

Managing Information for Competitive Advantage

EXAMINER'S REPORT

November 2007



Chartered Institute of Personnel and Development

Professional Development Scheme

Leadership and Management

**Managing Information for
Competitive Advantage**

November 2007

13 November 2007 09:50-12:00 hrs

**Time allowed - Two hours and ten minutes
(including ten minutes' reading time)**

**In Section A answer EITHER question 1 or question 2
AND either question 3 or question 4**

In Section B, answer SEVEN of the ten questions

Please write clearly and legibly.

Questions may be answered in any order.

**Equal marks are allocated to each section of the paper.
Within Section B equal marks are allocated to each question.**

**If a question includes reference to 'your organisation', this may be
interpreted as covering any organisation with which you are familiar.**

**The case study is not based on an actual company. Any similarities
to known organisations are accidental.**

You will fail the examination if:

- **you do not answer seven questions in Section B and/or**
- **you achieve less than 40 per cent in any section.**

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SECTION A

Answer EITHER question 1 OR question 2

AND

EITHER question 3 OR question 4

Note: It is permissible to make assumptions by adding to the case study details given below provided the essence of the case study is neither changed nor undermined in any way by what is added.

1. Case Study

Janet's estate and residential letting agency has expanded rapidly over the last five years. Serving the lucrative and booming South East, she now has three offices in the region. Each one has an administration manager and three supporting staff. Duties of the supporting staff are:

- showing clients the properties both for rental and sale
- carrying out regular visits to ensure that tenants are not causing any damage
- carrying out routine maintenance inspections and liaising with building maintenance companies when required.

The administration manager runs the office which involves:

- directing the supporting staff
- preparing the details of properties available for sale and to let
- keeping track of the sale process and liaising with solicitors
- keeping the records of tenanted properties, the rental agreements and costs of repairs
- receiving and banking rents
- checking on direct debits and standing order payments
- making monthly payments to owners and
- preparing overall income and expenditure statements.

Janet herself keeps in regular touch with the three office managers, trouble shooting when necessary, which in the main involves dealing with solicitors and debt collecting agencies, when evictions and recovery of rentals are necessary. On a routine basis, she deals with staff salaries and keeps tabs on the overall financial position.

As more and more people buy second homes for letting as an alternative to pension plans and first time buyers find it increasingly difficult to find affordable housing, so Janet has found her business expanding beyond her control. This has occurred both in rentals and house sales, where she has established a reputation in the buy to rent market. She

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now realises that the manual systems she set up initially, which have been built on in an 'ad hoc' way, are no longer effective

What she would like is a computerised system which allows her to see what is going on, as she puts it, "at the touch of a button".

She would like potential clients to be able to search the property stock in the offices or remotely. She would also like to feel in control by having control style reports on:

- property sales and progress
- properties available for rent
- rental agreement expiry situation
- occupancy rates
- speed of payment to owners
- repairs
- costs of damage
- arrears of rent and bad payers
- profitability overall and return on investment for owners

Janet has hired you to write a report for her providing some initial ideas on what kind of information systems she needs and how the whole project should be managed. She is expecting the latest approaches and the appropriate use of diagrams in your report

OR

2. "It must be remembered that there is nothing more difficult to plan, more doubtful of success, nor more dangerous to manage than the creation of a new system."
(Machiavelli, 2001)

Discuss the extent to which current approaches and methods can help to overcome the problems inherent in creating and implementing a new information system.

PLEASE TURN OVER

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Answer EITHER question 3 OR question 4

3. Your manager has left the following information on your desk, prepared by your accountants for one of the manufacturing units for the year to 31st March 2007. There is a note asking you to explain why there is a flexed budget and what causes variances of this kind. Draft your response.

