

Management Accounting Level 3



Model Answers

Series 2 2008 Malaysia (Code 3623)

Vision Statement

Our vision is to contribute to the achievements of learners around the world by providing integrated assessment and learning services, adapted to meet both local market and wider occupational needs and delivered to international standards.



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Management Accounting Level 3

Series 2 2008

How to use this booklet

Model Answers have been developed by Education Development International plc (EDI) to offer additional information and guidance to Centres, teachers and candidates as they prepare for LCCI International Qualifications. The contents of this booklet are divided into 3 elements:

- (1) Questions – reproduced from the printed examination paper
- (2) Model Answers – summary of the main points that the Chief Examiner expected to see in the answers to each question in the examination paper, plus a fully worked example or sample answer (where applicable)
- (3) Helpful Hints – where appropriate, additional guidance relating to individual questions or to examination technique

Teachers and candidates should find this booklet an invaluable teaching tool and an aid to success.

EDI provides Model Answers to help candidates gain a general understanding of the standard required. The general standard of model answers is one that would achieve a Distinction grade. EDI accepts that candidates may offer other answers that could be equally valid.

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QUESTION 1

(a) Explain, in the context of standard costing, the meaning and usefulness of:

- (i) ideal standards
- (ii) attainable standards.

(6 marks)

(b) Define, with examples, the term semi fixed cost (also termed semi variable cost or mixed cost) and state two ways in which the fixed and variable elements of such costs can be segregated.

(6 marks)

(c) State reasons why organisations decentralise.

(8 marks)

(Total 20 marks)

MODEL ANSWER TO QUESTION 1

(a)

- (i) Ideal standards are based on the best possible operating conditions, no wastage, no breakdowns, no stoppages or idle time. Ideal standards are unattainable in practice and are rarely used. They could be used for investigative and development purposes but not for regular control activities.
 - (ii) Attainable standards are based on efficient working methods and operating conditions. The standard would include allowances for normal losses and machine breakdowns. Attainable standards must be based on a performance level that has to be worked for, thus can provide motivation for management. They can be used for cost control, stock valuation and as a basis for budgeting.
- (b) Semi-fixed/semi-variable cost can be defined as "A cost containing both fixed and variable components and which is thus partly affected by fluctuations in the level of activity". Examples would include transport cost, gas and electricity charges where a standing charge is included, and salaries that include incentive payments.

The respective elements can be separated by using the high-low method where the lowest cost is subtracted from the highest cost, within a given range, and the answer is divided by the change in activity, then using the variable cost per unit to ascertain the fixed cost.

Another method would be to use a scatter graph, plotting the costs against activity, and then inserting a line of best fit. The intersection of this line with the monetary axis will give the fixed cost, following on from which the variable cost can be ascertained. Both methods will give a rough approximation at best.

- (c) Better decisions can be made as managers can react more quickly to local conditions.

The problem of handling all decisions is removed from top management, who can then apply more of their time to long-term planning.

By being given the responsibility for the performance of their own areas, managers are likely to be more motivated to achieve their own objectives. Such greater motivation is likely to result in greater awareness of the environment in which the company is, or is likely to be operating in. This is likely to cause more prompt and effective actions being taken.

Local management positions can provide a good training ground for the company's future senior management.

QUESTION 2

A company has budgeted to sell 200,000 units of its single product in the forthcoming year at a selling price of RM20 per unit. The variable cost per unit will be RM12. The company's budgeted fixed costs are RM1,000,000 for the year.

