CIPFA

MANAGEMENT ACCOUNTING

Certificate stage examination

7 December 2006

From 10.00am to 1.00pm
plus ten minutes reading time from 9.50am to 10.00am

Instructions to candidates

*Answer **five** questions:*
All three** compulsory questions from **Section A
***Two** of the three questions from **Section B**.*

All questions each carry a total of 20 marks

All workings should be shown. Where calculations are required using formulae, calculators may be used but steps in the workings must be shown. Calculations with no evidence of this (for example, using the scientific functions of calculators) will receive no credit. Programmable calculators are not permitted in the examination room.

Graph paper and cash analysis paper are available from the invigilator, where applicable.

Where a question asks for a specific format or style, such as a letter, report or layout of accounts, marks will be awarded for presentation and written communication.

AT THE HEART OF YOUR CAREER

SECTION A - (Answer all three questions in this section)

1

Aztec Ltd, a manufacturing company, has become increasingly more automated in recent years. Due to a number of advancements made, it has been possible to replace some labour with computer-controlled processes.

The products made by the company vary in terms of their complexity. Currently, the production overheads of the plant are all absorbed based on direct labour hours.

You conducted a review of the system used to attribute overheads to products. This concentrated on one area in the company. Your initial findings have revealed that the following are the most significant activities that are carried out in the production facility:

1. Receiving and checking deliveries from raw material suppliers into stores
2. Setting up production runs
3. Inspections of finished products prior to packing
4. Packing and dispatch of final products to customers

The production overheads recorded for quarter 2 are as follows:

	£000
Production operation expenses	380
Maintenance	80
Salaries of technical operatives	275
Storeman's wages	120
Packing staff salaries	125
	980

The salaries of the technical operatives are apportioned between maintenance expenses (45%), production run set ups (30%) and inspections of finished goods (25%).

Production operation expenses and maintenance are both apportioned between receiving and checking deliveries (15%), production run set ups (50%) and packing and dispatch (35%).

During quarter 2:

- 8,000 direct labour hours were worked (paid at £12.50 per hour).
- 2,550 production runs were set up.
- 1,440 inspections were carried out.
- 9,600 orders were sent out to customers.
- 2,940 deliveries were received from raw material suppliers.

In quarter 2, three products, X, Y and Z were made. The following information is available:

	X	Y	Z
Labour hours worked	15	160	75
Direct materials cost	£1,650	£850	£2,960
Raw material deliveries	17	26	40
Production runs	18	24	30
Inspection	20	15	30
Orders sent out	40	60	55
Units produced	510	9,800	3,600

- **Requirement for question 1**

(a) Calculate the unit cost of products X, Y and Z using the current costing methodology. *3*

(b) Calculate the unit cost of products X, Y and Z based on an activity-based costing methodology. *10*

(c) Draft a brief memorandum to the Board of Aztec Ltd that outlines the steps required to set up an ABC system. Indicate the main advantages and disadvantages that should be considered before implementation on a company-wide scale. Compare and contrast an ABC system with an absorption costing system. *7*

(20)

2

The Wacky Watch Company makes inexpensive novelty watches. The company predominately sells in bulk to retail establishments that specialise in accessory fashion goods. In addition, there is a small shop located adjacent to the factory premises from which they also make a small amount of sales. The company prepares budgetary information at the start of each three month period and you, as Management Accountant, have been provided with some information, as follows, in order to assist in this task:

Balance sheet extract as at 30 November 2006

Current assets:

	£
Stock - Raw materials	62,500
- Finished goods	45,750
Debtors	76,000
Cash in hand at shop	2,000
	186,250

Current liabilities:

Bank	4,400
Trade creditors	24,000
	28,400
Net current assets	157,850

Additional information:

- The cost of raw materials for each watch is £6.25. This is expected to rise at the beginning of February 2007 by 4%.
- Each watch takes 6 minutes to make. The hourly rate of pay for the staff is £8.00.
- Fixed production overheads are £9,500 per month. This includes depreciation on machinery of £1,500.
- At 30 November 2006 raw material stock was valued at current cost and the company had 3,000 finished watches in stock ready for resale.
- Stocks of completed watches are planned to increase by 300 watches each month. As the closing stocks of raw materials held are considered to be quite high, they will decrease by 5% in December and January. They are planned to remain constant throughout February.
- Sales to the retail trade are estimated to be 24,000 watches in December, 26,000 in January and 30,000 in February. The shop is expected to sell 1,000 watches each month. Each watch sold to the retail trade is priced at £7.40. Sales from the shop are sold for the higher price of £7.80.
- Sales department costs are £3,300 per month. This includes monthly general fixed overheads apportioned from central services of £450.
- The monthly costs of running the shop are £2,400 including £200 depreciation on equipment.
- For budgeting purposes, it can be assumed that 40% of retail trade customers pay 1 month after the date of sale and 60% pay 2 months later.
- Debtors at 30 November 2006 are expected to pay as follows:

  December £50,000
  January £26,000

- Raw materials will be paid for 1 month after purchase. All other costs are paid for in the month incurred.
- Sales from the on site shop are all for cash.
- Administration overheads are £1,500 per month, rising by 2% in January.
- Overdraft interest is charged at monthly rates of 1% of the overdrawn balance at the previous month. Credit balances attract an interest rate of 0.5% of the balance at the end of the previous month.
- An additional item of plant will be purchased in January costing £6,625.