Fixed Budget for year to 31st March 2007

Level of Activity	Budget <u>50%</u>	Actual <u>60%</u>
Costs	£	£
Direct materials	100,000	122,000
Direct labour	200,000	236,000
Variable overhead	<u>20,000</u>	<u>28,000</u>
Total variable cost	320,000	386,000
Fixed overhead	<u>80,000</u>	<u>84,000</u>
Total costs	<u>400,000</u>	<u>470,000</u>

Flexed budget operating statement for the year to 31 March 2007

Activity Level	Fixed budget 50%	Flexed budget 60%	Actual costs 60%	Variance Favourable/ adverse
	£	£	£	£
Direct materials	100,000	120,000	122,000	(2,000)
Direct labour	200,000	240,000	236,000	4,000
Variable overhead	<u>20,000</u>	<u>24,000</u>	<u>28,000</u>	<u>(4,000)</u>
Total variable costs	320,000	384,000	386,000	(2,000)
Fixed overhead	<u>80,000</u>	<u>80,000</u>	<u>84,000</u>	<u>(4,000)</u>
Total costs	<u>400,000</u>	<u>464,000</u>	<u>470,000</u>	<u>(6,000)</u>

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OR

4. Your manager has received the following survey of expenses claimed for business trips by company executives, which she requested to help her budget for projected trips in the coming year:

Duration of Trip (days)	Expenses (£)
x	y
9	824
4	504
7	974
3	354
2	268
5	750
6	690
8	1126
4	508
5	498

Correlation coefficient	0.89
Regression formula	$y = 68 + 109.7x$
Coefficient of determination	0.79

She has asked you to explain these results and to advise her on how they might be used reliably.

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SECTION B

Answer SEVEN of the ten questions in this section. To communicate your answers more clearly you may use whatever methods you wish, for example diagrams, flowcharts, bullet points, so long as you provide an explanation of each.

1. 'If only we knew, what we knew.' (Attributed to an executive of Hewlett-Packard). Develop and justify the outline of a talk on knowledge management for a CIPD Students' evening.
2. You are to attend an initial meeting to plan a training course for junior managers in effective decision-making. Jot down your first thoughts about the content and justify your selection.
3. A colleague, who is trying to tackle a complex organisational problem, has asked you to advise him of the advantages of using Soft Systems Methodology for this. What will you say and why?
4. Your manager wants you to set up a routine control to monitor absenteeism and labour turnover. What statistical method will you use to do this and why?
5. You have received an e-mail from a colleague: I've been reading through some of our competitors' company accounts and I'm particularly interested in the ratios they use to analyse them. Please explain how ratios work and what information they provide to give competitive advantage?
6. You have collected data on product sales and staffing levels. You need to set up a simple system to predict staffing requirements from the sales forecasts. What statistical techniques will you use and what are their limitations?
7. Outline the ways in which Information and Communication Technology (ICT) and Information Systems (IS) can contribute to supply chain management. Illustrate your answer with examples from your organisation.
8. You want a member of your staff to prepare a cash budget for a large department. Write an explanatory note on how she is to construct it and what information it is intended to provide.

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9. How can ICT assist decision-making autonomy in your organisation and what benefits will this bring to your organisation?

10. A new project initiative has been proposed, but some of your colleagues consider it to be risky. They have asked you to assess the risk. How will you go about this and what more information would you then have?

END OF EXAMINATION

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Introduction

November 2007		
Grade	Number	Percentage of total (adjusted/rounded up)
Distinction	8	6
Merit	28	21
Pass	57	44
Marginal Fail	15	11
Fail	23	18
Total	131	100

The figures shown are simply calculations based on the number of candidates sitting the examination in November 2007, whether for the first or a subsequent time, and are for interest only. They are not to be confused with the statistics produced by CIPD headquarters, which are based on the performance of candidates sitting the examination for the first time. It is from these figures that the national average pass rates are calculated.

71% of candidates achieved a Pass grade in the examination, but after moderation the pass rate is expected to be of the order of 76%. The mean score for all scripts was 52%, with a standard deviation of 12. This is a very satisfactory result and compares well with those achieved in recent November diets of the both L & M and PDS Core Management module examinations, as shown below.

Year	Scheme	May - initial result	May - expected result after moderation	November - initial result	November - expected result after moderation
2003	PDS	56%	61%	57%	65%
2004	PDS	60%	65%	71%	75%
2005	PDS	61%	65%	65%	72%
2006	L&M	56%	60%	63%	70%
2007	L&M	58%	66%	71%	76%

In order to achieve a pass grade, candidates must answer seven out of the ten questions in Section B of the paper. On this occasion, only four (approximately 3%) did not attempt all seven questions. One candidate made no attempt at any of the questions on the paper, due to illness. These figures are a marked improvement on those of previous diets.

