CIPFA

ACCOUNTING FOR DECISION MAKING

Diploma stage examination

3 June 2008

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

Instructions to candidates

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

*Answer **four** questions in total*

One compulsory** question from **Section A
Three** of the four questions from **Section B

*The questions in Section A carry, in total, **40** marks*
*The questions in Section B 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 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.

AT THE HEART OF
YOUR CAREER

SECTION A (Compulsory)

1 Homeotherapeutic Management Services (HMS) limited was set up seven years ago as a small business providing activity based and “whole person” management development for individuals and groups. It has expanded rapidly from an original partnership owned and operated by two brothers, Sam and Tim Sims, and became a limited company four years ago. Sam and Tim are joint managing directors of the company.

The main product is the management development programme which is based upon individuals and groups losing themselves and then finding themselves again through secular retreat based upon a combination of mental, spiritual and physical disciplines.

Despite outward appearances which suggest that the company might have values more closely akin to a “hippy” co-operative HMS pursues business success single-mindedly and is committed to overall performance management and improvement.

A number of objectives have been set for the medium term. They are to:
- Open two new centres over the next five years.
- Double turnover over this period.
- Reduce administrative costs and non core staffing.
- Achieve steady growth in profit and return on investment.
- Develop human resources to create self sufficiency in core staffing requirements.
- Treat staff fairly and at all times respect their dignity as human beings and their rights as employees.
- Sustain the quality of management development programmes to match and surpass the expectations of customers.
- Operate the business in an ethical and environmentally sustainable way.

HMS has decided, in principle, that it will produce and publish a sustainability report for 2007 as part of its annual reporting process.

These objectives have been translated into key targets:
- Annual sales income to grow by 20% per annum.
- Administrative costs (central and local) to reduce by 10% per annum.
- Contribution to be at least 40% of turnover.
- Return on investment of 12% overall and for all centres.

Contribution is defined as sales minus variable costs and the cost of training materials.

HMS now operates nationally and has five centres: in North West England, East Anglia, the Yorkshire Dales, Mid Wales and the Scottish Borders. All the centres make use of standard HMS methodologies and “courses”, but each centre is managed autonomously.

There is an administrative centre, based on the original buildings in the North West of England. Sam and Tim are based there, with a central product development and marketing team, along with accounting and other administrative functions. All training materials are currently published centrally and re-distributed to centres. Internal staff training and development is also carried out at headquarters, where Sam and Tim retain a major role in both the design and the delivery of this function. The aim, however, which reflects the objectives referred to above, is to decentralise HMS and reduce the central core to a bare minimum.

Each centre is currently managed by a local manager who is responsible for:

- Staff recruitment and development.
- Premises.
- Operational cost management.
- Training provision and revenue generation (subject to centrally determined prices).
- Overall centre financial performance.

Managers are unhappy with the current financial system and the management accounting information which it produces. They feel that their accountability is compromised as some of the cost attributable to their centres is allocated from headquarters and is outside of their direct control. Two areas of particular concern are training materials and internal staff training and development. Currently these costs are allocated on the basis of centre turnover from the previous year (or an assumed figure where the centre is new). The North West centre manager is also unhappy that the full value of the centre is attributed to his operation, even though the centre also houses the central administrative headquarters.

Data for the last two years (2006 and 2007) is provided in the Tables below. The centres are coded as follows: NW - North West England, EA - East Anglia, YS - Yorkshire Dales, MW - Mid Wales and SB - Scottish Borders.

Table 1 – Financial data 2006

	Central £	NW £	EA £	YS £	MW £	SB £
Course income		720,000	430,000	540,000	620,000	
Variable costs (excluding course materials)		420,000	260,000	300,000	370,000	
Fixed costs						
Local costs						
Staff		180,000	90,000	120,000	160,000	
Administration		18,000	10,000	8,000	18,000	
Premises		25,000	22,000	30,000	32,000	
Centrally incurred costs*						
Administration and management	80,000	25,000	15,000	20,000	20,000	
Staff training and development	40,000	12,500	7,500	10,000	10,000	
Training materials	120,000	37,500	22,500	30,000	30,000	
Current assets	6,000	6,000	5,000	4,000	4,000	
Long term assets		216,000	150,000	140,000	135,000	
Current liabilities	12,000	15,000	9,000	8,000	12,000	
Shareholder equity	610,000					

