



Advanced Management Accounting Module 13 June 2010

Suggested Solutions

Question 1

(a)Pricing

		€000	
Managing Director			
Sales	4000 x 1000	4,000,000	
Less Var Costs	1200 x 1000	(1,200,000)	
Contribution		<u>2,800,000</u>	
Less Fixed Costs		(1,500,000)	
Profit		<u>1,300,000</u>	[3 Marks]

Optimal pricing model

$$P = a + bQ$$

a = price where Q = zero

5000

[2 Marks]

b = rate of change

+500/-500

-1.00

[1 Mark]

Q = quality

$$P = 5000 - 1.0Q$$

$$TR = 5000Q - Q^2$$

$$MC = 1200$$

[1 Mark]

$$MR = DTR/DQ = 5000 - 2Q$$

Op. Position where MR = MC

Optimal Position

$$5000 - 2Q = 1200$$

1,900

[3 Marks]

Substituting Q into price fn.

$$P = 5000 - 1(1900)$$

3100

[2 Marks]

$$\text{Price} = \text{€}3100$$

Sales units

1,900

€

Sales

5,890,000

Less Var. Costs (@target)

(2,280,000)

Contribution

3,610,000

Less TFC

(1,500,000)

Profit

2,110,000

Less Sales Director price profit

(1,300,000)

Extra Profit

810,000

[2 Mark]

(b)

Other factors for pricing

Competition, Size of market

Market share v Optimal Profits

Packaging / quality / advertising

Problems establishing price demand relationship

Strategies

Cost Plus

Market / Competitors price

Premium pricing

Discounted / Special offer

[6 Marks]

Question 2

(a) Learning Curve

Wind Turbine System	Cum Time	Avg time per unit	% Learning
1	120	120	90%
2	216	108	90%
4	388.8	97.2	

[4 Marks]

Learning effect is 90% with learning stopping after the first 16 units

Time for 16 units = $Y = 120(16)^{-0.152}$	78.73	
	<u>x 16</u>	
Total time for 16 units	1,259.72	[3 Marks]
Time for 15 units = $Y = 120(15)^{-0.152}$	79.51	
	<u>x 15</u>	
	1,192.63	
Time for 16 th unit and each unit thereafter	67.09 hours pu	[3 Marks]

(b)

Total Fixed costs		
Total fixed production costs 1000 x €1000		1,000,000
Total fixed non-prod oh		<u>500,000</u>
Total Fixed costs		1,500,000

Selling Price	2000
Variable costs 850 + 200	<u>(1050)</u>
Contribution per unit	950

Target Profit + TFC	1,900,000	2,000
Contribution pu	950	

[5 Marks]

(c)

	Old	Proposal
Selling Price	2000	2000
Variable costs 850 + 200	<u>(1050)</u>	<u>(1070)</u>
Contribution per units	950	930
B/e units	1,579	1,505
	Units	Units
B/e Revenue	3,157,895	3,010,753

Proposal should be introduced as has lower effect on Breakeven revenues

[5 Marks]

Question 3

(a)

To : Board
From : Consultant
Report : KPIs

Spend on R&D – progress to date

No. of Sales

No. of Orders

Timelines for production

Efficiency levels / quality reports

Market Share

Competitor analysis

Cashflow

Profitability

ROI

Others

Should give company focus on key out comes and enable controlling action to be taken

[10 Marks]

(b) Strategic Management Accounting

Explanation

[2 Marks]

Awareness of external operating environment

[2 Marks]

Benchmarking v Competitors

[2 Marks]

Forward Planning with contingency plan in place

[2 Marks]

Use of non-financial measures as well as financial measures the balanced scorecard being an example.

