actual results occurred for the month:

Output (units)	**5 000**
Sales	98 500
Cost of sales	69 500
Fixed cost	27 500
Profit	1 500

1.9 What is the sales variance between the flexible budget and the actual results at the above level?

a) Favourible variance of R18 500
b) Unfavourible variance of R101 500
c) Favourible variance of R1 500
d) Unfavourible variance of R1 500

1.10 What is the profit variance between the flexible budget and the actual results at the above level?

a) Favourible variance of R6 500
b) Unfavourible variance of R6 500
c) Favourible variance of R1 500
d) Unfavourible variance of R18 500

QUESTION 2 (10 marks) (12 minutes)

Rashad Staga (Pty) was awarded a contract by the Department of Correctional Services to supply electronic tagging devices to monitor prisoners who have been released on parole.

The company uses standard costing system.

The units are manufactured at the company head office in Bloemfontein**.**

You have been presented with the following information for the year ended 30 May 2014

The standard cost per monitoring tag is as follows:

Direct material: Zall Hillen	(12 kg @ R15 per kg)	R180
Direct material: Patriotic Lille	(13 kg @ R12 per kg)	R156
Direct labour	(40 hours@ R16 per hour)	R640
Variable manufacturing overheads (Varying with hours worked)		R140
(40 hours @ R3.50 per hour)		
Variable selling costs		18 000
Budgeted selling price per monitoring tag		R1 500

Rashad Staga (Pty) Ltd actual information for the year ended 30 May 2014

Rashad Staga manufactured and sold 5 000 monitoring tags units

	R
Cost of direct material: Zall Hillen (15 kg@ R18 per kg)	1 350 000
Cost of direct material: Patriotic Lille (10 kg@ R14.50 per kg)	725 000
Cost of direct labour (35 hours @ R15 per hour)	2 625 000
Variable selling costs	22 000
Sales Revenue	8 750 000

Round all variances to the nearest rand

REQUIRED:

a) Calculate purchase price variance for material Zall Hillen (2)
b) Calculate purchase price variance for material Patriotic Lille (2)
c) Calculate the selling price variance (2)
d) Calculate variable selling costs variance (2)
e) Evaluate whether the following statements about standard costing is true or false

(i) The main aim of standard costing is to enable managers to draw comparison between what should have been achieved giving standard operating conditions and what actually was achieved (1)

(ii) A company applying standard costing will have consistent growth year after year (1)

<u>QUESTION 3</u> (10 marks) (12 minutes)

Nkandla Report (Pty) Ltd manufactures specialised parts and equipment used in the construction of fire pools

You have been presented with the following information for the year ended 30 June 2014 to prepare management accounting reports for the next management meeting

Month	**Semi variable Manufacturing costs**	**Activity (Units produced)**
1	R110 000	20 000
2	R140 000	15 000
3	R100 000	10 000
4	R130 000	13 000
5	R160 000	40 000
6	R115 000	30 000

REQUIRED:

a) Use the high-low method to calculate the variable cost per unit (round off to two decimal places) and total fixed costs (round off to the nearest hundred rand) (4)

b) Forecast the total costs assuming that 35 000 units will be manufactured (3)

c) Formulate the linear equation that explains and predicts cost behaviour (3)

<u>QUESTION 4</u> (15 marks) (18 minutes)

<u>Part A</u>

Mr Young is an informal dealer in coffee mugs. He is trying to decide if he wants to start up a new range of mugs in his business and asked you to assist him in determining the likely profit the new range will generate. He drew up the following tables of probabilities as you requested:

Number of units to sell	**% chance of occurring**
20 000	10%
40 000	25%
60 000	30%
80 000	20%
90 000	10%
100 000	5%

Contribution per unit (R)	% chance of occurring
5,00	25%
7,50	35%
10,00	30%
12,50	10%

REQUIRED

Determine the most probable contribution for the period that Mr Young will be able to generate. (5)

Part B

Mr Brown is an accounting practitioner that earns a total of R100 000 per month on fees from clients.

Mr Brown is considering the following alternatives for increasing the fees of his business.

1 Increasing fees charged to clients by 20%. The probable effect is that 20% of his clients will move to other accountants and he will lose those fees.

