

THE BCS PROFESSIONAL EXAMINATIONS

Professional Graduate Diploma

April 2006

EXAMINERS' REPORT

Management Information Systems

General

The standard for this examination session was higher than for previous sessions and some excellent papers were submitted.

Despite this general raised standard, there remained a number of candidates who did not have the required level of knowledge or, if they did, failed to communicate this to the examiners. To maximise their marks, future candidates are advised to:

- Read and absorb the recommended texts.
- Read the questions and make sure that they are thoroughly understood before attempting to answer.
- Answer all the question parts and to structure their answers accordingly.
- Provide in-depth answers. Many candidates appear to have the required depth of knowledge but leave much of this unwritten and therefore marks cannot be awarded.
- Not repeat points already made. Instead, use any spare time to check that the questions have been answered completely.

Although this comment has often been made in previous examiners' reports, regrettably a number of candidates answered more than the required three questions. Because of time constraints, this meant that there were often four or five poor answers rather than three good answers. As credit will only be given for the three best answers, future candidates are advised to attempt only three questions and to concentrate their thoughts accordingly.

An indication is given below of the expected answer points. However, marks were given for alternative answers if relevant to the question.

Question 1

1. a) Describe and evaluate both the traditional and Rapid Application Development (RAD) approaches to the development of Management Information Systems (MIS).

(15 marks)

- b) Compare the skills and knowledge expected of an MIS project manager in charge of a traditional development and an MIS project manager in charge of a RAD development.

(10 marks)

Answer Pointers

a) Traditional versus RAD

Traditional

Description of traditional/structured methodologies and the stages:

Practically all early systems developments and many current projects use structured methodologies. They generally consist of easily defined stages, each of which requires formal completion before the next one can commence. Generally, there are no tangible deliverables until the last stage has been completed and then the whole system is provided.

Structured methodologies are suitable:

- Where changes have to be implemented at one particular date, for example, regulatory purposes.
 - Where the requirements are well understood and are unlikely to change during the development period. Again, a regulatory requirement is an example.
 - Where it is impossible to break down the task into smaller component projects.
 - Where provision of the system is contractual and to a fixed price.
 - Where the technology used is inherently inflexible and it is therefore necessary to determine the requirements precisely at the outset of the development.
 - Where the required system is safety-critical (human-life depends upon reliable operation).
- (5 marks)

RAD

RAD emerged in the wake of evolutionary systems and the arrival in the late eighties of software tools that could facilitate prototyping and program code generation.

Prototyping overcomes many of the problems associated with systems development, where any user may experience difficulties in understanding hypothetical situations and where systems designers could have difficulty in communicating their solutions. Prior to RAD, prototyping of systems was possible only at the expense of time and effort necessary to design and mimic screen layouts and the proposed reports. Changing the prototype was difficult and, when the design was agreed, the prototype had to be thrown away and the operational system developed.

The introduction of graphical user interfaces (GUI) simplified the process of prototyping and RAD software tools enabled the completed prototype to form the basis of the system. For the first time, every percentage of effort resulted in the same percentage of the completed system. Current RAD methods and tools enable all stages of systems development to occur more or less in parallel. By prototyping a series of incremental system improvements, over a period of time, each can evolve into a completed system.

(5 marks)

Evaluation of traditional versus RAD

Structured	RAD
Can use lower grade staff/known by many	Needs specialist skills
Sequential approach limits progress	Parallel approach speeds development
Each stage generates user documentation	Less formal user documentation
Suitable for precise user requirements	Suitable for imprecise user requirements
Ideal for large corporate projects	More suited to small developments
System abstract until completion	Early visibility (prototypes)
Suitable for outsourcing	Not really suitable for contracted work

(5 marks)

b) Skills and Knowledge

Traditional

- A knowledge of traditional development methodologies, the stages and the usual timescales to complete each stage (SSADM or similar).
- The ability to translate detailed user specifications into design and program specifications that are understood by development staff.
- The ability to see and understand the whole development at an early stage.
- Internal political skills to enable funding to continue and staff to remain motivated until completion of the project, despite any tangible or visible evidence of success (shelfware, not software).
- Prepared to work on what could be regarded as outdated methodologies and be able to keep allocated project staff happy and motivated.
- Ability to persuade users to commit to specifications well in advance of implementation.
- An understanding of the change control process.

