

INFORMATION MANAGEMENT AND CONTROL

Professional 1 examination 10 June 1999

From 2.00 pm to 5.00 pm,
plus ten minutes reading time from 1.50 pm to 2.00 pm.

Instructions to candidates

Answer **five** questions in total: **two** from Section A, and **three** from Section B. The marks available for each question are shown in italics in the right-hand margin.

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 examinations room.

Formula sheets, statistical tables, graph paper and cash analysis paper are available from the invigilator, where applicable.

SECTION A (Answer two questions)**1**

The acquisition of a new computer system is normally achieved through one of two routes: the purchase of an 'off the shelf' package or the writing of a bespoke system. Your Director of Finance has decided that there is a need for a new organisation-wide accounting system, and has asked you to prepare a summary of the tasks that should be undertaken to decide whether to buy a package or write one in-house and, if the 'package' route is selected, the selection criteria that should be considered.

- **Requirement for question 1**

Your answers should be in the form of a briefing note to your Director of Finance.

(a) Identify the stages that need to be undertaken before a decision on whether to buy a 'package' system or commission a bespoke system should be taken. Describe each stage, and list the issues that each stage seeks to resolve.

10

(b) Outline the software evaluation criteria that would be applied if it is decided to investigate the acquisition of a 'package' solution. Explain the issues that each criterion addresses.

10

(20)

2

Over the last few years there has been a steady growth in the acquisition of Executive Information Systems (EIS) designed to give managers an early indication of trends in the areas for which they have responsibility. Appropriately used, they can form a valuable additional tool for the control process. However, the systems have to be used appropriately; like all tools, they should be a servant and not a master.

The information obtained from an EIS is often used in a feedforward system. To make the most of an often expensive investment, it is essential that users understand both the theory and practice of control systems.

To maximise the benefits from her recent introduction of an EIS, your Manager has asked you to prepare a set of notes explaining the theory of control systems and their applications in practice, so that she can brief budget holders.

- **Requirement for question 2**

(a) Identify the objectives of financial and management control systems. 8

(b) Describe and explain a typical feedforward system, referring to the difference between, and the benefits over, a similar feedback system. 12

Illustrate your answer with an organisational feedforward loop system diagram, showing the role of an EIS. The labels should include practical examples of the features that you include in your diagram.

(20)

3

Your Director of Finance has asked you to give an induction day training talk to new members of the Finance Department.

The experience of the attendees is mixed, but the aim of your talk should be to explain how systems theory can be used to understand complex, integrated accounting information systems.

- **Requirement for question 3**

Prepare a set of overhead slides to accompany your talk, which should begin with a general introduction to systems theory and then continue by clearly identifying the concepts of systems theory, relating specifically to an accounting information system.

(20)

SECTION B (Answer three questions)**4**

The Reprographics Section of Lanka College of Further Education operates on a business unit basis and has the financial objective to break even. The revised and original budgets prepared on an outturn basis for the 1998 - 99 financial year are as follows:-

**Lanka College of Further Education - Revised and Original Budgets for
1 August 1998 to 31 July 1999**

Expenditure	Revised Budget	Original Budget	Variance
	£	£	£
Salaries - Technical	65,820	64,527	(1,293)
Salaries - Administration	30,650	29,957	(693)
Premises - Repairs	7,850	7,500	(350)
Premises - Asset Rental	5,600	5,600	-
Transport - Travel Expenses	620	620	-
Supplies & Services			
Stationery	284,600	280,000	(4,600)
Telephone	6,852	6,000	(852)
Employees Liability Insurance	200	200	-
Miscellaneous	276	150	(126)
Agency & Contracted Services			
Special Print Runs	8,000	7,500	(500)
Central Support - Accountancy	3,000	3,000	-
Central Support - Audit	1,000	1,000	-
Central Support - Legal	500	500	-
Capital Finance - Lease Charges	18,000	18,000	-
Total Expenditure	432,968	424,554	(8,414)
Income			
Printing Receipts (Internal)	302,600	301,000	1,600
Special Jobs (Internal)	107,800	105,000	2,800
Student Printing Receipts	3,000	2,800	200
Special Jobs (External)	20,000	18,000	2,000
Total Income	433,400	426,800	6,600
Surplus/(Deficit)	432	2,246	(1,814)