2 Appointing two full-time personnel to assist him. There is a 80% probability that the capacity will increase. The effect of this will be salaries to the value of R10 000 per month will be paid, however his capacity will increase by 50%, the practice will then operate at a 85% productivity level at all times.

   If the capacity does not increase, the productivity level will operate at 100%.

REQUIRED

Calculate the value of all the separate options available to Mr Brown. Also indicate which option will be the most beneficial. (10)

QUESTION 5 (20 marks) (24 minutes)

After completing his articles at LPMG, Growth Chivango decided to venture into the world of business. He established Vharanani Pharmaceuticals (Pty) Ltd. The company produces Maringa herb, which is reputed to heal various ailments.

Growth decided that he will apply and test his management accounting skills which he learned during his MAC studies at Unisa.

The following information was obtained for the year ended 31/03/2013 and 31/03/2014 (budget)

	31/03/2013 Units	31/03/2014 Units
Production	7 000	8 000
Sales	5 000	7 000
Opening inventory (01/03/2012)	1 500	
	R	**R**
Selling Price per unit	400	395
Variable cost per unit:		
Direct materials	120	125
Direct labour	40	30
Manufacturing overheads	55	70

Selling and administration	10	10
	225	235
Fixed costs:		
Manufacturing	850 000	470 000
Selling overheads	40 000	45 000
Administrative overheads	25 000	30 000
	915 000	975 000

Additional information:

1. Vharanani Pharmaceuticals uses the first-in-first-out method of inventory valuation

REQUIRED:

(a) Prepare the budgeted statement of profit or loss and other comprehensive income for the year ended 31 March 2014 according to:

(i) The direct costing method (7)
(ii) The absorption costing method (8)

(b) Reconcile the differences in net profit before tax according to the two methods. (3)

(c) Evaluate whether the following statements are true or false:

(i) The absorption costing method includes both variable and fixed manufacturing costs in the product costs (1)
(ii) A company that uses variable costing has a better chance of meeting the conditions to be listed on the JSE (Johannesburg Stock Exchange) (1)

QUESTION 6 (15 marks) (18 minutes)

Dogtail (Pty) Ltd manufactures canned dog food. A process costing system is being used. The food is produced in a single process.

Normal wastage occurs when the process is 75% complete and it is estimated to be 10% of the inputs that reach the wastage point. Material is added at the beginning of the process and conversion costs are incurred evenly throughout the process. The first-in-first-out (FIFO) method of stock valuation is used.

	1 June 2013	**31 May 2014**
Work-in-process	250 000 units	150 000 units
% of completion – material	100%	100%
% of completion – labour	60%	85%
% of completion – overheads	60%	85%
Cost of material included in stock	R2 500 000	?
Cost of labour included in stock	R2 250 000	?
Cost of overheads included in stock	R1 500 000	?

Additional information

- Fully completed units at 31 May 2014 were 450 000 units
- 550 000 units were put into production during the year

- Costs incurred during the 2014 financial year: material R30 000 000; conversion costs R45 000 000

REQUIRED

1.	Prepare the Quantity Statement	(8)
2.	Prepare the Production cost statement	(3)
3.	Calculate the Rand value of the normal loss	(2)
4.	Calculate the Rand value of the abnormal loss	(2)

QUESTION 7 (10 marks) (12 minutes)

Watches (Pty) Ltd is a manufacturing company that manufactures watches and clocks. You are the newly appointed management accountant, and you are required to report to top management on the possibility of using the ABC method for allocating overheads, as it appears that the current method (traditional method) is not accurate. The following information is provided to you with regards to the current overheads incurred.

Activity	**Labour hours**		**Total cost (R)**
	Clocks	**Watches**	
Production set-up cost	10 000	5 000	75 000
Material handling	300	120	14 700
Packaging and shipping	120	80	30 000
TOTAL OVERHEADS			119 700

You identified the following cost drivers that will assist you to allocate overheads according to ABC:

		ACTIVITY LEVEL	
Activity	**Cost driver**	**Clocks**	**Watches**
Production set-up cost	Number of set-ups	18	12
Material handling	Number of parts	25	35
Packaging and shipping	Number of units shipped	1 000	1 500

REQUIRED

a) Calculate the overheads that should be applied to each product according to:

i. Activity Based Costing (5)
ii. The traditional method (allocating in accordance with direct labour hours spent) (5)