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Section A

Candidates were required to answer either Question 1 (the case study, involving information system design issues) or Question 2 (a discursive question on an information systems topic), and then either Question 3 (a finance question requiring explanation of fixed and flexible budgets and interpretation of variances) or Question 4 (a statistics question requiring interpretation of the results of correlation and regression analysis).

In this diet, there was a preference by candidates (55%) for the discursive question (Question 2) with, unusually, fewer (45%) opting for the case study. For the second question in Section A, more candidates chose the accounting question (Question 3), 59% attempting this compared to 39% for Question 4. Two candidates (2%) did not attempt either questions 3 or 4.

In this section 20% of the answers scored less than 50% and 8% scored less than 40%. Overall the mean score was 52% (standard deviation 13) for Section A, with 72% of candidates achieving a pass grade. This is a general improvement overall on previous diets.

Question 1

This question, attempted by 45% of the candidates, required the analysis of a short case study concerning the information needs of the owner of property sales and letting agency. As information systems consultants, the task set for candidates was to write a report, with appropriate use of systems diagrams, providing some initial ideas on the kind of information systems needed and indicating how the system should be designed and implemented, making reference to the latest approaches. The information systems proposed should fully support the key decisions needed to be made in managing the agency.

A good answer was expected to have the following features.

- It would be in a report format and include supporting diagrams identifying the information needs of the owner of the agency.
- The routine and non-routine decisions to be made by the owner and staff would be derived from an informational needs analysis and this would lead to the identification of systems that could provide the appropriate reports to support these decisions.
- Systems proposed would be based on a generic hierarchy, such as transactional/operational systems (TPS), management information systems (MIS), executive/strategic information systems (EIS) and decision support systems (DSS). Candidates could use this approach to structure their reports. Alternatively, elements of a design or project management methodology, such as Systems Development Life

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Cycle (SDLC), Structured Systems Analysis and Design Methodology (SSADM), somewhat later approaches like Rapid Applications Development (RAD) or a database management system (for example, a relational database), could be used. The emphasis should be very much on the outputs from the proposed systems; that is, the information flows and the control reports.

- Diagrams would be used to show key aspects of the systems proposed, for example, decomposition diagrams, context diagrams, data flow diagrams, document flow diagrams, process diagrams and algorithms. An appropriate level of detail would be chosen for diagrams (for example, level 0 or level 1) to provide a reasonable overview of the systems proposed and avoid overly complex diagrams which would be difficult and time-consuming to draft under examination conditions.
- An outline of the methodology for the design and implementation of this information system, which could be SSADM, but preferably one of the later RAD methods.

In addition, of course, in all their answers candidates must meet the thinking performer and postgraduate criteria, which are encapsulated in the five key competencies highlighted in the BACKUP framework.

This means explicitly demonstrating their understanding of the way in which concepts, theories and frameworks can be used to tackle problems and provide insights on which to base practical actions or recommendations in a business oriented way.

Overall, the quality of the answers was satisfactory with 63% of the candidates achieving a pass grade. Good answers were based on the approaches and concepts mentioned above. Twelve of the candidates (20%) achieved a merit grade and two (3%) distinction grades.

Weaker answers had some of the following unsatisfactory features.

- They failed to use any information systems concepts.
- They did not use or make reference to any information systems design methodology; for example, SSADM or RAD.
- They took an anecdotal approach, repeating much of the case study detail, without relating it to any theoretical framework. Candidates need to focus their answers clearly on the question being asked. There is no time in this examination to include irrelevant material.
- They did not provide any diagrams or included diagrams with insufficient detail, poorly presented, or not following any of the recognised conventions.

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- They attempted to use Soft Systems Methodology (SSM) as the main approach, misunderstanding the purposes of SSM; that is, using it in a situation where the problem is clearly defined.

To summarise, candidates need to make explicit use of systems models, concepts and diagrams in order to produce more coherent and analytical answers. In doing this, they should be able to avoid descriptive, anecdotal reports and the inclusion of irrelevant material and prescriptive platitudes.

