Tutorial letter 201/2/2013

MANAGEMENT ACCOUNTING TECHNIQUES AS AID IN DECISION-MAKING

SEMESTER 2

Department of Management Accounting

IMPORTANT INFORMATION:
This tutorial letter contains important information about your module.

Dear Student

Enclosed please find the solution in respect of compulsory assignment 01/2013. It is in your own interest to work through the suggested solution in conjunction with the assignment and your own answer.

Kind regards

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BAR CODE

QUESTION 1

ELECTRA WHOLESALERS

Break-even selling price:

Let the selling price per unit = x

$$\text{Break-even point} = \frac{\text{Fixed costs}}{\text{Marginal income per unit}}$$

$$20\,000 = \frac{R160\,000}{x - R10} \times \frac{100}{1}$$

$$R160\,000 = 20\,000\,(x - R10)$$

$$R160\,000 = 20\,000x - R200\,000$$

$$R160\,000 + R200\,000 = 20\,000x$$

$$x = R360\,000 \div 20\,000$$

$$= R18$$

The break-even selling price would be R18.

or

Sales = Fixed costs + Variable costs + Profit
20 000*x* = R10 (20 000) + R160 000 + 0
20 000*x* = R360 000
x = R360 000 ÷ 20 000
x = R18

Option (2) is therefore correct.

QUESTION 2

LESATH CC

Conversion costs:

	R
Direct labour	60 000
Variable overheads	20 500
Fixed overheads	210 000
	290 500

Option (3) is therefore correct.

QUESTION 3

MERGA CC

Evaluation of statements:

No of units produced	Doubling	Total time (Hours)	Cumulative average time per unit (Hours)
1	-	1 600,00	1 600,00
2	1	2 880,00	1 440,00
4	2	5 184,00	1 296,00 ①
8	3	9 331,20	1 166,40
16	4	16 796,16	1 049,76

① 5 184 ÷ 4 = 1 296

Statements 1, 2 and 4 are true.

Option (3) is therefore correct.

QUESTION 4

OKUL LTD
Let the total time for unit 1 = x

$$\text{Learning rate} = \frac{\text{Cumulative average time per unit}}{\text{Previous cumulative average time per unit}}$$

$$0{,}90 = \frac{(x+16000)\div 2}{x}$$

$$0{,}9x = \frac{x+16\,000}{2}$$

$$1{,}8x = 16\,000 + x$$
$$0{,}8x = 16\,000$$
$$x = 20\,000$$

Cumulative average time for the 16th unit:

Cumulative number of units	Total cumulative time (minutes)	Cumulative average time per unit (minutes)
1	20 000	20 000
2	36 000	18 000
4	64 800	16 200
8	116 640	14 580
16	209 952	13 122

Alternatively:
$0{,}90^3$ x 20 000 = 13 122

Option (4) is therefore correct.

QUESTION 5

KASTRA (PTY) LTD

Overhead recovery rate: $\frac{\text{R300 000}}{\text{75 000}}$ = R4

	R
Applied overheads (68 000 x R4)	272 000
Actual manufacturing overheads	290 000
Under-recovery	**18 000**

Option (4) is therefore correct.

POLARIS ENTERPRISES

QUESTION 6

Marginal income per machine hour - Deluxe model:

Marginal income = Selling price - variable costs
= R400 - R(150 + 80 + 15 + 5)
= R150

Number of machine hours required to manufacture one unit = 45/60 = 0,75

Marginal income per machine hour = R150 ÷ 0,75 = R200

Option (5) is therefore correct.

QUESTION 7

Marginal income per machine hour - Standard model:

Marginal income = Selling price - variable costs
= R300 - R(135 + 50 + 10 + 5)
= R100

Ranking of products:

Product	**Marginal income per unit R**	**Labour hours**			**Machine hours**		
		Hours per unit	**Marginal income per hour R**	**Ranking**	**Hours per unit**	**Marginal income per hour R**	**Ranking**
Standard	100	5	20	1	30/60	200	1
Deluxe	150	8	18,75	2	45/60	200	1

QUESTION 7 (continued)

Evaluation of options:

Option (1) is true.

Option (2) is false as the standard model ranks first in terms of labour hours.

Option (3) is false as the standard model ranks equally in terms of machine hours and first in terms of labour hours.

Option (4) is false for the same reason as (3).

Option (1) is therefore correct.

QUESTION 8

The equation in option (3) represents the correct one.

QUESTION 9

Budgeted fixed manufacturing overheads

	Standard model	**Deluxe model**
Number of machine hours required in order to manufacture one unit	$\frac{30}{60}$	$\frac{45}{60}$
Budgeted fixed manufacturing overheads per unit	R14	R21
Budgeted fixed manufacturing overheads per machine hour	R28	R28
Total number of machine hours available	12 500 hours	
Total budgeted fixed manufacturing overheads (12 500 x R28)	R350 000	

Option (2) is therefore correct.

QUESTION 10

FURUD (PTY) LIMITED

Required selling price:

Let the required selling price = x

Sales	=	Fixed costs + Variable costs + Profit
40 000x	=	[40 000 x R(2 + 1 + 0,60) + 10%x] + R60 000 + (R2,82 x 40 000)
36 000 x	=	R316 800
x	=	R8,80

The required selling price would have to be set at R8,80 per unit.

Option (4) is therefore correct.

TEGMAN LIMITED

QUESTION 11

Substitute b	=	0,6004 in the following equation:
Σy	=	$na + b\Sigma x$
1 324	=	7a + 1 980b
1 324	=	7a + 1 980 (0,6004)
1 324	=	7a + 1 188,792
7a	=	1 324 - 1 188,792
7a	=	135,208
a	=	19,3154

The correct answer is therefore option (4).

QUESTION 12

y	=	average daily maintenance cost
y	=	a + bx
y	=	19,3154 + 0,6004 (250)
y	=	19,3154 +150,1
	=	169,42

The correct answer is therefore option (1).