(5 marks – some examiner discretion)

RAD

- Knowledge and experience of a RAD methodology.
- Ability to motivate users to invest time and energy in the early stages of development.
- Sound project management skills to understand and limit parallel activities.
- Preparedness to take some reputational risk.
- Able to avoid procrastination at different stages of the development (paralysis by analysis).
- Political skills to balance early rough estimates of time and cost and expectations with changing or developing user requirements.

(5 marks – some examiner discretion)
(Total marks for Q1 = 5+5+5+5+5=25)

Examiner's Comments

Part a) of the question is in three parts, namely:

- Describe traditional methods
- Describe RAD
- Evaluate use of both for MIS development

Many candidates lost marks by omitting one or more of these component parts, thereby emphasising the need to read the question carefully and to try to understand exactly what is required. However, a number of candidates did understand the question and achieved very high marks.

Part b) required the candidate to understand the differences between the two development methodologies and to compare the different project manager skills. The weaker candidates just wrote about managerial skills that project managers should have, rather than specifically relating these (and others) to the methodology type. The best candidates listed all the skills required and gave some form of commentary for each, including weighting factors. Again, candidates should examine the question carefully in order to understand the requirements.

Generally, most candidates performed well for this question and were able to demonstrate some sound knowledge.

Question 2

2. A manufacturing and distribution business uses four legacy systems. Although each system operates reliably, the information contained is not available to all departments. Also, users frequently need to access two or more systems to obtain the information required and continued use of these inefficient systems has made staff resentful. The management realise the need to improve accessibility to the corporate information, but have insufficient funds for major redevelopment.

You have been engaged as a consultant and are required to write a report to describe how a new Management Information System (MIS) could make the legacy information available to staff, customers and suppliers.

- a) Explain how data warehousing could be used to combine the information from the four legacy systems and state the benefits that could arise. Describe any problems that may be encountered.
(7 marks)
- b) Describe two different ways in which the information could be made available to the internal staff.
(6 marks)
- c) How could extranet and internet technology be used to make the information available to suppliers and customers?
(6 marks)
- d) Explain the various security measures that should be incorporated in the new MIS.
(6 marks)

Answer Pointers

a) Data warehousing

A data warehouse is a database with sophisticated software tools that stores current and historical data extracted from many operations of the business and allows easy access for reporting and analysis. It enables data previously locked in legacy systems to be made available.

The data structures for each legacy system needs to be analysed and then transferred to the data warehouse. Data will need to be reformatted to a common form and procedures devised to identify and correct errors and remove duplicates. (two marks)

Benefits

- Improved provision of data
- Easy access to information
- Can remodel existing data
- Permits access to data without affecting routine operation
- Allows tracking of data
- Can combine data from a variety of sources
- Provides an organisation with a better understanding of customer behaviours
- Can show geographic demand patterns
- Any other reasoned benefit

(half a mark for each benefit described, maximum three marks)

Problems

- Matching information from each of the systems – may be difficult
- Determining the update status of information
- Not updated online
- Retrieval only (unless combined with messaging system)
- Relies on numerous systems to operate successfully
- Any other reasoned problem

(half a mark for each problem described, maximum two marks)

b) Sharing information internally

- Intranet – internal network based on internet and web technology. Enables access to document libraries, company procedures etc. Can be used to support homeworking. Inexpensive solution that can provide an early “win” for the company.
- Use of datamarts for specified business areas.
- Groupware – special software that recognises groups and teams in an office. Can be used by staff working on the same project and connects members of the group so they can share and work together on data, documents, discussions etc.
- CSCW – Computer supported co-operative work. Through network connections to terminals, people sitting at different computers may share and add to work on a specific document or report.
- Other justified method.