The mean score for this question was 52% with a standard deviation of 8.

Question 2

In answering this question, candidates were expected first of all to outline the kind of problems that beset the design and implementation of information systems. There are lots of examples – NHS, DHSS, Inland Revenue, Stock Exchange, London Ambulance Service - that can be cited of applications that have been problematic, both from the standpoint of cost and performance of the system, and that have even had to be abandoned. The root causes of these symptoms need then to be identified; for example, poor systems specification due to inadequate end-user consultation, poor project management, inability to modify software within the time frames, over-ambitious specifications and inadequate testing. Candidates should then review some of the current design methodologies in use and identify those which purport to address the causes, such as those indicated above.

This question was generally well answered with eighteen candidates (25%) achieving merit grades and two candidates (3%) distinction grades. Good answers identified the problem themes and were able to evaluate the extent to which the various methods provided a credible response to these.

Weaker answers were poorly organised and haphazard, lacked logical development and often just described methodologies such as SSADM and SSM, without any 'argument' or trace of rational response to the question requirement.

The mean score for this question was 53%, with a standard deviation of 9 and a pass rate of 74%. This question was attempted by 55% of the candidates.

Question 3

This question was the more popular of the two alternative second questions in this section, with 59% of the candidates opting to answer it.

The main purpose of this very straightforward question was to get candidates to explain the reason for the use of the flexed budget and then to comment on the variances and the possible reasons why they had occurred. .

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Most candidates were able to comment very effectively on the possible reasons for the variances, but quite a number were confused about the use of flexed budgets and did not relate them to changed levels of activity, even though these levels were shown in the table.

The pass rate for this question was 62%. Twenty candidates (26%) were given a merit grade and five (6%) a distinction grade. The mean score was 52%, with a standard deviation of 11

This topic is covered in Chapter 13 of the CIPD recommended text *Managing Financial Information* by David Davies and in the additional recommended reading: *Accounting for Non-Accounting Students* by J.R.Dyson.

Question 4

In this question, candidates were presented with a set of data, showing the level of expenses for various durations of business trip. The correlation coefficient, regression formula and coefficient of determination for these data were given and the candidates were required to explain these statistics; that is, that they indicated the strength of the correlation between the two variables and enabled interpolation and extrapolation to be carried out to predict what kind of level of expenses might be expected for any given length of future business trip. They would then go on to discuss how reliable this information was as a predictor.

This option was chosen by 39% of the candidates. The majority of these answered the question very well and displayed adequate knowledge of correlation and regression and the pitfalls of extrapolation. Twenty four candidates (47%) were awarded merit grades and nine (17%) distinction grades.

The relatively few weak candidates clearly knew very little or nothing about the subject and so often ignored the statistical data given in the question. Although the regression equation was given, some candidates even attempted to reach a conclusion by drawing a scatter graph - a pointless exercise in the circumstances.

This topic and similar examples are covered in Chapter 18 of the latest CIPD edition of R & F Bee's *Managing Information and Statistics*, the essential reading for this module.

The mean score for this question was 56%, with a standard deviation of 13 and a pass rate of 76%.

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Section B

The overall performance in this section was similar to that of Section A, with a mean score of 52% (standard deviation 12). The pass rate, however, was slightly lower at 67%.

Candidates generally seemed to have been quite well prepared for this section. The following performance figures provide some indication of this.

- Only twenty seven candidates (20%) scored less than 50% on three or more questions and fourteen candidates (11%) scored less than 40% on three or more questions.
- Overall, 16% of all Section B questions were given less than 50% and 11%, less than 40%.

Weak candidates often tended to answer questions indirectly and provide descriptive and unfocused answers of insufficient or irrelevant detail, indicating unfamiliarity with important syllabus topics.

In answering questions in this section, candidates should make every attempt to respond convincingly to the demands of the situation described in the question, taking care to make explicit use of relevant concepts or techniques. Sources should be acknowledged with brief referencing.

