Chartered Institute of Personnel and Development

Professional Development Scheme

Core Management

Managing Information

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 question 1 and either question 2 or 3;
AND SEVEN of the ten questions in Section B.**

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 fail to answer seven questions in Section B and/or**
- **you achieve less than 40 per cent in any section.**

Managing Information

EXAMINER'S REPORT

November 2007

SECTION A

Answer question 1 AND EITHER question 2 or question 3.

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 has been running her estate and residential letting agency in the South East for the past five years. The business has expanded rapidly over this period and she now has three offices in the region. Each office 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 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 she should approach this. You should make appropriate use of diagrams in your report

PLEASE TURN OVER

Managing Information

EXAMINER'S REPORT

November 2007

Answer EITHER Question 2 or Question 3.

2. Your organisation is reviewing its capital budgeting programme. The finance department has just sent the HR manager the following figures on a project proposal that she has put forward, with the note from one of the accountants:

Have just done a run through your project using a couple of approaches. It looks viable. You may want to make further points to support your proposal, before it goes to the board.

Assumed project cost and income:

	£000	£000
Total cost of project		600
Expected net cash flow		
Year		
1	24	
2	60	
3	120	
4	240	
5	360	
6	55	859
Net Return		259

1. Payback method calculation:

	Net cash flow	Cumulative net cash flow
Year	**£000**	**£000**
0	-600	-600
1	24	-576
2	60	-516
3	120	-396
4	240	-156
5	360	204
6	55	259

2. Discounted payback calculation

Year	Net cash flow	Discount factors	Present value at 9%	Cumulative present value
	£000		**£000**	**£000**
0	-600	1	-600	-600
1	24	0.9174	22	-578
2	60	0.8417	51	-527
3	120	0.7722	93	-435
4	240	0.7084	170	-265
5	360	0.6499	234	-31
6	55	0.5963	33	2

Your manager has asked you to interpret the figures and explain the note. Draft your considered response. (You must assume that she has a limited knowledge of financial matters.)

OR

3. What sampling method will you recommend for finding out in a cost-effective way the views of staff of a large retailer on attitudes to working conditions? The staff are located in stores to be found in all the major population centres of the UK and consists of sales assistants, senior sales assistants, supervisors and professionally qualified and graduate staff managers. Give reasons for your recommendations.

And

On finding that some 60% of the sample had a positive view of the working conditions in the organisation, what statistical technique will you use for establishing the reliability of your result and its extension to the whole of the staff?

PLEASE TURN OVER

Managing Information

EXAMINER'S REPORT

November 2007

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. Your Chief Executive Officer wants to review the budgetary planning and control process in your organisation as there seems to be a lot of managerial dissatisfaction with the process. He has asked you to identify the factors you think are critical to the success of this process. In your response, explain your reasoning.

2. A colleague has asked your advice on how to check salary levels between male and female administrators to ensure that they are not subject to any sexual discrimination. Suggest and explain a statistical method for doing this.

3. An e-mail from a colleague reads: 'have just come across the term "confidence limits" in a report …can you briefly explain what this means? Give me some examples of how this concept might be useful and applied in practice.' Outline your response.

4. You have been asked to give a lecture on standard costing to the operations supervisors. Explain the process, discuss the contribution that it makes to effective resource management and identify any inherent problems.

5. In an attempt to convince colleagues of the importance of theory, explain and illustrate what insights the concepts of 'positive and negative feedback loops' and 'emergence' provide for management decision making and problem solving in your organisation.

6. Your local CIPD branch wants you to give a talk to students on how cost information can inform management decision-making. You have decided to focus on marginal costing. In preparing your talk, explain the concept and, with reference to your organisation, give **two** examples of the kinds of decisions where it can be usefully applied.

7. One of your colleagues wants to be briefed on Structured Systems Analysis and Design methodology. Evaluate the methodology and indicate how later methods have addressed its weaknesses.

8.   A study carried out by one of your Human Resources department's graduate trainees has shown a moderate correlation between an employee's consumption of cigarettes and absence from work. How will you advise that these results be interpreted?

9.   A colleague has asked for help in carrying out a sample survey. In particular, she is concerned about sample size. Explain why it is important to calculate sample size and how this is done.

10.   Discuss ways in which Information Technology/Information Systems might enhance the competitiveness of your organisation, making reference to recent research and developments in applications.

END OF EXAMINATION

Managing Information

EXAMINER'S REPORT

November 2007

Introduction

The results for this diet are tabled below:

November 2007		
Grade	**Number**	**Percentage of total** (rounded up)
Distinction	0	0
Merit	2	7
Pass	13	45
Marginal Fail	4	14
Fail	10	34
Total	**29**	**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.