*Note: all these costs are re-allocated to the centres

Table 2 – Non financial data 2006

	NW	EA	YS	MW	SB
Customer numbers	6,000	3,200	4,100	4,600	
Satisfaction ratings (%)	95	90	97	92	
Complaints	120	340	6	260	
Refunds	100	200	12	200	
Occupation of premises	75	65	80	80	
Staff turnover (leavers/staff)	nil	66	25	20	

Note: the Scottish Borders (SB) centre opened at the beginning of 2007

Table 3 – Financial data 2007

	Central £	NW £	EA £	YS £	MW £	SB £
Course income		800,000	510,000	580,000	700,000	230,000
Variable costs (excluding course materials)		480,000	290,000	310,000	380,000	110,000
Fixed costs						
Local costs						
Staff		150,000	90,000	140,000	170,000	40,000
Administration		20,000	12,000	9,000	19,000	8,000
Premises		28,000	24,000	32,000	33,000	16,000
Centrally incurred costs						
Administration and management	100,000	28,000	17,000	20,000	24,000	11,000
Staff training and development	50,000	14,000	8,500	10,000	12,000	5,500
Training materials	150,000	42,000	25,500	30,000	36,000	16,500
Current assets	8,000	6,000	5,000	6,000	5,000	3,000
Long term assets		216,000	150,000	140,000	135,000	120,000
Current liabilities	18,000	12,000	11,000	9,000	8,000	6,000
Long term debt	120,000					
Shareholder equity	610,000					

SB allocation of centrally incurred costs is based upon notional figure of 300,000 turnover.
Interest on long term debt has been excluded from the operating costs.

Table 4 – Non financial data 2007

	NW	EA	YS	MW	SB
Customer numbers	6,200	3,800	4,000	4,700	1,200
Satisfaction ratings (%)	92%	94%	97%	93%	86%
Complaints	160	100	20	200	80
Refunds	80	180	20	150	80
Occupation of premises	70	70	80	80	60
Staff turnover	25	nil	25	nil	nil

You have recently taken up the post of management accountant for HMS. Sam Sims has asked you to produce a report on performance management within the company. He is interested in the performance being achieved and in the comparisons that can be made between the centres. He is aware that there has been some criticism and unrest emanating from the local managers surrounding the methodology being used and also in relation to some of the data which is being used for performance measurement. Whilst he would expect you to produce a report on the 2007 performance based upon the approaches currently in place, he thinks that you are in a good position as a well qualified newcomer to take a view with a new pair of eyes and unencumbered by personal relationships or knowledge of previous comments that may have been made.

- **Requirement for question 1**

Prepare a report for discussion with Sam and Tim on HMS' performance in 2007. In the report you should:

(a) Using total asset values calculate ROI, the modified ROI using the Du Pont method and Residual Income for each of the centres for 2007. Determine how well each centre has achieved its financial targets. Discuss the position shown in your calculations. Appraise the methodology being used and assess the value of the data being used. Suggest changes which could be made to improve the current situation. *26*

(b) Include three suitable non-financial performance indicators based on 2007 data for each of the centres. Comment upon each of these and explain their significance in relation to the company's objectives. *6*

Tim has asked you about sustainability reporting. In a separate briefing provided for him you should:

(c) Explain the purpose of a sustainability report. Outline the steps that would need to be taken in developing a report and provide two examples of performance indicators that could be used. *8*

(40)

SECTION B (Answer three from four questions)

2

The Civic Amenities, Leisure and Culture (CALC) department of Witmouth City Council has introduced a number of cardholder membership and subscription based schemes during the last two decades. The main schemes are LibraryCard, SportsCard, CALCard and YouthCard. The SportsCard which gives free entry to council sports facilities, and the CALCard which provides discounted entry to sports, leisure and cultural facilities are available on a subscription basis. The LibraryCard and the YouthCard are available free of charge. Some individuals are members of more than one of these schemes and are required to hold several of the cards.

Each of the card schemes was introduced separately and at different times and is supported by independent systems and databases. The council has decided that an important part of their strategy for the development of CALC services is to improve accessibility and usage of the services and that one way of achieving this would be to rationalise and improve the marketing of those services to the population of the city. The existing schemes are seen as a barrier to achieving this aim.

Two options are under consideration at the present time. The first option would involve retaining the current card schemes, but making changes to them which would allow for integration of the IT platforms and the sharing of data between schemes. This would meet the basic requirements of the council and could be implemented relatively quickly with minimum disruption as far as present cardholders are concerned. It would not allow for the full range of development of the marketing function which many supporters of the change envisage.