For thinking performance there should, therefore, be

- a focused and direct response to the situation and an appreciation of its complexity
- concepts used to support the response
- adequate discussion of 'caveats' and limitations of models or theoretical constructs used, demonstrating an understanding of the complexity of organisational life
- reference to research and literature
- use of an organisational context to provide examples of the application of concepts.

Question 1

Candidates were expected to use this theme/quotation as a basis for developing the outline of their talk on knowledge management. They should explore the concept of tacit and explicit knowledge and the conversion process with brief reference to Nonaka and Takeuchi's work and go on to describe how this might be achieved in organizations; for

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example, the Alavi and Leidner model showing the potential role of IT, knowledge communities, Intranet/internet; knowledge continuity management (Beazley et al), expert systems - all of which are outlined in the core text referenced below. They should conclude by discussing the value to the organisation of effective knowledge management and providing an example of good practice.

This question was answered very well - largely I suspect due to the very good coverage given to this topic in Chapter 9 of R & F Bee's *Managing Information and Statistic*, the CIPD recommended text for this module.

Weak answers did not provide enough detail, relying on vague statements about the importance of knowledge/information, and making no reference to the processes or literature.

This question was attempted by 98% of the candidates, of whom 89% achieved a pass grade. The mean score was 60%.

Question 2

For this question, candidates were expected to think in terms of providing a broad view of organisational decision-making, covering both rational and descriptive decision-making models; for example, limited rationality, garbage can, and emergent. Their justification should demonstrate an understanding of concepts such as bounded rationality, logical incrementalism, emergence and the role of intuition. They should also include some discussion on the situational and personal circumstances which are likely to affect the decision process.

There was a varied response from candidates to this question. Some focused very much on decision theory and probability, others thought in terms of financial decision models, such as marginal costing and project appraisal, and yet others on the expected approach mentioned above. All were acceptable, although the financial models were not always described as rational decision-models, with their inherent informational weaknesses. Poor answers generally were lacking in detail and provided no justification for their choice of decision topics.

The mean score was 51%, with a pass rate of 65%. This question was attempted by 85% of the candidates.

This topic is covered in Chapter 1 of the CIPD recommended text *Managing Information and Statistics* by R & F Bee and in Chapter 7 of the additional recommended reading *Global Business Information Technology* by G Elliott.

Question 3

This question was set to test the candidates' understanding of the usefulness of the Soft Systems Methodology (SSM) for problem solving. A good starting point would be to

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identify some of the attributes of 'soft' or unbounded problems such as unclear objectives, limited information, and an unclear view of what the problem really is (that is, the existence of different interpretations of the problem), the inability to 'box' it (that is, separate it from its context due to its wider implications). From here one could explain that SSM encouraged a holistic approach, exploration of different perspectives, involvement of major stakeholders and debate with the problem owners, all of which should help to address the complexity of the unbounded problem. Good answers would also point out that it was, in the main, an approach used for incremental change and that some definition of the problem would need to be followed by a hard systems approach where options could be evaluated.

Answers to this question were quite good in that the majority of candidates were able to identify some of the key strengths of SSM. Weak answers merely described the methodology, often inaccurately.

The mean score was 51% and the pass rate 69%. This question was attempted by 79% of the candidates.

This topic is covered in Chapter 2 of the CIPD recommended text *Managing Information and Statistics* by R & F Bee and in Chapter 5 of the additional recommended reading *Global Business Information Technology* by G Elliott.

Question 4

Candidates were expected, in the main, to nominate Statistical Process Control (SPC) Charts as the method for establishing a routine control to monitor absenteeism and labour turnover. They would point out, by means of an SPC chart, that its main advantage lies in its ability to distinguish between inherent/'natural' variation in a system and 'out of control' variation. In this way it enables managers to manage 'by exception'. Good answers would also mention that it is based on the normal distribution.

However, other approaches based on the application of the control model would also be acceptable. Less acceptable, but still warranting a marginal pass would be answers based on descriptive statistics or graphs.

Many candidates provided well-drafted SPC charts in their answers and provided good explanations for their choice as described above.

A few candidates were completely off-track on this question and for some obscure reason decided that the two items should be correlated. However, since there was a remote possibility of misinterpreting this question, these candidates were given the benefit of the doubt and some marks were given for answers of this kind.