Further information is as follows:

The existing establishment of technical staff is as follows:

	Salary as at 1 April 1999
	£
Senior Technician	14,500
Junior Technician x 2	11,800
Photographer	12,000
Reprographics Assistant	9,400

A 2% pay increase is forecast from 1 April 2000.

The establishment of administrative staff is as follows:

	Salary as at 1 September 1998
	£
Reprographics Manager	16,900
Receptionist/Administrator	10,300

A 2.5% pay increase is forecast from 1 September 1999.

N.B. All of the technical and administrative posts are currently filled. On-costs are payable in the form of 10% National Insurance and 5% pension contribution.

The repairs budget for 1998-99 included £5,000 non-recurring expenditure. It is anticipated that £2,000 of urgent maintenance in floor strengthening will be required in 1999-2000. The remainder of the repairs and maintenance expenditure is expected to be constant. Inflation is estimated to be 1.5% across the period for these items. This should be applied to the original budgeted expenditure.

Asset rental relates to the space which the Reprographics Section occupies on the campus. The charge for 1999-2000 is £30 per square metre. This includes electricity, rates etc. The section occupies 200 sqm.

Travelling expenses are incurred when technicians deliver jobs to external clients, and, occasionally, by the photographer. There is one mileage rate for the college which will be £0.45 per mile in 1999 - 2000. It is expected that 1,500 miles will be covered during the year.

Stationery requirements are dependent on the level and type of work undertaken. The college's intake of students is on average increasing by 2% per annum and this is felt to be the main cost driver for photocopying in the academic departments. It is estimated that 80% of the stationery used is in relation to academic work, the balance being

administrative demand. Stationery cost is anticipated to rise by an average of 3% during 1999-2000 which should be applied to the revised budget.

Telephone, employee liability insurance and miscellaneous expenditure are expected to increase by the forecast inflation rate of 2% on 1998-99 original budget levels. No growth is anticipated on these expenditure heads.

The Reprographics Section occasionally has to subcontract some work of a specialised nature. However, the reprographics manager intends to lease two new machines with a capital value of £20,000 which he anticipates will reduce the level of subcontracting required in 1999-2000 by 25%. The lease charge for these machines is £100 per £1,000 of capital value.

As the printing market is highly competitive at present, no inflationary increase is anticipated on the printing agency and leasing expenditure. Therefore, these should be budgeted for on the basis of the revised budget.

Central support costs are recharged to academic departments and business units on the basis of a fixed price 3 year service level agreement. 1999-2000 will be the second year of the existing agreement and the agreed rate of increase is 2.5%.

Internal printing is charged to clients on a per copy basis dependent on the copy size.

An analysis of 1998 - 99 data to the end of May 1999 has revealed the following:

		Charge per copy
A3 Copies	1,050,000	£0.04
A4 Copies	6,500,000	£0.02
A5 Copies	800,000	£0.02

Copying has two 'peaks', August and January when 30% and 20% of the copying is undertaken. The balance of the copying is spread evenly throughout the remaining months.

Volumes for 1999-2000 are expected to rise in line with increased student numbers and a £0.01 increase in all charges for 1999-2000 has been agreed by the college management group.

Internal and external jobs of a special nature include laminating, photography and business card production. No change in volume is anticipated. It is felt that in order to remain competitive, charges for these jobs should only be increased by 1%. This should be budgeted for on the basis of the revised budget.

The college principal has stated that, where possible, direct charges to students should not be increased by more than the general rate of inflation (2%). These calculations should be made on the basis of the revised budget.