Some consideration has been given at Board level to the possibility of increasing the selling price of the watches sold to the retail trade, to the same level charged to customers of the on site shop, with effect from December 2006.

- **Requirement for question 2**

(a) Prepare the cash flow forecast for the three month period December to February assuming there are no changes made to the current selling prices. *15*

(b) Evaluate the effect of increasing the selling price of the watches sold to the retail trade, to that charged to customers in the on site shop. Include a calculation of the impact of the change on:

- the closing cash balance
- the closing debtors balance

at the end of February, assuming that debtor patterns of payment remain the same. *5*

(20)

3

The South Banks Primary Health Care Trust provides a range of health services to local residents. One service, managed as an independent responsibility centre, is the Equipment Loan Service. The service provides medical equipment, on loan, to local residents for as long as they require. The service is responsible for the supply, delivery, installation and maintenance of the equipment.

Upon receipt of a 'service requisition' the equipment loan team must respond within a target time period. All of the jobs performed are documented and logged onto the performance monitoring system. This system compares the actual costs of each period against the budget, as well as recording the number of requisitions completed by the team.

The Equipment Loan Service's costs are monitored centrally by the Primary Care Trust. The budget is based upon an agreed number of completed service requisitions in each period. This is agreed at the start of the year based upon a forecasting exercise. Due to funding shortages, the Equipment Loan Service is kept under constant review and staff are employed predominantly on temporary contracts. The Equipment Loan Service Manager is not happy with the current way that costs are reported. He believes that the reports present an unfair picture and that this may have an adverse effect on any decisions made, regarding the viability of renewal of staff contracts.

A report that compares budget to actual is sent to central headquarters on a quarterly basis. The report for quarter 2 is shown below:

Equipment Loan Service
Quarterly performance report
Quarter 2

	Budget	**Actual**	**Variance**
Number of service requisitions	2,600	3,150	550
Expenditure:			
	£	£	£
Centre Manager	8,100	9,200	1,100
Team supervisor	6,000	6,000	-
Technical operatives	18,488	18,660	172
Drivers	11,093	19,640	8,547
Equipment cleaning officers	7,395	12,880	5,485
Consumables – equipment	13,025	18,810	5,785
Repairs and maintenance	11,550	15,920	4,370
Cleaning products	1,560	1,760	200
Diesel and vehicle costs	7,250	8,741	1,491
Telephone expenses	546	660	114
Stationery	3,276	4,256	980
Heating and lighting	1,750	1,790	40
Premises rental costs	2,050	2,700	650
Total Expenditure	92,083	121,017	28,934

The following set of assumptions was used in the preparation of the original budget:

- The centre manager and the team supervisor are paid an annual salary.
- Four full time technical operatives each cost £16,100 per annum. On top of this they are paid a bonus costing £1.10 for each requisition actually completed within the specified time period.
- In quarter 2, it was budgeted that 90% of the requisitions would be completed in the specified time period. The actual number of requisitions completed in the specified time period was 80%.
- Vehicles and diesel costs are semi-variable. The total costs for the last 2 quarters were as follows:

	Number of requisitions	Total cost
		£
Quarter 4	2,720	7,430
Quarter 1	3,400	8,450

- The costs of repairs and maintenance are also semi-variable. This is based on a fixed cost of £7,200 per year for maintenance contracts. The remainder of the budget varies in relation to the number of requisitions completed.
- Heating, lighting and premises are fixed costs.
- The costs of stationery, telephones and cleaning products vary in relation to the number of requisitions completed.
- The cost of consumables varies according to the type of requisition. For the purposes of the performance evaluation system, 4 levels of unit cost have been identified. These are:

	£
Level 1	3.00
Level 2	4.50
Level 3	5.00
Level 4	7.50

  For budgeting purposes the split between all four levels was assumed to be equal based on past analysis. In quarter 2, the analysis has revealed that the split was actually level 1-20%, level 2-15%, level 3-35% and level 4-30%. The stores only hold a very small amount of stock above that budgeted for and some items can be difficult to obtain quickly.
- The annual cost of the equipment cleaning officers and the drivers is £14,500 per full time employee. There are five full time drivers and three full time cleaners. For efficiency levels of 90% or above, they receive a bonus of 2% of their pay.
- Some staff have appealed against the grades awarded to them as a result of the ‘Agenda for Change’ pay review. The Primary Care Trust has not taken these into consideration when setting the budget, although, if successful, these would be paid at the end of the second quarter.