52% of candidates achieved a Pass grade in the examination, but after moderation the pass rate is expected to be of the order of 62%. The mean score for all scripts was 46%, with a standard deviation of 12. This pass rate is almost the same as that achieved in this module for the May diet. The small, residual numbers of candidates now sitting this examination may well account for this lower than normal pass rate.

For comparison purposes, the recent results of the Professional Development Scheme (PDS) examinations in this subject are 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	**PDS**	**62%**	**69%**	**45%**	**59%**
2007	**PDS**	**53%**	**61%**	**52%**	**62%**

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 one candidate did not attempt all seven questions in Section B.

Managing Information

EXAMINER'S REPORT

November 2007

Section A

Candidates were required to answer Question 1 (the case study), and either Question 2 (an accounting question dealing with project appraisal) or Question 3 (a statistics question on sampling and confidence limits). Again in this diet, the accounting question proved more popular, with 69% of the candidates opting for Question 2 and 28% for Question 3. One candidate (3%) attempted neither of these questions.

Overall, the mean score for Section A was 47% (standard deviation 13), with 62% of candidates achieving a Pass grade.

Question 1

This question, attempted by 97% of the candidates; that is, all except 1, involved the analysis of a short case study concerning the information needs of the owner of a 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 design and implementation of the system should be approached. 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 Cycle (SDLC), Structured Systems Analysis and Design Methodology (SSADM), 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 Systems Development Life Cycle (SDLC), but preferably one of the later methods mentioned above.

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.

The learning outcomes sought in this question, were:

- to be able to construct data models for analysis and design of simple information systems

- to understand and explain systems concepts, elementary database concepts and the range and nature of organisational information systems.

Overall, the quality of the answers was satisfactory with 57% of the candidates achieving a pass grade. Good answers were based on the approaches and concepts mentioned above.

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 not time in this examination to include irrelevant material

- They did not provide any diagrams or included diagrams with insufficient detail.

- They attempted to use Soft Systems Methodology (SSM) as the main approach, misunderstanding the purposes of SSM.

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 51% with a standard deviation of 8 and a pass rate of 57%.

Question 2

The greater majority of the candidates (69%) opted to answer this question, which required candidates to explain tables, showing two different methods of project appraisal, and a note from the finance department. In their answer the candidates were expected to explain both approaches. Good answers would include other factors which might need to be taken into account, such as the accuracy of the figures and the influence of other unquantifiable variables; that is, to show that the models may not reflect all the complexity of the situation.

The learning outcomes sought in this question were to calculate expenditure on work programmes and costings.

This question was answered reasonably well by many of the candidates, who were able to explain the simple and discounted payback methods shown in the tables and evaluate them. They also suggested the additional use of cost benefit analysis to deal with the 'soft' variables.

The weak answers tended to:

- include irrelevant material and not focus on the question
- provide superficial or erroneous explanations
- describe rather than evaluate.

The mean score was 53% with a standard deviation of 7 and a sound pass rate of 65%.

This topic is covered in Chapter 16 of the CIPD recommended text *Managing Financial Information* by David Davies.

Question 3

Some 28% of the candidates chose to answer this question. The first part required candidates to argue the case for the use of a particular sampling method, starting perhaps with a brief review of available methods and then justifying their selection of

ones appropriate to these circumstances; for example, multi-stage and stratified sampling. In the second part, the candidates should have shown how the standard error of proportion could be used to calculate the confidence limits.

 Learning outcomes being looked for in this question were:

- to be able to interpret statistical information for management

- to understand and explain basic statistical concepts

The candidates were able to answer the first part of the question quite well and displayed a basic knowledge of sampling methods. However, only one of the eight candidates attempting this question had any idea what the standard error of proportion was and how it provided the information on reliability of the results.

The essential information for this question is covered very simply and clearly and to the necessary level of detail in Chapter 16 of R & F Bee's *Managing Information and Statistics* (the recommended CIPD publication for this module).

The mean score for this question was 37%, with a standard deviation of 19 and a pass rate of 13%.   .

Section B

The overall performance in this section was weaker than that of Section A, with a similar mean score at 45% (standard deviation 11) but a significantly lower pass rate of 38%.

Eighteen candidates (62%) had a total score of less than 50% and of these 9 scored less than 40% in Section B.

42% of the answers to Section B questions scored less than 50% and 20% scored less than 40%.These figures provide some indication of the proportion of candidates who were not adequately prepared for the examination in terms of syllabus coverage.

Weak candidates tended to answer questions indirectly and provided descriptive and unfocussed and superficial answers.

In answering questions in this section, candidates should:

- provide a focused and direct response to the situation and an appreciation of its complexity

- use concepts to support the response/argument and make reference to literature sources

- provide adequate discussion of 'caveats' and limitations of models or theoretical constructs used

- provide a level of detail in their answers, appropriate to the time constraints of the examination.