[2 Marks]

Other relevant Points

Question 4

(a) Absorption approach

	Jan	Feb	Mar	Total
Sales	450,000	520,000	530,000	1,500,000
COS	(225,000)	(260,000)	(265,000)	(750,000)
Gross Profit	225,000	260,000	265,000	750,000
Over Abs	0	750	3,750	4,500
Selling Costs	(70,000)	(77,000)	(78,000)	(225,000)
Net Profit	155,000	183,750	190,750	529,500
Closing Stock	25,000	20,000	30,000	30,000
	[2 Marks]	[2 Marks]	[2 Marks]	[2 Marks]

Variable Approach

	Jan	Feb	Mar	Total
Sales	450,000	520,000	530,000	1,500,000
- Var man costs	(191,250)	(221,000)	(225,250)	(637,500)
- Var sell costs	(45,000)	(52,000)	(53,000)	(150,000)
Contribution	213,750	247,000	251,750	712,500
- fixed man costs	(37,500)	(37,500)	(37,500)	(112,500)
- Fixed selling costs	(25,000)	(25,000)	(25,000)	(75,000)
Operating profit	151,250	184,500	189,250	525,000
Closing stock	21,250	17,000	25,500	25,500
	[2 Marks]	[2 Marks]	[2 Marks]	[2 Marks]

(c) Reconciliation

Cum Abs profits	155,000	338,750	529,500
Cum Var profits	151,250	335,750	525,000
Diff in profits	3,750	3,000	4,500
Diff in inc. closing stks	3,750	3,000	4,500

If prod > sales abs will show higher than variable accounting

[4 Marks]

Question 5

(a)

Price Variances			
Sales Price	$148500 - (11000 \times 14)$	(5500)	[1 Mark]
DM A Price	$(28600 \times 2) - 62920$	(5720)	[1 Mark]
DM B Price	$(26950 \times 1) - 29645$	(2695)	[1 Mark]
Container	$(11000 \times 0.05) - 5500$	(4950)	[1 Mark]
Dir labour Rate	$(1080 \times 10) - 11340$	(540)	[1 Mark]
Var P Oh	$(1080 \times 2 - 2000)$	160	[1 Mark]
Fix POH Exp	$4000 - 3500$	500	[1 Mark]
Usage variances			
DM Mix	See working	(825)	[1 Mark]
DM Yield	See working	(825)	[1 Mark]
Dir Labour	$(1100 - 1080) \times 10$	200	[1 Mark]
Var P OH	$(1100 - 1080) \times 2$	40	[1 Mark]
Fix POH Volume	1000×0.4	400	[1 Mark]
Total Variances		<u>(19755)</u>	

Working

Mix and Yield Variances	AQ in AM	AQ in SM	SQ in SM
DM A	28600	27775	27500
DM B	26950	27775	27500
	<u>55550</u>	<u>55550</u>	<u>55000</u>
	Mix		Yield
DM A	(1650)		(550)
DM B	825		(275)
Total	<u>(825)</u>		<u>(825)</u>

(b)

DL Planning Price var	$(10 - 10.5) \times 1000$	(500)
DL Operation Price var	$(10.5 - 10.5) \times 1080$	0
DL Operation Usage	$(1100 - 1080) \times 10.5$	210

(c)

Investigate based on a) observation b) rule of thumb models c) statistical models

Managers can see what relates to them

Can spot trends

Managers can make decisions based on information provided

Links with Responsibility

[4 x 1 Mark]

Question 6

(a) Cost management and cost reduction

Value analysis
Value engineering
Standardisation of parts
Shared models / R + D
Total Quality management techniques
Reduce waste
Lean Manufacturing / management practices
Just in time stock management systems

[5 x 2 Marks]

(b) Quality

Product recall damages :
Internal warranty costs
Repair costs
Replacement costs
Increased quality control costs
Damage to brand

Implement proper quality assurance techniques
Build good quality in rather than try to inspect poor quality out
Training is important as well as creation of a quality ethos /culture

Reports : Quality reports
Prevention costs
Quality control cost
Internal failure costs
External failure cost

[10 Marks]