- **Requirement for question 3**

You are to draft a report to the Primary Care Trust financial accountant that:

(a) Explains why the present format of the monitoring statement may not represent a true picture of the Loan Service's quarter 2 performance. *1*

(b) Presents the information for the quarter in a way that may prove more useful. *12*

(c) Comments on the performance of the Equipment Loan Service based on your revised statement. *3*

(d) Explains the main principles upon which your revised statement has been prepared, referring specifically to cost behaviour. *2*

(e) Outlines the benefits of commitment accounting. *2*

(20)

SECTION B (Answer two questions in this section)

4

You are the Technical Accountant at a Digital Media Company. The company has two production divisions. Division X manufactures blank DVD discs. These are then passed to Division Y for the transfer of music and film data. The DVDs are then sold to the customers.

A system of standard costing is used in both of the departments. Division X is highly labour-intensive and uses labour hours as a basis on which to absorb overheads. The budgeted number of DVD discs to be produced is 600 DVDs per machine hour. Each standard machine hour requires 6 standard labour hours.

The standard costs for Division X, and the data for the week ending 30 November 2006 are as follows:

Standard cost per machine hour – Division X

		£
Blank DVD discs	600 x £0.15 each	90.00
Direct labour	6 hrs x £6.25	37.50
Fixed overheads		150.00
Standard cost of making 600 discs per Machine hour		277.50

Additional information:

Actual costs of blank DVDs issued to division Y	£15,589
Actual price paid for each blank DVD	£0.17
Actual number of DVD discs passing inspection	72,000
Budgeted labour hours: Division X	660
Actual labour hours: Division X	735
Actual labour cost: Division X	£5,439
Budgeted total factory overheads	£24,750
Budgeted total factory labour hours	990
Actual total factory fixed costs	£25,875

Budgeted and actual fixed overheads are apportioned between the two divisions on the basis of budgeted labour hours.

- **Requirement for question 4**

(a) By calculating appropriate cost variances, produce a statement that reconciles standard cost of production to actual cost of production for the month of November 2006 for Division X. *11*

(b) For each 100 DVDs produced, on average it is accepted that it will be necessary to scrap 6 discs at the inspection stage because they are faulty. Based on this assumption, subdivide the materials usage variance into that part which is due to the expected loss and that due to other reasons. *3*

(c) Outline the key features of three different types of standard that can be used in standard costing. *6*

(20)

5

You are a newly appointed Trainee Accountant in a small housing association. Recently, the association has been successful in its attempt to secure additional funding from the national lottery and as a result, has been able to substantially increase the size of its Finance Department.

The Director of Finance knows that you are currently studying the CIPFA accounting qualification and has decided to involve you in some research that will inform the future organisation and focus of the department. She has asked you to provide her with some information for a meeting that she has to attend.

- **Requirement for question 5**

Prepare a briefing note for the Director of Finance that covers the following areas:

(a) The key differences between management accounts and financial accounts. *4*

(b) An explanation of the terms "data and information" and "a management information system". *1*

(c) The difference between quantitative and qualitative information. *1*

(d) An explanation of strategic, tactical and operational information. *6*

(e) The main qualities of good information. *8*

(20)

6 Truer Textiles manufacture and retail a range of sealers. The company makes three types of waterproof sealer specifically for finishing and sealing block paving. These products are coded the J150, the K620 and the T550. All three products are sold in 7 litre tins and their retail prices are £70.00, £80.00 and £90.00 respectively. The J150 and the K620 are big sellers and the company can be sure to sell all that it decides to produce. The T550 however, has a maximum demand of 500 litres per week. In order to make all of the products, the same four raw materials are required in varying quantities. These materials and the quantities required for each product are as follows:

		Material (litres)		
Product	W	X	Y	Z
J150	2.8	0.0	2.1	2.1
K620	2.8	1.4	2.1	0.7
T550	0.0	2.8	1.4	2.8

The materials are made specifically for the company by a small business that is only able to supply up to a certain quantity per week. The availability of each material is as follows:

W	1,400 litres
X	840 litres
Y	1,750 litres
Z	1,050 litres

The cost per litre for each material is as follows:

W	£7.50
X	£12.50
Y	£8.00
Z	£10.00

Requirement for question 6

(a) Formulate a linear programming model that could be used to solve the weekly production levels for each of the three products J150, K620 and the T550. *5*

(b) Identify the technique you would use to solve this scenario and highlight its key features. *4*

(c) In the context of short-term decision making, explain the following terms:

- Sunk cost
- Opportunity cost
- Relevant cost
- Contribution *4*

(d) Explain the difference in the treatment of general fixed overheads and directly attributable fixed overheads in relevant costing. *2*

(e) Explain any potential problems when using the principles of relevant costing. *5*

(20)