Question 1

Following a brief outline of the system, using a diagram, candidates were expected to make the following points. The basic control model is very mechanistic in its approach, borrowed as it is from the field of engineering and it ignores the possible behaviour of participants in the process. Since resources in organisations are usually scarce and have to be 'rationed', there are frequently conflicts and compromises over the allocation of resources. The budgetary process in reality, therefore, often involves ongoing and iterative bargaining and balancing, manifesting the overall characteristics of an emergent decision process.

Thus, organisational processes allowing for consultation, participation and negotiation as well as a clear understanding of the control process and use of variances should feature in discussing critical success factors.

There were a number of very good answers to this question, following the themes outlined above. Weaker answers tended to focus mainly on a general description of the budgetary process and the 'hard' system requirements for success. Surprisingly, for CIPD candidates, the weak answers more or less completely ignored the 'soft' variables/behavioural angle. A holistic view of the budgetary process is essential if both 'hard' and 'soft' critical success factors are to be identified.

The mean score for this question was 55% and the pass rate 86%. This question was answered by 97% of the candidates.

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 2

This question was attempted by some 66% of the candidates, but only 32% were able to achieve a pass grade. The main reason for this was lack of knowledge of the appropriate statistical technique. Many attempted to resolve the issue by the simple use of averages

or cumulative frequency distributions or even descriptive statistics. What was required from the candidates here, however, was an explanation via the two tail test of the difference between sample means (two population inference), covering type 1 and type 2 errors and null and alternative hypotheses.

The mean score for this question was 35%.

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

Question 3

This was not a popular question, presumably because of the need to know something about a basic statistical concept and only 7 candidates (24%) attempted it. Of these only one (14%) achieved a pass grade, which accounts for the low mean score of 25%.

Candidates were required to explain confidence limits and to give examples to illustrate the application; for example, from the field of sampling. A diagram could have been used here to help with the explanation.

The technique is fully and clearly covered in Chapter 16 of the CIPD recommended text *Managing Information and Statistics* by R & F Bee.

Question 4

Here a brief description of standard costing was required, with an explanation of the informational outputs; that is, variance analysis. This should then be followed by a critical discussion of its value for management, where some acknowledgement of the limitations, problems and costs of setting up such a system should also be made. For example, costs of maintenance of the standards and synthetic work measurement.
The different levels of standard (for example, ideal, attainable, attainable with effort), and the process of variance analysis, using the control model as a conceptual basis should feature in answers.

This question was well answered by many of the candidates, who were able to explain the standard costing process at an appropriate level of detail. Good answers dealt with the inherent difficulties of running such a system and used the control model diagram as a basis for discussion.

The mean score for this question was 50% and it was answered by 76% of the candidates. The pass rate was 68%.

This topic is covered in Chapter 11 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.

Managing Information

EXAMINER'S REPORT

November 2007

Question 5

This question was set to test understanding and application of some basic features of systems thinking. Candidates were expected to point out the state-maintaining/status quo aspects of negative feedback and the destabilising, vicious/virtuous circle aspects of positive feedback and give examples. The emergent properties of systems (that is, the unpredictability of systems behaviour in terms of unexpected consequences) was also to be explained and the consequences of this for management; for example, strategic decision making as a necessarily emergent process (Mintzberg) in unstable business environments. Overall, answers were to focus on the insights that these concepts provide in understanding the complexity of organisational life and in the analysis and solution of problems.

Most candidates were able to explain negative feedback tolerably well with the aid of the control model diagram, but relatively few provided a clear explanation of positive feedback. Mintzberg's emergent decision making model featured for the most part in answers as an explanation of emergence, rather than as an example of a response to the consequences of the emergent properties of complex adaptive systems (CAS).

The mean score for this question was 45, with a pass rate of 52%. 72% of the candidates attempted it.

The topic is covered in Chapter 4 of the CIPD recommended text *Managing Information and Statistics* by R & F Bee.

Question 6

Some 79% of the candidates attempted this question with a mean score of 45% and a pass rate of 52%.

Candidates were asked to explain the basic idea of marginal costing and cover contribution, break-even, safety limits, making use of the standard diagram to illustrate these terms. Two examples were needed and these could have been, for example, outsourcing decisions, or decisions involving the allocation of   scarce resources (limiting factors).

Many candidates would have improved their answers with the use of a break-even chart - although this was not specifically requested - to help explain the terms. Weaker candidates did not provide the required number of examples nor cover all the terms.

This topic is covered in Chapter 12 of the CIPD recommended tex*t Managing Financial Information* by David Davies and lots of decision-making examples are given in the additional recommended reading: *Accounting for Non-Accounting Students* by J.R.Dyson.

