

INFORMATION AND FINANCIAL MANAGEMENT

Professional 1 examination 7 June 2001

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 all five questions. The marks available for each question are shown in italics in the right-hand margin.

All workings must be shown. Where calculations are required using formulae, calculators may be used but steps in the working 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.

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

1

North Kyle Supplies plc is a trading company supplying highway materials to local authorities. The figures below are from its accounts at 31 December 2000.

2000
£ million

Goods purchased	99.9		
Cost of goods sold	99.5		
Sales	157.5		
Closing stock	17.4	Opening stock	17.0
Closing Trade Creditors	16.0	Opening Creditors	15.5
Closing Trade Debtors	29.7	Opening Debtors	28.0

• **Requirement for question 1**

- (a) Use the data above to calculate the following, and explain briefly the meaning of each:
- (i) Inventory (or stock) turnover period 2
 - (ii) Debtor conversion period 2
 - (iii) The operating cycle 2
 - (iv) The financing period (or creditor conversion period) 2
 - (v) The cash conversion cycle (or cash cycle) 2
- (b) A non-executive director of North Kyle Supplies plc has suggested that the organisation should always hold enough cash to meet the payments due over the next month. How would you respond to this suggestion? 5
- (c) Another non-executive director has suggested North Kyle Supplies plc increase its creditor conversion period. What will be the effect of this on the organisation and the ethics and legality of such a move? 5

(20)

2

The University of Cumnock is to develop an information management system for its Corporate Communications Group (CCG). CCG was formed as a merger of three departments: student recruitment, innovation and research office, and external relations. Previously, each of these departments was relatively small and relied heavily on paper-based systems and significant secretarial and clerical support. The University operates a wide-range of systems including: a general ledger, student records, library catalogue and a personnel database.

The University operates in an environment of declining per capita funding, increasing competition, and an increased need for accountability. There is, therefore, a requirement to create efficiency savings within support services. The information management system is seen as key to improving service levels and more efficient operation within the new CCG.

You have recently been appointed to the University's Finance Group. As a personal development exercise, the Chief Accountant has asked you to consider how the information management system might be developed. Specifically, she has asked you to consider the following:

- **Requirement for question 2**

- (a) What are the three main methods of acquiring an information system? Which is the most appropriate method in this instance and why? 5
- (b) Identify the potential benefits the University might hope to achieve through its investment in the information management system for CCG. Illustrate your answer with examples. 8
- (c) How can these benefits be quantified? Discuss the degree to which it is possible to give these benefits a monetary value. 7
- (d) What are likely to be the finance department's main concerns with regard to the design and development of the system? How might these concerns be dealt with? 5

(25)

3

Carlton District Council is developing a series of open events whereby school and college students are invited to attend a number of information sessions. These events are designed to be both educational and to demonstrate the value and integrity of council services to those studying within the district.

You have been seconded to the Information Systems Department to provide a presentation on control systems. Your presentation will be largely theoretical, with the Director of Information Systems providing examples of how control systems are implemented.

- **Requirement for question 3**

(a) Write brief notes to assist your presentation on the following aspects of control systems, indicating the relative merits of feedback and feedforward loops, using:

- | | |
|--|---|
| (i) Open loop systems, with an appropriate example; | 3 |
| (ii) Closed loop systems, with an appropriate example; | 4 |
| (iii) The difference between positive and negative feedback. | 5 |

(b) The Director of Information Systems was appointed two years ago from an Information Systems consultancy. Prior to that, the Information Systems Department had performed poorly and provided low levels of customer service. There had been little turnover of staff and each of the section leaders had been in post for at least ten years. The previous Director of Information Systems had been employed within Carlton District Council all his career and took advantage of an early retirement scheme. The performance and perceptions of the Information Systems Department has improved considerably. Morale within the group has also improved. The Council Leader recently said “much of the credit for the improvements in information services should go to the IS Director, she has been like a breath of fresh air to the authority”.

Viewing the Information Systems Department as a system itself, discuss briefly how concepts from systems theory might be used to explain its decline and re-vitalisation.

3

(15)

4

Ayrshire European Partnership (AEP) is a not-for-profit organisation. AEP seeks to maximise the amounts of European funding available for economic development and social purposes in the region. Members are a consortium of colleges, universities, local authorities and business support agencies. To gain funding from the European Commission, applicants need to demonstrate the outputs and impacts their scheme will have. The Chief Executive of AEP is interested in comparing inputs, outputs and impacts across successful projects designed and delivered by its membership. He hopes this will assist members to gain a better perspective on what constitutes good value.

- **Requirement for question 4**

- (a) It has been suggested that benchmarking might help the Chief Executive achieve this purpose. Explain what benchmarking is and its purpose. What are the benefits of such an exercise and the associated problems? How might these problems be addressed? 8
- (b) To improve the service AEP provides to members, it is considering adopting a total quality management approach and adopting an international quality management system standard.
 - (i) Identify a potential quality management assurance standard for AEP. How would an organisation such as AEP achieve certification? 4
 - (ii) Identify **three** advantages and **three** disadvantages of such an approach. 3

(15)

5

A central government department is to implement a new computer-based system for recording its fixed assets. The project must be completed within a specified timescale of 40 days. This constraint is fixed. An overall budget of £25,000 is indicated which must not be exceeded.

Initial project planning indicates the following activities which need to be performed along with their sequencing. An estimate of cost is also available and is shown below.

Activity	Preceding activity	Normal duration (days)	Cost £
A	-	3	1,500
B	A	2	1,000
C	A	12	6,500
D	B	2	1,000
E	D	2	1,200
F	C	11	6,000
G	E	10	6,200
H	FG	8	4,500
I	H	8	4,500

• **Requirement for question 5**

- (a) Prepare a network diagram showing the duration of each activity. Identify the critical path of the project, the duration and its total cost. 10
- (b) What is meant by “crashing the network”? Why might this be desirable and how might it be achieved? 3
- (c) It is possible to buy in consultancy support which would reduce the time necessary for certain activities. The potential charges are shown below:
- Action can be taken to reduce activity F by 3 days at a cost of £1,500
 - Activities B, D and I can be reduced by one or two days each. The cost for B and I is £500 per day, and for D it is £400 per day.
- Assess the original estimates of time and cost against the constraints set for the project. Evaluate the options and identify an appropriate recommendation. 8
- (d) What graphical means of representing the project could have been employed, other than a network analysis? Identify **three** ways in which this technique would have assisted. 4

(25)