

Certified Accounting Technician Examination  
Advanced Level

# Planning, Control and Performance Management

Tuesday 8 December 2009

**Time allowed**

Reading and planning: 15 minutes

Writing: 3 hours

This paper is divided into two sections:

Section A – ALL 10 questions are compulsory and MUST be attempted

Section B – 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.

**Section A – ALL TEN questions are compulsory and MUST be attempted**

Please use the Candidate Registration Sheet provided to indicate your chosen answer to each multiple choice question. Each question within this section is worth two marks.

**1 Which of the following describes target costing?**

- A** A method of costing that sets a target cost by subtracting a desired profit margin from a competitive market price.
- B** A method of costing that sets a target price by adding a desired profit margin to actual cost.
- C** A method of costing that targets selected business departments and aims to minimise their costs.
- D** A method of costing whose target is to reduce unit cost without impairing value to the customer.

**2** A division earns an annual operating profit of \$200,000 and has a return on investment of 20% per annum.

**What is its residual income at an imputed interest rate of 15% per annum?**

- A** \$10,000
- B** \$30,000
- C** \$50,000
- D** \$66,666

**3** A company uses a spreadsheet package to produce budgets for its long established product. An extract from the spreadsheet is shown below. It is company policy to always maintain finished goods inventory at a level equal to 30% of next month's forecast sales.

	A	B	C	D
1				
2				
3		January	February	March
4	Production budget			
5	Sales (units)	5,000	6,000	8,000
6	Production (units)			

**Which of the following is a correct formula for cell C6?**

- A** =5000-6000\*0.3+5000\*0.3
- B** =1.3\*C5-D5\*0.3
- C** =C5+C5\*0.3-0.7\*D5
- D** =C5+(D5-C5)\*0.3

**4** A company uses an absorption costing system. It has a variable cost of \$5 per unit and absorbs fixed production overhead at \$3 per unit. In a period when 1,800 units of product were sold and 2,000 units were produced, it recorded an operating profit of \$3,600.

**What would its operating profit have been if it had used a marginal costing system?**

- A** \$2,600
- B** \$3,000
- C** \$4,200
- D** \$4,600

5 A company recorded the following prices and usage of materials over the last two periods.

	Period 1		Period 2	
	usage kg	price per kg \$	usage kg	price per kg \$
Material 1	200	12	210	15
Material 2	10	20	16	21

Period 1 is the base period with an index value of 100.

**What is the value of a Laspeyre price index (to the nearest whole number) of the business's material costs for period 2?**

- A 71
- B 121
- C 123
- D 142

6 The performance of a publicly funded hospital is monitored using measures based upon the 'three Es'. The most important performance measure is considered to be the achievement of hospital targets for the successful treatment of patients.

**Which of the three Es best describes this above measure?**

- A Economy
- B Effectiveness
- C Efficiency
- D Externality

7 A product has the following costs per unit.

	\$
Direct material	4.00
Direct labour	3.00
Direct expenses	1.50
Variable overhead	5.00
Fixed overhead	6.00

**What is the prime cost per unit of the product?**

- A \$4.00
- B \$7.00
- C \$8.50
- D \$13.50

8 **What would be the usual order of budget preparation for a manufacturing company, whose principal budget factor is sales demand?**

- A Production budget, sales budget, purchases budget.
- B Production budget, purchases budget, sales budget.
- C Sales budget, production budget, purchases budget.
- D Sales budget, purchases budget, production budget.

9 The following statements relate to the participation of junior management in the budget setting process:

- (i) It speeds up the budget setting process.
- (ii) It increases their commitment to budgets
- (iii) It incorporates their knowledge into budgets.
- (iv) It improves their morale and motivation.

**Which of the statements are true?**

- A** (i), (ii) and (iii)
- B** (i), (ii) and (iv)
- C** (ii), (iii) and (iv)
- D** (ii) and (iii) only

10 A company prices its product by using a mark up of 80% on variable production cost. Fixed production overhead is absorbed at 50% of variable production cost and the product has a price of \$15 per unit.

**What is the product's full production cost per unit?**

- A** \$4.17
- B** \$4.50
- C** \$6.00
- D** \$12.50

**(20 marks)**

**Section B – ALL FOUR questions are compulsory and MUST be attempted**

1 Adams Co manufactures one product whose output level varies from month to month. No inventory is held. Budgets for its minimum and maximum monthly output levels are given below, together with actual figures for November 2009.

	Cost Classification	Budgeted minimum	Budgeted maximum	Actual
Output		20,000 units	40,000 units	35,000 units
		\$	\$	\$
Sales revenue		400,000	800,000	735,000
Less:				
Direct materials	variable cost	240,000	480,000	430,000
Direct labour	variable cost	50,000	100,000	80,000
Indirect labour	semi-variable cost	15,000	25,000	31,000
Indirect materials	fixed cost	6,000	6,000	6,500
Profit		<u>89,000</u>	<u>189,000</u>	<u>187,500</u>

**Required:**

- (a) Prepare a flexed budget for an output level of 35,000 units. (10 marks)
- (b) Calculate revenue, cost and profit variances for November 2009 using the actual figures given and the flexed budget you have prepared. (3 marks)
- (c) Explain the meaning of the terms fixed budget and flexible budget and the importance of basing variance calculations on flexible budgeting principles. (7 marks)

**(20 marks)**

- 2 Vin Co operates a public bus service in a large city. Recently its bus service has been criticised for its poor level of efficiency. The managers of Vin Co have decided to undertake a benchmarking exercise to assess the efficiency of the bus service and have collected the following information.