REQUIRED

- (a) Calculate for the year in units:
- (i) the budgeted break-even point (3 marks)
 - (ii) the budgeted margin of safety. (2 marks)
- (b) Explain the significance of both the break-even point and the margin of safety. (4 marks)
- (c) Calculate the increase in budgeted sales units required:
- (i) to increase the existing budgeted profit by one third (3 marks)
 - (ii) to maintain the existing budgeted profit if the company now budgets for an advertising campaign at a cost of RM250,000. (2 marks)
- (d) Calculate the selling price that will be required, assuming that sales units remain at 200,000, to maintain the **original** budgeted profit if the advertising campaign in (c) goes ahead and the variable cost per unit increases by RM1 per unit. (6 marks)

(Total 20 marks)

MODEL ANSWER TO QUESTION 2

(a)

(i) Contribution per unit	RM
Selling price	20
Variable cost	<u>12</u>
	8

$$\text{Break-even point: } \frac{\text{Fixed costs}}{\text{Contribution per unit}} = \frac{\text{RM1,000,000}}{8} = 125,000 \text{ units}$$

(ii) Margin of safety: Budgeted sales units - Break-even point
 200,000 - 125,000 = 75,000 units

(b) The break-even point is the sales figure that a company must achieve before it begins to earn a profit. It is the point at which its total fixed costs will have been recovered.

The margin of safety is the maximum amount of sales units that a company can afford to lose before it finds itself in a loss-making situation.

(c)

(i) Present profit:		RM
Sales	200,000 x RM20	4,000,000
Less Variable cost	200,000 x RM12	2,400,000
Less Fixed cost		<u>1,000,000</u>
Profit		600,000

Additional contribution required 600,000 x 1/3 = RM200,000

$$\text{Units required: } \frac{\text{RM200,000}}{\text{RM8}} = 25,000$$

(ii) Additional contribution required: RM250,000

$$\text{Units required } \frac{\text{RM250,000}}{\text{RM8}} = 31,250$$

(d)

	RM
Original profit	600,000
Advertising	250,000
Fixed cost	<u>1,000,000</u>
Contribution	1,850,000
Contribution per unit	$\frac{\text{RM1,850,000}}{200,000} = \text{RM9.25}$
Contribution per unit plus Variable cost	RM9.25
	<u>13</u>
Selling price	<u>22.25</u>

QUESTION 3

A company is preparing budgets. The company makes and sells a single product. The details of the product are:

Sales price	RM40 per unit
Direct material	RM5 per unit
Direct labour	RM10 per unit
Variable production overhead	RM6 per unit

The following information is also available:

- Budgeted sales and production (units)

Month	1	2	3	4	5	6
Sales	1300	1500	1700	1900	1800	1800
Production	1400	1500	1800	2000	2200	2200

- Fixed overhead is budgeted at RM7,000 per month, including depreciation of RM1,000
- Wages are paid 75% during the month in which they are earned, 25% in the month following
- Variable production overhead is paid in the month in which it is incurred
- Material costs are paid for two months after the material is used in production
- There is a tax liability of RM14,000 to be settled in Month 4
- The company will purchase and pay for a new van for RM20,000 in Month 3; the present van will be sold for RM3,000 receivable in Month 5
- Five per cent of each month's sales are for cash, the remainder are sold on credit, the debtors settling one month after sale
- No bad debts are anticipated
- The cash balance at the start of Month 3 is expected to be RM1,000 in hand.

REQUIRED

- (a) Prepare a cash budget, by month, for the four-month period from Month 3 to Month 6
(15 marks)
- (b) List 5 reasons why there may be a difference between the budgeted cash balance at the end of Month 6 and the budgeted profit for the period from Month 3 to Month 6.
(You are **not** required to calculate the budgeted profit)

(5 marks)

(Total 20 marks)

MODEL ANSWER TO QUESTION 3

(a)

RM	Month 3	Month 4	Month 5	Month 6
Receipts				
Sales	60,400	68,400	75,800	72,000
Van			<u>3,000</u>	
Total Receipts	60,400	68,400	78,800	72,000
Payments				
Material	7,000	7,500	9,000	10,000
Labour	17,250	19,500	21,500	22,000
Tax		14,000		
Van	20,000			
V Overheads	10,800	12,000	13,200	13,200
F Overheads	<u>6,000</u>	<u>6,000</u>	<u>6,000</u>	<u>6,000</u>
Total Payments	61,050	59,000	49,700	51,200
Net cash flow	(650)	9,400	29,100	20,800
O Balance	1,000	350	9,750	38,850
C.Balance	350	9,750	38,850	59,650

