

Certified Accounting Technician Examination
Advanced Level

Planning, Control and Performance Management

Tuesday 3 June 2008

Time allowed

Reading and planning: 15 minutes

Writing: 3 hours

ALL FOUR questions are compulsory and MUST be attempted.

Do NOT open this paper until instructed by the supervisor.

During reading and planning time only the question paper may be annotated. You must NOT write in your answer booklet until instructed by the supervisor.

This question paper must not be removed from the examination hall.

The Association of Chartered Certified Accountants

Paper T7

The ACCA logo consists of the letters 'ACCA' in a bold, white, sans-serif font, centered within a solid black square.

ALL FOUR questions are compulsory and MUST be attempted

1 Ethan uses a system of standard marginal costing to control the costs and revenues of its only product, the Lundegaard. It was budgeted to manufacture and sell 300,000 units of the Lundegaard in the year ended 31 May 2008. Flexed budgets for the manufacture and sale of 100,000, 300,000 and 500,000 units of the Lundegaard are given below, together with some explanatory notes.

Flexed Budgets for the year ended 31 May 2008.

Sales and production (units)	100,000	300,000	500,000
Direct material (kg)	50,000	150,000	250,000
Direct labour hours	20,000	60,000	100,000
Machine hours	12,500	37,500	62,500
	\$	\$	\$
Sales revenue	1,500,000	4,500,000	7,500,000
Direct materials	60,000	180,000	300,000
Direct labour	165,000	495,000	825,000
Overhead	1,425,000	2,175,000	2,925,000
Profit/(loss)	(150,000)	1,650,000	3,450,000

Notes

1. Ethan carries no finished goods or raw materials inventory.
2. Direct material is a variable cost.
3. Direct labour is a variable cost.
4. Overhead is a semi variable cost. Its variable element varies with MACHINE hours.
5. Overhead is absorbed on the basis of MACHINE hours.

Required:

(a) Use the high-low technique to calculate:

- (i) Variable overhead cost per unit;**
- (ii) Fixed overhead cost per annum.** (4 marks)

(b) Prepare a DETAILED standard marginal cost card for the Lundegaard, based upon the above budgets. The cost card should show standard marginal contribution per unit. (5 marks)

(c) Calculate the contributions/sales ratio and the break-even point in sales revenue for Lundegaards. (3 marks)

(d) Actual performance for the year ended 31 May 2008 is given below.

Sales and production (units)	250,000
Direct material (kg)	125,000
Direct labour hours	45,000
Machine hours	30,000
	\$
Sales revenue	4,000,000
Direct materials	160,000
Direct labour	420,000
Variable overhead	924,000
Fixed overhead	1,110,000
Profit	1,386,000

Required:

Calculate the following variances for the manufacture and sale of Lundegaard for the year ended 31 May 2008:

- (i) Sales volume contribution variance;
- (ii) Sales price variance;
- (iii) Direct materials price variance;
- (iv) Direct materials usage variance;
- (v) Direct labour rate variance;
- (vi) Direct labour efficiency variance;
- (vii) Variable overhead rate variance;
- (viii) Variable overhead efficiency variance; and
- (ix) Fixed overhead expenditure variance.

(18 marks)

- (e) Draft a short memorandum to the sales director of Ethan which explains the meaning of the sales volume and sales price variances and the possible interrelationships between the two variances. Use your answers from part (d) to illustrate your explanation.

(10 marks)

(40 marks)

2 Your company, an electronics retailer, has arranged a conference for its 12 regional managers who are responsible for the profitability of its shops. The managers have little understanding of management accounting. The conference has been arranged because of two recent problems in the business.

1. The company's recently introduced budgeting system has not proved popular with regional managers, many of whom feel it is a waste of their time.
2. Due to the large number of products offered by manufacturers and the shortage of display space in its shops, the company has recently experienced difficulties in deciding which products it should sell.

Typical of this problem is the choice currently facing the company over which MP3 player to sell. Details of three alternative models are given below.

Model	A	B	C
Sales price per unit	\$130	\$180	\$210
Variable cost per unit	\$60	\$100	\$120
Display space per unit	140 cm ³	120 cm ³	160 cm ³

Your chief executive has asked you to prepare a brief presentation to the conference to improve financial awareness. Your company always attempts to maximise profits.