The mean score was 51% and the pass rate 54%. This question was attempted by 50% of the candidates.

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This topic is covered in Chapter 17 of the CIPD recommended text *Managing Information and Statistics* by R & F Bee

Question 5

Questions on ratios are usually answered well by the majority of the candidates and this occasion was no exception, as demonstrated by the high pass rate.

Good answers provided sound explanations of the various categories of ratios and the information they impart to management to help sustain competitive advantage. These answers also dealt well with the limitations and caveats (that is, the need to have this information for a period of several years) and also the importance of establishing benchmarks for the industry sector in which the organisation is located.

Weak answers mentioned only certain ratios and ignored the limitations and competitive advantage aspects, which should have covered the use of benchmarks for identifying high performance profiles and areas where an organisation might improve its competitive performance. Some candidates spent a long time describing the ratios in words, rather than just writing down the 'formulae' and focussing more on the information that these ratios provide.

The mean score was 56% and the pass rate 82%. This question was attempted by 73% of the candidates.

This topic is covered in Chapter 7 of the CIPD recommended text *Managing Financial Information* by David Davies and in the additional recommended reading: *Accounting for Non-Accounting Students* by J.R.Dyson.

Question 6

This was the least popular of the questions in Section B.

Candidates were expected to use correlation and regression or time series analysis here. The limitations of extrapolation in the case of regression and the underlying assumptions of forecasting should be discussed.

Generally, candidates followed the expectations and used either of the above mentioned techniques. Good answers discussed the limitations and difficulties fully and suggested that further information, such as seasonal variations, would be needed.

The mean score was 53% and the pass rate 71%. This question was attempted by 42% of the candidates.

This topic is covered in Chapter 18 of the CIPD recommended text *Managing Information and Statistics* by R & F Bee

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Question 7

Here candidates were expected to explain the impact that ICT has had on supply chain management, focussing in particular on relationships with suppliers, and then go on to deal specifically with the partnership sourcing approach (Dyer & Ouchi/Lytton). Mention should also be made of networking, data sharing, linked CAD/CAM systems and the involvement of suppliers in product development and modification. (Rothwell); that is, the creative process.

There were some good answers to this question, covering partnership sourcing, networking and stocking systems including JIT.

Weaker candidates however, were only able to provide general and somewhat bland observations on the contribution that information systems have made to supply chain management. Here there was no mention of the partnership sourcing concept, which is surprising, since for some well known High Street retailers, such as Marks & Spencer plc, it is the corner stone of their stocking/supply strategy.

Worse still, a few candidates merely mentioned supply chain management in the first line of their answer and then went on to talk about 'other things'.

The mean score for this question was 56% with a pass rate of 83%; it was attempted by 67% of the candidates.

This topic is covered in Chapter 10 of the latest CIPD edition of R & F Bee's *Managing Information and Statistics*.

Question 8

Candidates should explain that the construction takes the form of a columnar chart showing a month by month cash budget; that is, monthly planned income and expenditure with cash surpluses or deficits being transferred to the following month.

They would point out that the cash budget is used to plan and control the cash balances on a day-to-day basis. Money, like the other resources employed in organisations, is costly and should not be allowed to sit around doing nothing. It should be continuously working, and to have too much is as bad as having too little.

The overall measure of a concern's liquidity and of its ability to pay its way is the amount of money it has readily available, which is generally represented by cash-in-hand and cash-at-bank.

Good answers largely followed the above outline. Too many candidates, however, just wrote about budgeting in general and merely gave the cash budget a passing mention in their overall scheme. This was somewhat surprising, as the cash budget is not difficult to understand and construct.

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The mean score for this question was 46% with a pass rate of 55%; it was attempted by 56% of the candidates.

This topic is covered in Chapter 14 of the CIPD recommended text *Managing Financial Information* by David Davies and in the additional recommended reading: *Accounting for Non-Accounting Students* by J.R.Dyson.

Question 9

Candidates should ideally base their answer around Ashby's Law of Requisite Variety and Stafford Beer's Viable Systems Method. In the context of a control system, the significance of this law is that the system undertaking the controlling function needs to be able to match the variety of the environmental disturbances against which it is controlling. This can be accomplished either by amplifying the controlling variety or by reducing (attenuating) the variety of the system being controlled.

