

FINANCIAL MANAGEMENT, SYSTEMS AND TECHNIQUES

Certificate stage examination

5 December 2007

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

Instructions to candidates

*There are **seven** questions on this question paper*

*Answer **six** questions in total*

***Two compulsory** questions from **Section A**
Four of the five questions from **Section B***

*The questions in Section A carry, in total, **40** marks
The questions in Section B each carry a total of **15** 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 examinations room.

Formula sheets, statistical tables, 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.

SECTION A (Compulsory - answer both questions)

1

Greenergardens is a charity which provides employment and skills development for people with mild learning disabilities. The organisation produces garden furniture packs from recycled wood. The packs are then sold direct to customers using mail order. Sales are generated from Greenergardens' web site and from newspaper advertising.

The organisation is non profit making. Any surpluses are used for the provision of further educational opportunities for employees. The day to day running of the charity is the responsibility of the General Manager who reports to the Board of Trustees. She is accountable to the trustees for achieving the objectives of the charity and for maintaining a sound financial position.

Sales tend to peak in the spring and summer months due to the nature of the product. A recent audit report has brought to the attention of the Board of Trustees that there have been problems with inventory over the past two years. At various times there have been periods of over stocking of raw material and of finished goods and also periods of shortages. In the latter case these may have led to a loss of sales.

The General Manager has managed raw material purchases using an EOQ model, but unfortunately the original calculations for the model have not been updated for three years. During this time costs have changed and the original calculation may not be appropriate. Raw material units have remained the same at 10,000 per annum, but the cost of ordering has gone up from £20 to £30 and the annual cost of holding one unit of inventory has increased from 15 pence to 20 pence.

The use of the EOQ model has led to a shortage of stock at certain times. This is largely due to the lead time for orders which is one week from making the order to receiving the raw materials. The General Manager favours the holding of 100 units of buffer stock.

One of the Trustees is a senior social worker employed by the local authority. He has asked you, with the permission of your manager, if you could provide some consultancy support. (The local authority already provides some support in producing end of year financial statements and reports for Greenergardens).

Another of the Trustees has experience of manufacturing industry and has been advocating the use of a Just in Time (JIT) approach to stock management.

• **Requirement for question 1**

Produce a report for the Board of Trustees which covers the following:

- (a) A brief explanation of what EOQ can achieve and a critique of EOQ as an appropriate model to use in Greenergardens. 4
- (b) A recalculation of the EOQ which shows clearly how the changes in the cost data would affect the EOQ, the number of orders per year and the overall costs. Calculate the reorder level based upon the information provided above. What impact might the use of this have upon the EOQ method being used? 12
- (c) A response to the suggestion of using JIT which explains what it is, how it might be implemented and how it might assist Greenergardens. 4

(20)

2

Middlewest Community College operates on a split site. One campus is situated to the east of the main town and the other campus is situated to the west. There are two routes between the campuses, one of which goes straight through the town centre and the other which uses the ring road which skirts the town.

Teaching staff must be prepared to teach at either or both campuses and have been allowed time to travel from one campus to the other as necessary. The distance between the sites is either 3 miles using the direct route or 7 miles using the ring road. Staff have been allowed 20 minutes for their travel.

College management is now insisting that 20 minutes is far too generous and has determined that from next academic year the allowance will be only 15 minutes. This will have an impact upon timetabling and the allocation of duties. Management has also said that it would expect all staff to use the direct route in future even though this will reduce the mileage allowances paid to staff.

Over the course of two terms a random sample of journey times has been taken. These have been audited and accepted as being valid by both the management and staff. Samples have been taken for both of the routes. The data collected is shown below.

Sample day	Direct (mins)	Ring road (mins)
1	14	14
2	18	16
3	13	15
4	17	15
5	24	16
6	21	20
7	23	18
8	19	17
9	17	20
10	18	16
11	19	19
12	20	21

The main concerns are whether the new allowance of 15 minutes is reasonable and whether there is a significant difference between the journey times for the two routes.

• **Requirement for question 2**

- (a) Calculate the mean and standard deviation for each of the samples. 6
- (b) Estimate the population mean for the direct route at the 95% level of confidence. 7
- (c) Test the hypothesis at the 5% level that the ring road has a significantly different journey time to the direct route. 7

(20)

SECTION B (Answer four from five questions)

3

Projects have become an important element in the introduction and management of organisational change. It is essential that organisations possess people with project management skills as well as individuals who can contribute effectively to the success of projects. When projects fail it can be extremely damaging to an organisation. Failure may lead to an inability to meet strategic aims and may disrupt operational performance. It may be extremely costly and, in the public sector, there could be an impact upon the organisation's reputation and image, together with possible political implications.