Workings: Sales (RM)

	Month 3	Month 4	Month 5	Month 6
Previous month's sales	57,000	64,600	72,200	68,400
Current month's sales	<u>3,400</u>	<u>3,800</u>	<u>3,600</u>	<u>3,600</u>
Total	60,400	68,400	75,800	72,000

Labour (RM)

	Month 3	Month 4	Month 5	Month 6
Previous month	3,750	4,500	5,000	5,500
Current month	<u>13,500</u>	<u>15,000</u>	<u>16,500</u>	<u>16,500</u>
Total	17,250	19,500	21,500	22,000

- (b) There are non-cash items in the Profit and Loss Account, e.g. Depreciation.
 Capital Expenditure is included in a cash budget.
 Taxation is included in a cash budget.
 There is a time lag in the settlement of Debtors and Creditors, not reflected in the Profit and Loss Account.
 A brought forward balance is included in the cash budget.
 There is a large increase in the stock of finished goods.

QUESTION 4

A company produces and sells a single product, the standard selling price and production costs are:

		RM per unit
Selling price		25
Direct material	1 kilo x RM7 per kilo	7
Direct labour	2 hours x RM4 per hour	8
Fixed overhead	2 hours x RM2 per hour	4

The figures for a recent period were:

Budgeted production and sales	20,000 units
Actual production	19,000 units
Actual units sold	18,800
Actual sales revenue	RM451,200
Actual direct material	19,000 kilos x RM6.8 per kilo = RM129,200
Actual direct labour	38,200 hours x RM3.8 per hour = RM145,160
Actual fixed production overhead	RM83,900

Raw material stocks were unchanged during the period.

REQUIRED

(a) Calculate for the period:

- (i) the standard gross profit (2 marks)
- (ii) the actual gross profit. (2 marks)

(b) Calculate the following variances for the period:

- (i) Selling price (2 marks)
- (ii) Sales volume profit (2 marks)
- (iii) Material price (2 marks)
- (iv) Labour rate (2 marks)
- (v) Labour efficiency (2 marks)
- (vi) Fixed production overhead expenditure (2 marks)
- (vii) Fixed production overhead capacity (2 marks)
- (viii) Fixed production overhead efficiency. (2 marks)

(Total 20 marks)

MODEL ANSWER TO QUESTION 4

(a)	Standard gross profit:		
	Per unit (RM 25 - 19) = RM 6		
	Total 18,800 x RM6 = RM 112,800		
	Actual gross profit:		RM
	Sales		451,200
	Less Production cost of sales		
	Material	129,200	
	Labour	145,160	
	Fixed overheads	<u>83,900</u>	
		358,260	
	- Closing stock increase		
	200 x 19	<u>3,800</u>	<u>354,460</u>
	Gross profit		<u>96,740</u>
(b)			
(i)	Selling price variance		
	Actual units x actual price		451,200
	Actual units x standard price (18,800 x RM25)		<u>470,000</u>
			18,800 A
(ii)	Sales volume profit variance		
	Budgeted units x standard profit (20,000 x RM 6)		120,000
	Actual units x standard profit (18,800x RM 6)		<u>112,800</u>
			7,200 A
(iii)	Material price variance		
	Standard price x actual usage (RM 7 x 19,000)		133,000
	Actual price x actual usage		<u>129,200</u>
			3,800 F
(iv)	Labour rate variance		
	Actual hours x actual rate		145,160
	Actual hours x standard rate (38,200 x RM 4)		<u>152,800</u>
			7,640 F
(v)	Labour efficiency variance		
	Actual hours x standard rate		152,800
	Standard hours x standard rate (19,000 x 2 x RM 4)		<u>152,000</u>
			800 A
(vi)	Fixed production overhead expenditure variance		
	Actual		83,900
	Budget (20,000 x RM 4)		<u>80,000</u>
			3,900 A
(vii)	Fixed production overhead capacity variance		
	Budgeted hours x standard rate (20,000 x 2 x RM 2)		80,000
	Actual hours x standard rate (38,200 x RM 2)		<u>76,400</u>
			3,600 F
(viii)	Fixed production overhead efficiency variance		
	Actual hours x standard rate		76,400
	Standard hours x standard rate (19,000 x 2 x RM 2)		<u>76,000</u>
			400 A