Thus, they should argue that for effective control, information systems should allow all parts of the organisation to deal autonomously with the environmental complexity that they face; that is, to provide the variety of information that allows each part to make decisions which match the variety of the environment.

Candidates may not necessarily be familiar with Ashby or Beer, in which case, they could base their discussion on other relevant theory and argument; (for example, complexity theory and adaptation), or on decentralisation/delaying. They should, however, explicitly discuss how information systems might promote autonomy at different levels of the organisation and the effect that this could have on managing the environmental and internal complexity associated with the organisation's activities

Although it was disappointing that no candidates used Ashby or Beer as a basis for their argument, there were some well focused answers which argued for the use of ICT for supporting decision-making at all organisational levels and hence providing the basis for autonomy, decentralization and distribution of power throughout the organisation.

The mean score for this question was 53% with a pass rate of 78%; it was attempted by 76% of the candidates

Question 10

Here candidates should have identified sensitivity analysis, as a device for evaluating the risks associated with a project. A Decision Support System can be set up as a spread sheet and then any variables can be tested on a 'what if' basis, so that the effect of any significant variation can be identified. Knowledge of the probability of any variables assuming exceptional values will enable managers to assess the risks associated with any new product. Candidates should point out that although the technique provides an assessment of the sensitivity of a product or service to changes in

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the key variables, there remains uncertainty as to what values these variables may acquire. So the technique provides information on the impact aspect, but not the probability.

There were many good answers which provided explanations of sensitivity analysis and other acceptable ones which suggested decision trees and maximin, minimax criteria. Weaker candidates thought that project appraisal techniques such as Net Present Value (NPV) could be used to evaluate risk. These were given some consideration as NPV could possibly be a first step in a risk assessment process.

This question was attempted by 63% of the candidates, of whom 70% were awarded a pass grade. The mean score was 54%.

This topic is dealt with in chapter 3 of R & F Bee's *Managing Information and Statistics*, the CIPD recommended text for this module.

Conclusion

The overall results for this examination diet show a pass rate of 71% (possibly 76% or more after moderation). This is a very good result and compares very favourably with past results, both for the November and May diets.

To achieve this kind of success, future candidates must attempt to meet the criteria of the thinking performer and the postgraduate criteria. These are encapsulated in the five key competencies highlighted in the BACKUP framework. This means, in particular, demonstrating explicit understanding of the way in which concepts, theories and frameworks can be used to tackle problems and provide insights on which to base practical actions or recommendations in a business oriented way.

Future candidates must also develop their ability to evaluate critically the models and theories that they apply, as pointed out in the above sections. At this level they must be aware that concepts and theories can be thought of as mental constructs of reality. These constructs may, however, in many circumstances not capture the complexity, or to use Ashby's terminology, the variety of reality, since they are likely to be reductionist to some degree. The realization that concepts and theories do not deal with the whole of the complexity or variety of a problem should lead candidates to question how good a fit the particular theory has with reality and hence what limitations can be inferred; that is, what it does not tell you. Concepts and theories must be thought of as providing insights, but not, except in the most simple of circumstances, total solutions. This is in line with the systems thinking on emergence and complexity.

Familiarity with key developments and thinking in the domain of Information and Communications Systems and Technology and with current design methods, gained through wider reading of literary sources and research, is also expected.

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In Section B, particularly, candidates must answer questions directly, focussing on the specific requirements of the question and making use of relevant concepts and techniques to support and justify their 'argument'. They should also bring in examples from their own organisational contexts to demonstrate their ability to apply the thinking to 'real world' situations. Inclusion of irrelevant descriptive material wastes valuable examination time and is not acceptable for a Pass grade at this level. Candidates should aim for a discursive approach, with an appropriate balance of explanation and critical evaluation.

To ensure that they are prepared to answer seven questions in Section B, with a tight focus on the question requirements, candidates must be knowledgeable about all the syllabus topics and be confident to use the associated vocabulary appropriately. It is essential that evidence of this knowledge is explicit in their answers.

Dave Allen
Examiner