• **Requirement for question 3**

- (a) Identify and describe the key characteristics of a project. 5
- (b) Explain the criteria which can be used to judge whether a project is a success or a failure. What is meant by "soft success criteria"? 5
- (c) Project management techniques such as network analysis may be important but project managers need to develop a much wider range of skills. What skills do project managers need and how do project management techniques fit into the mix? 5

(15)

4

Hawesdale District Council has outsourced most of its car parking, but still retains one park in the small town of Haweshead which is situated 6 miles from Haston, the main centre of population. The car park is in the town but is not particularly convenient for the centre. It is costly to run and the Council is concerned to make sure that it does not become a financial burden. It is open during business hours (9.00 am to 5.00 pm Monday to Friday). The car park provides 50 places.

The Council is reviewing its charging policy and has carried out some market research as well as sounding out key stakeholders within the town's civic and business communities. The Council has also taken into account current charges and charges made by benchmarking partners. The result of this is the production of information on the likely impact of various levels of charge upon car park use. The table below relates hourly charges to the probability of car park usage expressed as a percentage of capacity. Three levels of charge have been considered.

Hourly charge	Percentage usage (averaged over year) %	Probability of achieving percentage
60 pence	35	0.4
	40	0.3
	45	0.3
80 pence	30	0.6
	35	0.2
	40	0.2
£1.00	20	0.5
	30	0.3
	40	0.2

The costs of the car park are all fixed and relate to the maintenance and emptying of collection machines, and business rates. The total cost for the year is estimated to be £24,000.

Assume the car park is open 260 days per year.

• **Requirement for question 4**

- (a) Produce a probability table that estimates the surplus that would be made at each probability level and the expected surplus at each price level. 9
- (b) Identify the probability, at each price level, that a deficit would arise. 3
- (c) Make a recommendation based upon the results of your analysis. What are the weaknesses of using expected values in this way? 3

(15)

5

Most management accounting information is produced for operational and control purposes. It is important that this is recognised so that systems are designed to produce information which meets the needs of managers. The characteristics of information vary depending upon the level of management and the nature of the management decisions being informed.

• **Requirement for question 5**

- (a) Explain what information is, ensuring that you distinguish it clearly from data. 2
- (b) What are the main characteristics of information produced for operational and control purposes? Illustrate this, using one example of management accounting control information. You may refer to the characteristics of decisions taken at this management level. 7
- (c) Identify one example of management accounting information which is produced for other than operational and control purposes. Explain why it is produced and how it differs in characteristics from operational and control information. 6

(15)

6

Cash management is an important element of treasury management. All organisations whether they be in the public or the private sectors, need to manage their cash resources effectively. Two aspects of this are managing the cash pool and determining the most effective ways of collecting cash payments made to the organisation.

- **Requirement for question 6**

- (a) Why do organisations need to manage cash? 4
- (b) What is the cash pool? Define the terms 'payments float' and 'receipts float' and identify the main factors which will impact upon float forecasts. 5
- (c) Identify four common methods whereby payments may be made to your organisation. What factors can you use to make a judgment on the effectiveness of these methods? Explain the factors in relation to one of the methods you have identified. 6

(15)

7

The Robinson family has had substantial farming interests for many generations. Moving with the times they diversified in the 1990s into the production and sale of organic produce, opening up a number of farm shops as well as selling at farmers' markets, stately homes and in selected retail outlets.

They produced their first web site in 1997, mainly as a means of gaining publicity. They then linked it with a mail order service for more remote customers, initially in the UK, but then moving into sales overseas. The current system has been developed further to allow for direct sales via the internet.

The responsibility for information systems development has rested with one of the younger family members, Hugh Robinson, a maths graduate with a high level of IT and IS skills. Whilst Hugh was on secondment studying for an MBA, two IT specialists were recruited to cover for him and to continue the development work with which he had been involved. On Hugh's return he assumed the role of marketing director for the business.

Hugh can now see that the current systems are inefficient and not as effective as they might be. He is aware of competitors possessing much better systems which make use of more up to date technology. He wants to introduce a web based system which fully integrates the sales, marketing and inventory systems. An off-the-shelf system, SOPHIA, is available.

Hugh knows that his in-house "team" possess a good level of skill and they have discussed with him the possibility that they could develop the system using a prototyping approach.

• **Requirement for question 7**

- (a) Explain what an off-the-shelf solution is in relation to this scenario and outline the main advantages and disadvantages of taking this approach. 6
- (b) What would be the main stages involved in using prototyping to develop the system required above? 4
- (c) Identify the main factors that should be taken into account in determining the most appropriate approach to systems acquisition for the Robinson business. 5

(15)