QUESTION 5

A company is considering a marketing campaign to run for five years for one of two products. The choice will be between product A and B.

The campaign will involve the payment of RM200,000 to an advertising agency at the start of the campaign; no other payment will be made to the agency. There is a limited advertising budget so only one product can be advertised.

Product A has a contribution to sales ratio of 40%, and product B 33 $\frac{1}{3}$ %. These are not expected to change over the life of the campaign.

There are no fixed costs specific to either product.

The agency has forecast the following increases in sales resulting from the campaign:

(RM000)	A	B
Year 1	87.5	660
Year 2	200	30
Year 3	225	30
Year 4	187.5	12
Year 5	50	9

The company's cost of capital is 10% per annum

Discount factors	10%	20%
Year 1	0.909	0.833
Year 2	0.826	0.694
Year 3	0.751	0.579
Year 4	0.683	0.482
Year 5	0.621	0.402

REQUIRED

- (a) Calculate the Net Present Value of each product's marketing campaign (at the company's cost of capital). (8 marks)
- (b) Calculate the approximate Internal Rate of Return of each campaign using only the discount factors provided. (6 marks)
- (c) Recommend, with reasons, which campaign should be undertaken. (2 marks)
- (d) Explain why, when both campaigns have the same initial cost and the same life cycle, there should be differences in the ranking of the Net Present Values and Internal Rates of Return. (4 marks)

(Total 20 marks)

MODEL ANSWER TO QUESTION 5

(a)

	RM000	A	B
Cash in flows Year 1		35	220
		2 80	10
		3 90	10
		4 75	4
		5 20	3

Net present value 10%					
(RM000)	A	B	Factor	A	B
Year 0	(200)	(200)	1	(200)	(200)
1	35	220	0.909	31.81	199.98
2	80	10	0.826	66.08	8.26
3	90	10	0.751	67.59	7.51
4	75	4	0.683	51.23	2.73
5	20	3	0.621	<u>12.42</u>	<u>1.86</u>
			NPV	+29.13	+ 20.34

(b)

Net Present Value 20%					
(RM000)	A	B	Factor	A	B
Year 0	(200)	(200)	1	(200)	(200)
1	35	220	0.833	29.15	183.26
2	80	10	0.694	55.52	6.94
3	90	10	0.579	52.11	5.79
4	75	4	0.482	36.15	1.92
5	20	3	0.402	<u>8.04</u>	<u>1.21</u>
				(19.03)	(0.88)

Internal Rate of Return:

$$10 + 10 \frac{\text{A}}{(\text{A} - \text{NPV})} = \text{IRR}$$

$$10 + 10 \frac{29.13}{(48.16)} = 16.04\% \quad 10 + 10 \frac{20.34}{(21.22)} = 19.59\%$$

- (c) Assuming that it is the company's objective to maximise the NPV of its future cash flows, campaign A should be undertaken. Both have returns above the cost of capital; A is the greater.
- (d) The campaigns have different Net Present Values and Internal Rates of Return, because of the timing and the amounts of the cash inflows. A is fairly evenly spread but B, although significantly lower in amount, has the majority of inflow in the first year, causing the higher IRR. If liquidity is important to the company possibly B should be further investigated.