**Bus Operators – Industry average statistics for the year ended 31 December 2008**

Return on capital employed	12%
Return on sales	8%
Asset turnover	1.5 times
Average maximum capacity per bus	55 seats
Average bus occupancy (% of maximum capacity)	70% of capacity
Average bus km travelled per litre of fuel	5.25 km/litre
Average fuel consumption per passenger kilometre*	0.005 litres per passenger km
Average number of fatalities per million passenger kilometres*	0.035 fatalities per million passenger kilometres

\*A passenger kilometre equals one kilometre travelled by one passenger.

The management accountant of Vin Co has collected the following information for the year ending 31 December 2008.

**Vin Co operating data for the year ended 31 December 2008**

Capital employed	\$4,000,000
Operating profit	\$600,000
Sales revenue	\$3,600,000
Number of buses in operation	40 buses
Total number of passenger seats available	1,920 seats
Total number of passenger kilometres travelled	39,000,000 passenger kilometres
Total bus kilometres travelled	3,250,000 kilometres
Fatalities	1
Total fuel consumed	764,705 litres

**Required:**

- (a) Calculate the following ratios and other statistics for Vin Co for the year ended 31 December 2008.

- (i) Return on capital employed;
- (ii) Return on sales;
- (iii) Asset turnover;
- (iv) Average maximum capacity per bus;
- (v) Average bus occupancy as a percentage of maximum capacity;
- (vi) Average bus km travelled per litre of fuel;
- (vii) Average fuel consumption in litres per passenger kilometre;
- (viii) Average number of fatalities per million passenger kilometres. (10 marks)

- (b) Give two reasons apparent from your analysis why Vin Co's fuel consumption per passenger kilometre is higher than that of the industry average. (2 marks)

- (c) 'Benchmarking involves the establishment, through data gathering, of targets and comparators from which an organisation's relative level of performance can be measured. By the adoption of the best practices identified, performance may be improved.'

**Explain the following types of benchmarking**

- (i) Internal benchmarking;
- (ii) Functional benchmarking;
- (iii) Competitive benchmarking;
- (iv) Strategic benchmarking. (8 marks)

**(20 marks)**

3 A standard cost card for product Lee is given below

		\$ per unit
Direct materials	2kg at \$10 per kg	20
Direct labour	4 hours at \$12 per hour	48
Total		<u>68</u>

In the most recent period 2,000 units were produced using 4,200 kg of material, costing \$41,000. Direct labour was paid for 10,000 hours and cost \$130,000.

**Required:**

**(a) Calculate the following variances for product Lee for the most recent period:**

- (i) Direct materials price;**
- (ii) Direct materials usage;**
- (iii) Direct labour rate;**
- (iv) Direct labour efficiency.** (10 marks)

**(b)** It was subsequently discovered that of the 10,000 labour hours paid, 2,200 hours were idle due to the late delivery of material.

**Required:**

**Using this new information:**

- (i) Calculate revised direct labour efficiency and idle time variances;** (5 marks)
- (ii) Explain the meaning of the idle time variance;** (2 marks)
- (iii) Suggest two actions the company could take to eliminate idle time variances.** (3 marks)

**(20 marks)**

- 4 Britt Co is reviewing the budget for one of its products. There is no opening inventory of finished goods but the company wishes to build up a closing inventory of 1,000 units by the end of the year. The company prepares budgets on a marginal costing basis. The budgeted income statement for the coming year is given below.

**Budgeted income statement for the year ending 31 December 2010.**

	\$000	\$000
Sales (5,000 units at \$2,000 per unit)		10,000
Less:		
Opening inventory of finished goods	nil	
Variable production costs (6,000 units produced):		
Direct labour 120,000 hours at \$12 per hour	1,440	
Direct material 60,000 kg at \$80 per kg	4,800	
Closing inventory of finished goods (1,000 units)	(1,040)	
Variable cost of sales		<u>5,200</u>
Contribution		4,800
Less:		
Fixed overheads		<u>3,000</u>
Profit		<u><u>1,800</u></u>

Some of Britt Co's managers believe the company should adopt an activity based costing (ABC) system and value finished goods inventory at full production cost. This would involve valuing finished goods at their variable cost plus an element of fixed overhead. Fixed production overhead would be charged to units of finished goods by use of the following cost driver rates

Cost driver	Cost driver rate	Driver activity per unit of finished goods
Drilling	\$150 per drill operation	2 drill operations per unit
Parts administration	\$50 per part used	4 parts used per unit

**Required:**

- (a) (i) Calculate the full production cost of one unit of finished goods using the budgeted variable costs and the ABC cost driver information given above; (6 marks)
- (ii) Use the ABC full production cost to value the budgeted closing inventory for the year ending 31 December 2010. (1 mark)
- (b) Prepare a budgeted income statement for the year ended 31 December 2010 using the revised inventory valuation. (3 marks)
- (c) Explain the cause of any differences between the budgeted marginal costing profit and the budgeted activity based costing profit. (4 marks)
- (Note: you are not required to prepare a reconciliation of the two profit figures)
- (d) Explain three benefits of using activity based costing, other than its effect on profit measurement. (6 marks)

**(20 marks)**

**End of Question Paper**