The other option is the introduction of one card which would replace all existing cards and which would provide access and entry to services at a variety of levels, beginning with free entry to libraries up to and including a subscription level which would gain entry to all the services being offered by the council. This card would be supported by one IT system and all cardholders would be on one database. As cards would be provided for all inhabitants in the city area, including children and young people through family cards, this would give direct marketing access to a much wider catchment than at the present time.

An outline business case presenting the general costs and benefits has already been accepted and the next stage is a consideration of the financial implications in the form of an investment appraisal. Both of the options are to be considered at this stage.

The first option will be developed in-house and would involve development costs of £65,000. No additional hardware will be required. The new system will require software for which a licence fee of £5,000 per year is payable for five years. It is estimated that there would be an increase in marketing costs, including magazines and leaflets, postages, and card production. This would be £18,000 in the first year and after that it would be £10,000 per annum. There will also be additional costs due to system administration, which would be £10,000 each year. The cash benefits of the project are more difficult to estimate as they rely upon an assumption on the increased usage of facilities resulting from a wider take up and use of the card schemes. A figure of £45,000 per annum has been determined. This takes into account the additional income from subscriptions and other charges and assumes that no additional costs would be incurred as actual service usage is currently well below capacity.

The second option is much more ambitious and would involve initial purchase of new hardware (£35,000) in addition to £70,000 of development costs. Software licences would run for five years and would cost £8,000 per year. The scheme would be introduced in two stages, largely for geographical and service based reasons. In year one 80% of the population would be involved, with the remaining 20% being included in the second year. Marketing costs will be larger in the first two years as the scheme is being introduced. The estimate is that £40,000 will be spent in each of these years and after that the expenditure will fall to £10,000 per annum. Savings are expected which will go some way to offsetting the increased costs. These will be effected through a reduction in administration due the use of only one card, and also through a reduction in the number of cards being issued. It is expected that this would give rise to £20,000 worth of savings each year. The final benefits would be due to the increased use of services. This is less predictable, but a figure of £45,000 (the same as for the other option) is expected to be achieved. As this option is being phased in it is felt that the whole benefit would not be immediately achievable. It is estimated that the benefit achievable would be 50% in year one and 80% in year two (and the full amount in subsequent years).

Investment appraisals within the Council are carried out in accordance with the council's agreed guidelines. They state that a discount rate of 6% should be used, arguing that this fully takes into account the effects of inflation, risk and the cost of borrowing.

- **Requirement for question 2**

(a) Calculate the Net Present Value (NPV) of the two options under consideration, using the rate of 6% as required by the council. Discuss the choice of 6% as the discount rate. *8*

(b) Explain the basis of the Treasury Test Discount Rate (TDR) and assess how well it deals with:
  i. Risk;
  ii. Inflation. *6*

(c) Determine the effects of re-calculating the NPV of the two options using the present Treasury TDR and discuss the implications of your result. *6*

(20)

Treasury TDR 3.5%

Year	Discount factor
0	1.0000
1	0.9662
2	0.9335
3	0.9019
4	0.8714
5	0.8420
3-42	19.9352
42	0.2358

3

Healthymeals was awarded the contract one year ago to operate the onsite café and restaurant at Riponville Acute Hospital. The hospital is a large, acute facility serving a widespread area covering a mix of rural and urban populations. The catering facility is substantial with an understanding that the provider will offer a range of refreshments and meals for hospital staff, patients (where required) and visitors. The basis of the provision is relatively fast food, priced to be attractive to the range of customers referred to above.

The first year of the contract has been unsuccessful for Healthymeals. The contract terms are that they pay a sum to Riponville to cover premises and facilities management costs. They are responsible for all other costs of running the facility, including the provision of furniture and fittings and kitchen equipment. They have a free hand to promote the facility within the hospital and the location of the hospital, being on the outskirts of a town, guarantees a monopoly position.

Healthymeals has considered pulling out of the contract, but has taken the view that the penalties for doing so would prove to be prohibitive. As an alternative it has engaged with marketing consultants who have provided them with useful information based upon surveys of staff, patients and visitors as well as meetings with senior hospital management.

The main conclusion of their report is that the refreshments (tea, coffee, etc) side of the business is viable (making a contribution of £40,000 per annum), but that Healthymeals is not selling sufficient meals. The two main issues are:

1. Healthymeals is not perceived as providing healthy meals. The menus are such that they are not attractive to people wishing to eat in a hospital environment. The menus are also viewed as being too traditional and not adventurous enough, especially in terms of providing ethnic food. This is important given the core market is staff, many of whom have a non-European background.
2. The meals are felt to be too expensive. The average price of a meal (based upon standardising menus over a period of one month) is £7.20.