- **Requirement for question 4**

Prepare the estimated outturn budget for the Reprographics Business Unit of Lanka College of Further Education for 1999-2000.

(20)

5

Capital expenditure by central government, the NHS and local government currently runs at tens of billions of pounds. In light of this, answer the following questions which have been raised at the Heads of Department Forum in your organisation.

- **Requirement for question 5**

- (a) What are the main characteristics of capital budgets and why is it important for organisations to manage their capital expenditure effectively? 4
 - (b) Provide a description and explanation of the whole process of developing and monitoring a capital programme. 6
 - (c) What limiting factors exist in relation to capital expenditure? You should illustrate your response with examples from your own organisation. 8
 - (d) Identify any recent developments which you feel may influence or affect aspects of your above responses. 2
- (20)

6

The aim of a feasibility study will normally be to carry out a preliminary investigation which should help to determine whether a project should proceed any further and, if so, how it should proceed. Public sector organisations will often carry out a feasibility study prior to making a fuller investigation in order to avoid the costs of a full blown, but abortive, appraisal.

- **Requirement for question 6**

- (a) What are the key features of a feasibility study? 6

 - (b) What would you expect to find in a feasibility report? 6

 - (c) Your organisation is considering outsourcing its payroll function across the organisation. Produce an outline of the terms of reference for a feasibility study, citing the areas to be investigated. This part of the question must relate to the practical aspects of such a feasibility study and no marks will be awarded for restating the theory covered in parts (a) and (b). 8
- (20)

7

Crook Borough Council DSO has adopted a system of standard costing and variance analysis for its Vehicle Maintenance Business Unit. This approach is used as the basis for budgeting, and a trading account is produced for each major activity within the Business Unit. Information relating to the standard servicing of council operated vans is shown below.

Materials for a standard service

- 3 litres of oil @ £7 per litre
- 4 spark plugs @ £1.50 per unit
- 2 filters @ £3.50 per unit
- 1 gasket set @ £7 per unit

Labour for a standard service

- 3 hours @ £7 per hour

Variable overhead @ £3.55 per hour

Fixed overhead @ £7.45 per hour

Activity for the period from 1 April 1999 to 30 June 1999, is based upon 100 units and the standard trading price of the activity is £95. Over the three months period under consideration, the actual costs and revenues are as shown.

**Crook Borough Council DSO
Trading Account of the Vehicle Maintenance Business Unit for period
1 April 1999 to 30 June 1999**

		£
Income	70 services @ £95	6,650
Materials		
• Oil	s @ £6.90	1,518
• Spark plugs	280 @ £1.45	406
• Filters	120 @ £3.50	420
• Gasket set	60 @ £6.55	393
Labour	250 hours @ £7.10	1,775
Variable Overhead	£3.50 per hour	875
Fixed Overhead	£8.50 per hour	2,125

Total Expenditure	7,512
Surplus/(deficit)	(862)

Activity over the period was 70 services.

A number of issues need to be noted:

- A review of DSO procurement policies has revealed weaknesses in the products used, and it is likely that major changes will be introduced later in the year.
 - No job measurement review has been undertaken since August 1996.
 - 1999/2000 is the first year during which new service level agreements have been in place. This has had the effect of reducing fixed overheads.
 - The demand for the activity has reduced by 20% over the last twelve months, but this has not been taken into account in the standard costings for the period under consideration.
 - A pay rise of 2.5% was awarded to all workers from 1 May 1999.
 - Gasket sets are in short supply due to a collapse of manufacturing in the Far Eastern markets. Replacement products of inferior quality have been available from Eastern Europe and some purchases have been made from May onwards.
- **Requirement for question 7**

You are required to produce a report for the DSO Manager on the position over the three month period from 1 April 1999 to 30 June 1999. In the report you should make appropriate calculations, comment upon the position which is shown, and make recommendations on the future position of the Unit.

(20)