Tutorial Letter 202/2/2012

MANAGEMENT ACCOUNTING TECHNIQUES AS AID IN DECISION-MAKING

ACN306Y

Semester 2

Department of Management Accounting

Bar code

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Dear Student

Enclosed please find the solution in respect of assignment 02/2012. It is in your own interest to work through the suggested solution in conjunction with the assignment and your own answer.

With kind regards

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QUESTION 1

STONEHENGE CONSTRUCTION

Calculation of the expected duration of activity A→B:

Estimated time   = $\frac{(1 \times \text{optimistic}) + (4 \times \text{most likely}) + (1 \times \text{pessimistic})}{6}$

                          = $\frac{8 + (4 \times 9) + 16}{6}$

                          =   10 days

Option (2) is therefore correct.

QUESTION 2

STONEHENGE CONSTRUCTION

Calculation of the latest starting time for activity D ⇀ F:

LST   =   Critical route – longest route from the beginning of the activity to the end of the project

        =   37 – (10 + 9)
        =   18 days

Option (4) is therefore correct

QUESTION 3

STONEHENGE CONSTRUCTION

Acceleration schedule

	Routes				Additional direct costs	Saving in fixed costs	Net savings
	ABG	ACEG	ACFG	ADFG			
Normal time: Reduce EG by 1 day	25	37 (1)	36	35	R3 500	R5 000	R1 500
Reduce AC by 1 day	25	36 (1)	36 (1)	35	R4 980	R5 000	R20
Reduce AC by 1 day Reduce FG by 1 day	25	35 (1) (1)	35 (1) (1)	35 (1)	R 4 980 + R 3 280	R5 000	(R3260)

The minimum duration is 35 days.

Option (3) is therefore correct.

QUESTION 4

SANDINO MANUFACTURING

Calculation of the expected profit of the new product line:

Expected future profit	=	[(R300 000 x 0,20) + (R170 000 x 0,65) + (R80 000 x 0,15)]
	=	(R60 000 + R110 500 + R12 000)
	=	R182 500

Option (2) is therefore correct

QUESTION 5

SANDRA STONE

Calculation of conditional profit/loss for a successful campaign for a medium factory:

=	Expected income – cost of advertising campaign
=	R260 000 – R25 000
=	R235 000

Option (3) is correct.

QUESTION 6

SANDRA STONE

Calculation of the expected net profit/loss for a large factory:

SUCCESS: R350 000 – R60 000 =   R290 000
FAILURE: (R50 000) – R60 000 =   (R110 000)

EXPECTED PROFIT:

(R290 000 X 0,90)   +   (R110 000 X 0,10)   =   R250 000

Option (1) is therefore correct.

QUESTION 7

Calculation of marginal income per unit for Granite Ltd:

	R
Selling price	30,00
Less: Variable costs	10,50
Direct materials	*4,00*
Direct labour	*2,50*
Variable overheads	*4,00*
Marginal income	19,50

QUESTION 7(continued)

Should the special order be accepted, sales to the other customers would have to be reduced by 5 000 units owing to insufficient production capacity. Granite Ltd will therefore forfeit the marginal income on 5 000 units.

The opportunity cost is therefore 5 000 units x R19,50 = R97 500.

Option (4) is therefore correct.

QUESTION 8

HAPPY TOTS NURSERY SCHOOL

Economic order quantity:

$$\sqrt{\frac{2 \times \text{Annual demand} \times \text{Ordering cost per order}}{\left(\text{Unit price} \times \dfrac{\text{Interest on capital}}{100}\right) + \text{Stockholding cost per unit p.a.}}}$$

$$= \sqrt{\frac{2 \times 4\,150 \times \text{R55}}{\text{R150} \times \dfrac{15}{100} + 12}}$$

$$= \sqrt{\frac{\text{R456 500}}{34,50}}$$

=   115,030 bags

≈   116 bags

Option (4) is therefore correct.

QUESTION 9

HAPPY TOTS NURSERY SCHOOL

Re-order point:

=   Demand during lead time + safety stock
=   (demand per day x lead time in days) + safety stock
=   (4 150/50) x 3
=   249 bags

Option (1) is therefore correct.