Required:

- (a) **On the basis of contribution per unit of the limiting factor, recommend which of the three MP3 players the company should sell.** (4 marks)
- (b) **Prepare notes, suitable for distribution to conference delegates, which explain the following:**
- (i) **the benefits of operating a budgeting system;** (8 marks)
 - (ii) **variable cost;** (1 mark)
 - (iii) **fixed cost;** (1 mark)
 - (iv) **contribution;** (2 marks)
 - (v) **limiting factors; and** (2 marks)
 - (vi) **the importance of making decisions based upon contribution per unit of the limiting factor.** (2 marks)

(20 marks)

- 3** Showalter produces plates, which it sells in boxes, to the hotel industry. The company has sufficient work to operate at full capacity for July 2008. Thereafter, it has one further order for 80,000 boxes. After that no further orders are expected until December when it is hoped that demand will improve. The order for 80,000 boxes represents one month's operation at full production capacity.

Showalter is considering two alternative production plans:

EITHER

- (i) complete the order for 80,000 boxes by operating at full capacity in August and closing the factory for September, October and November.

OR

- (ii) complete the order for 80,000 boxes by operating at 25% of full capacity for each of the four months of August, September, October and November.

The following information is available:

- Direct material cost is a constant \$7 per box.
- Direct labour is hired on a daily basis from an employment agency. Total direct labour cost **per month** at various activity levels are budgeted as follows:

% of full production capacity	0%	25%	100%
Total direct labour cost per month	\$0	\$250,000	\$850,000

- The behaviour of the cost of power is represented by the equations below, where:

y = total cost of power per month in \$
and x = production per month in boxes.

For production of 30,000 boxes or more per month:

$$y = 60,000 + 5x.$$

If production falls below 30,000 boxes per month then:

$$y = 40,000 + 6x.$$

- Overhead costs, other than power, are forecast as follows:

Overhead costs per month at various activity levels			
% of full production capacity	0%	25%	100%
	\$	\$	\$
Indirect labour	10,000	20,000	35,000
Plant and machinery depreciation	8,000	25,000	95,000

Required:

- (a) For each of the two alternative production plans being considered, prepare detailed budgets showing the prime cost and total production cost for the period August to November 2008 inclusive. Use your answer to recommend which alternative plan Showalter should adopt.

Note: you are not required to produce monthly budgets. (12 marks)

- (b) Suggest four factors, other than the total production cost you have calculated above, that Showalter might consider before deciding upon its favoured alternative. (8 marks)

(20 marks)

- 4 Brainerd is a passenger airline. In 2007 it was criticised in the press for the poor quality of the service that it offered to passengers, particularly with regard to flight punctuality and the courtesy of its staff. In 2008 it spent \$220m on new aeroplanes and \$10m on staff training in an attempt to improve its performance. Summarised financial statements are given below.

Summarised income statement for the year ended 31 May

	2007 \$m	2008 \$m
Revenue	1,800	1,850
Operating profit	180	175
Financing costs	(32)	(47)
Tax expense	(44)	(35)
Profit for the period	104	93

Summarised statement of financial position as at 31 May

	\$m	2007 \$m	\$m	2008 \$m
Non-current assets (net)		1,200		1,400
Current assets				
Inventory		53		90
Receivables		22		25
Cash		64		32
		1,339		1,547
Equity and reserves		585		615
Long-term liabilities				
8% Debenture 2009	650		650	
Bank loan	20	670	160	810
Current liabilities		84		122
Total equity and liabilities		1,339		1,547

Required:

- (a) Calculate the following ratios for Brainerd for the years ending 31 May 2007 and 2008, clearly defining the ratio you are calculating and showing the figures used in your calculations:
- Return on capital employed based upon closing capital employed;
 - Operating margin (return on sales);
 - Asset turnover;
 - Current ratio; and
 - Capital gearing ratio.
- (10 marks)
- (b) Explain the meaning of ANY THREE of the above ratios and suggest one possible cause, apparent from the question, of changes in performances revealed by each of your chosen ratios.
- (6 marks)
- (c) Give TWO reasons why it would be important for Brainerd to use non-financial measures in assessing its performance.
- (4 marks)

(20 marks)

End of Question Paper