QUESTION 6

A company jointly produces three products A, B and C in a single process. There is wastage in the process of 10% of input weight and the products emerge in the ratio: A 5 : B 3 : C 2.

For a typical month the following figures are available:

Direct material input	80,000 kg at RM1.9 per kg
Direct labour	3,000 hours at RM6 per hour
Variable production overhead absorption	3,000 direct labour hours at RM3 per hour

Fixed production overhead absorption is 50% of direct labour cost.

Wastage is sold for scrap at RM1 per kg this being credited to the process account.

There is no opening or closing work-in-progress or finished stock.

The products sell for	A RM15 per kg
	B RM12 per kg
	C RM10 per kg

REQUIRED

(a) Calculate the total gross profit for each of A, B and C, using each of the following methods to apportion the joint processing costs:

- (i) Weight of output
- (ii) Sales value of output

(12 marks)

(b) B can be converted by further processing into Y, if financially worthwhile. The selling price of Y would be RM15 per kg. The further processing would cost RM1 per kg input. There would be a loss in the further processing of 10% of material input. This would have no value.

State with supporting figures whether product B should be further processed.

(5 marks)

(c) In the context of process costing define:

- (i) normal loss
- (ii) abnormal loss.

State how each would be dealt with in the equivalent unit calculation.

(3 marks)

(Total 20 marks)

MODEL ANSWER TO QUESTION 6

(a)

Costs		RM
Direct material	80,000 kg x RM1.9	152,000
Direct labour	3,000 hours x RM6	18,000
Variable production overhead	3,000 hours x RM3	9,000
Fixed production overhead	50% x RM18,000	<u>9,000</u>
		188,000
Less scrap	8,000 kg x RM1	<u>8,000</u>
		180,000

Weight

Workings: $\frac{\text{RM}180,000}{72,000 \text{ kg}} = \text{RM}2.5 \text{ per kg}$

Cost apportionment

	kg		RM
A	36,000	x 2.5 =	90,000
B	21,600	x 2.5 =	54,000
C	<u>14,400</u>	x 2.5 =	<u>36,000</u>
	72,000		180,000

Sales Value

	kg		sales value RM
A	36,000	x RM15	540,000
B	21,600	x 12	259,200
C	<u>14,400</u>	x 10	<u>144,000</u>
	72,000		943,200

Workings $\frac{\text{RM}180,000}{\text{RM}943,200} = 0.19084 \text{ per RM sales}$

Cost Apportionment		RM
A	540,000 x 0.19084 =	103,053
B	259,200 x 0.19084 =	49,466
C	<u>144,000 x 0.19084 =</u>	<u>27,481</u>
	943,200	180,000

i)	RM	A	B	C
Sales		540,000	259,200	144,000
Costs		<u>90,000</u>	<u>54,000</u>	<u>36,000</u>
Gross profit		450,000	205,200	108,000

ii)	RM	A	B	C
Sales		540,000	259,200	144,000
Costs		<u>103,053</u>	<u>49,466</u>	<u>27,481</u>
Gross profit		436,947	209,734	116,519

MODEL ANSWER TO QUESTION 6 CONTINUED

(b) Output

$$21,600 \text{ kg of B} \times 90\% = 19,440 \text{ kg of Y} \times \text{RM15 per kg} = \text{RM291,600}$$

Y	RM
New sales	291,600
Loss of sales	<u>259,200</u>
Increase in sales	32,400
Further costs	<u>21,600</u>
Incremental profit/loss	10,800

Further processing of Product B should be undertaken as Y is incrementally profitable.

(c)

(i) A normal loss is an unavoidable loss arising from the nature of the process, and/or the physical properties of the input material.

The normal loss should be excluded from the equivalent unit calculation.

(ii) An abnormal loss is a loss above the level deemed to be the normal loss rate for the process. These cannot be foreseen and are due to such factors as defects in materials and plant breakdown.

The abnormal loss should be included in the equivalent unit calculation.