Managing Information

EXAMINER'S REPORT

November 2007

Question 7

In their answers to this question, candidates should first of all have briefly outlined Structured Systems Analysis and Design Methodology (SSADM), preferably with the aid of a diagram or using bullet points. They should then have discussed the strengths, which are to do with the logical data modelling features and weaknesses, which are to do with the rigidity of the 'waterfall' approach and long development times, together with the lack of sufficient end-user involvement.

Candidates could then have briefly discussed the thinking behind the newer approaches (for example, iterative prototyping of systems, importance of systems users), and made reference only to one of the following:

Rapid applications development (RAD)
Dynamic systems development method (DSDM)
Joint applications development (JAD)
Object oriented systems development (OOSD)
Prototyping

Many candidates discussed Systems Development Life Cycle (SDLC) instead of SSADM and there were some hybrid versions. Despite this, a good number of candidates identified the weaknesses of SSADM and made reference to RAD. Weak answers merely described SSADM or SDLC or a mixture of both and made no attempt at an evaluation.

The mean score for this question was 50% with a pass rate of 61%. The question was attempted by 79% of the candidates.

Structured Systems Analysis and Design Methodology is covered in Chapter 6 of the CIPD recommended text *Managing Information and Statistics* by R & F Bee and the newer approaches in Chapter 5 of the additional recommended reading *Global Business Information Technology* by G Elliott.

Question 8

This question was intended to test the candidates' understanding of what can be deduced from correlation and regression data. In their answers the candidates were expected to explain briefly the terms used (that is, the correlation coefficient, the coefficient of determination, interpolation and extrapolation) and, with reference to the values of the statistics, discuss the assumption of a causative relationship between the variables.

Many candidates did not know enough about correlation either to explain the terms correctly and or to provide any advice on how the results should be interpreted. Fail

answers did not deal at all with the issue of interpretation and provided no evidence of a clear understanding of correlation.

The mean score for this question was 35% with a pass rate of 40%, 52% of the candidates attempted this question.

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

Question 9

Here candidates were expected to refer to sampling theory and indicate the relationship between size and confidence limits. The way in which the appropriate size of a sample can be calculated should have been briefly outlined, albeit, as a minimum requirement, in a qualitative way.

As frequently happens, the majority of the candidates took refuge in descriptions of sampling methods and avoided any mention of sample size. Those that did mention it, made very general comments (for example, 'the bigger the better'), rather than providing a reasoned explanation based on their knowledge of sampling theory. Candidates focusing on sampling methods alone were generally given a marginal fail grade.

The mean score for this question was 30% with a pass rate of 20%. It was attempted by 52% of the candidates.

This topic is covered in Chapter 16 of the CIPD recommended text *Managing Information and Statistics* by R & F Bee.

Question 10

In this question, candidates were expected to show how Information Systems/Information Technology (IS/IT) could help their organisations meet competitive challenges. In other words, how IS/IT could assist Strategy Formulation and Internal Effectiveness. Strategic aspects, such as, the way IS/IT enhances marketing and the organisation of customer and supplier relationships, best value, innovation and new product/service development could be covered. Internal Effectiveness issues might include the way in which IS/IT can assist in effective problem solving and decision-making, knowledge management and organisational learning.

The majority of candidates had no problem with this question - as reflected in the mean score and pass rate - and provided examples of applications of IS/IT that contributed to the competitive strengths of their organisations. Good answer made relevant references to recent IS/IT developments

Managing Information

EXAMINER'S REPORT

November 2007

The mean score for this question was 55% with a pass rate of 89%. It was attempted by 93% of the candidates.

Conclusion

The overall results for this examination show a pass rate of 52% (possibly up to 62% after moderation). Mean scores and pass rates for some of the Section B questions were unusually low. This might be down to the probably higher proportion of candidates re-sitting the paper, since this is the last occasion on which the Managing Information examination is to be held.

To achieve success in this or the succeeding L & M Managing Information in a Competitive Environment examination, candidates must meet both 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.

Candidates must also develop their ability to evaluate critically the models, concepts and theories that they use. They must be aware that these concepts, models and theories should be thought of as constructs of reality in the mind of the observer and not 'out there' in the 'so called' real world. For this reason, these constructs may, 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 a degree. The realisation 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. Concepts and theories must be thought of as providing insights, but not, except in the most simple of circumstances, total solutions.

In Section B, candidates must make use of relevant concepts and techniques to support and justify their 'argument' and provide relevant references. They should aim for a discursive approach, with an appropriate balance of explanation and critical evaluation and always answer the question in as direct a way as they can.

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

Dave Allen
Examiner