Healthymeals' response to this was to propose new menus with a wider range of foods and a shift from traditional to ethnic dishes. They then engaged the consultants to carry out further research based upon the likely responses to reduced pricing levels.

This information is summarised below:

State	Probability	£5.50 per meal Est. no. of meals	£6.00 per meal Est. no. of meals	£6.50 per meal Est. no. of meals
Pessimistic	0.3	210,000	180,000	150,000
Neutral	0.4	235,000	195,000	155,000
Optimistic	0.3	260,000	205,000	160,000

Fixed costs (including the contract fee payable to the hospital) are estimated as being £400,000 per annum. These costs do not include the costs of the consultants or the costs of developing the new menus. Average variable cost of a meal is £4.00.

- **Requirement for question 3**

(a) Calculate the price that Heathymeals should charge based upon the Maximax, Maximin and Minimax regret approaches to risk. *6*

(b) Calculate the Expected Value of each price level and compare this with the approaches used in part (a). Explain what Expected Value means. *7*

(c) Explain what is meant by Perfect Information. Assess the value of Perfect Information in the scenario described above. *4*

(d) The terms 'risk' and 'uncertainty' are often used interchangeably. Explain what each term means and demonstrate the distinction between them, using the Heathymeals scenario. *3*

(20)

4

Building Schools for the Future (BSF) is a central government initiative designed to replace or renew every secondary school in England before 2020. This is to be achieved through a combination of conventional finance and the Private Finance Initiative (PFI).

Eastshire County Council has been included in the current wave of development and is planning to convert and rebuild five existing secondary schools to create two new specialist academies. If the council were to use conventional finance the following information would be relevant:

Design and build costs	£36m
Design and build period	2 years
Land cost	£1.8m (assume no increase in real value over time)
Maintenance and repairs	£50,000 per year (rising in line with inflation)
Facilities management	£180,000 per year (rising in line with inflation)
Net receipts from sale of existing land and buildings	£8m
Estimated life of new buildings	40 years
Design and build payments - timing	Regular stage payments over the two year building period

Eastshire County Council has begun negotiations with a private sector partner with a view to working with a consortium headed by Schoolbuild UK plc.

Schoolbuild would take over the freehold on the existing land and buildings on completion of the whole scheme. They would require a unitary payment of £1.8m payable each year in advance. The contract would run for 20 years after the completion of the schools. The consortium would retain freehold of the new land and buildings at this time and it is probable that a new contract could be negotiated on similar terms for a further 20 years. The unitary payment would be subject to annual increases due to inflation.

A financial comparison between the two procurement approaches based upon calculating the Public Sector Comparator (PSC) would ignore one of the chief benefits claimed for PFI schemes, which is the transfer of risk from the public to the private sectors. It also ignores the natural optimism of managers responsible for initiating and managing projects such as this one.

Research commissioned for the UK Treasury and carried out by Mott MacDonald provides the following figures indicating average optimism bias for traditional procurement:

	Optimism bias %
Works duration	17
Capital expenditure	47
Operational expenditure	41
Benefits shortfall	2

(HM Treasury website, Student Learning Centre)

- **Requirement for question 4**

(a) Explain what is meant by the Public Sector Comparator (PSC). Calculate the PSC for the secondary schools project and present it in a format which will allow for a value for money comparison with the annual consortium unitary payment. *8*

(b) Explain the importance of taking risk into account in the final decision and explain the problems inherent in doing so. *4*

(c) Explain what is meant by Optimism Bias. Use the figures provided to recalculate the PSC and discuss your findings. *8*

(20)

5

Many organisations have attempted to improve their operational and strategic performance through the introduction of new methods of management. Two approaches which have been widely adopted are those involving the concepts of the Lean Enterprise and of Business Excellence.

The difficulty that organisations can often experience is that of knowing exactly what the concepts involve, how they may differ from each other and what they might have to offer for their specific organisation. This is especially true in relation to public sector organisations as these approaches, and others, have been originally developed for use within the private sector.

- **Requirement for question 5**

(a) Explain the concepts of Lean Enterprise and Business Excellence, stating the main elements that make up each of the concepts, and comparing them. *10*

(b) Discuss the management accounting implications of each of the approaches. *4*

(c) Assess the value of each approach to the public sector and demonstrate, through the use of examples, their actual or potential usage. *6*

(20)