(three marks for any two methods, maximum six marks)

c) Extranet and internet

Extranet allows the participating organisations (suppliers, major customers, auditors, outsourcing suppliers, etc.) to have limited and controlled access to each other's internal data. Again, extranets use internet and web technology and are easy to use and relatively inexpensive to install and maintain.

An internet site could provide public data for use by customers, to advertise products, place orders, accept payment, provide contact routes etc.

(three marks for extranet and three for internet, maximum six marks. Examples of use gained marks at the examiners' discretion)

d) Security issues

The extranet should be protected from hackers or illegal access. Internet technology based systems are more vulnerable. Information can be protected from attack by using:

- Hackers - firewalls installed and maintained.
- Digital signatures – digitally sign documents to confirm the originator.
- Encryption – Encrypted data can only be decrypted by those holding the 'key'.
- Authentication – provides assurance of identity.
- Access control - only those with authority to use particular functions or access particular data are allowed access.
- Data integrity – check digit or character. An extra reference to confirm authentication of data on input.
- Staff - vetting of all staff, special measures for disgruntled staff, staff internet policy.
- Data loss - regular security copies of all software and data - stored offsite, appropriate DR plans (if put in context)
- Virus attacks - virus-scanners (and regular updates)
- Any other reasoned measure.

(one mark for each measure described, maximum six marks)

(Total marks 7+6+6+6=25)

Examiner's Comments

Whilst there were some comprehensive answers that demonstrated a keen understanding of data warehousing and the practical and theoretical issues involved, a significant number of candidates relied on repeated or vague answers.

Part "a" of the question gained the most marks for candidates, with many achieving the maximum seven available. Similarly, part "d" was answered well, with candidates clearly understanding the security issues involved in operating a MIS web facility.

Parts "b" and "c" were less well answered, with candidates either missing the point of the question or providing short and meaningless answers with no content.

Question 3

3. A medium-sized company, which specialises in the manufacture of high quality, contemporary office furniture, wants a computerised system to support its collection and utilisation of customer information. The company has a small yet capable IT department (comprising 6 staff members) which has successfully performed fairly simple database application development work. Where large-scale IT application development has been required, the company has typically outsourced the work to one or more external contractors. The IT department is extremely busy with maintenance work on existing in-house application systems.

The company has three options for acquiring a suitable customer information management system to run on the existing hardware platform:

1. To purchase an off-the-shelf package to manage customer information.
2. To develop in-house a bespoke system to manage customer information.
3. To outsource the development of a bespoke system to manage customer information.

Select and justify which of the three options you think is most suited to the company. Your answer should include a discussion of the advantages and disadvantages of each option. State any assumptions you make regarding company operations and needs within your answer.

(25 marks)

Answer Pointers

This question is about applications development options and their advantages/disadvantages.

Some of the advantages that could be discussed for an off-the-shelf package purchase include the following:

- A package is typically a tried and tested system, with good user and technical documentation.
- Costs are known in terms of package price (but possibly not in terms of tailoring costs).
- The package may have extra features that were not considered at the outset yet may prove to be of benefit to the organisation.
- These packages tend to be supported and maintained by the originating company (although there are clearly issues concerning how long that support will be available and the costs involved).

Disadvantages include:

- The time and effort involved in any possible tailoring that may be needed to suit the needs of the organisation. Indeed, the package may never be able to support all company requirements.
- There may not be a suitable package that runs on the existing hardware platform.
- The initial tailoring and subsequent maintenance of the package may be undertaken by the originating company, which means more expense.
- The package may be expensive to buy, and expensive upgrades to the package may be needed subsequently.

Some of the advantages that could be included for an in-house development are:

- The system is developed to cater for the specific user requirements of the organisation – requirements specification activities are expected to determine these.
- The resultant system may be quite efficient if developed with the particular hardware set up of the company in mind.
- The system would be developed with the other existing and future systems, and their possible interfaces with this system, in mind.

Disadvantages include:

- The price uncertainty, and the time it takes to develop the system (particularly given the high existing workload of the IT staff).

- The risk of undertaking a relatively large and important project with a department that, although competent, has only really dealt with smaller projects.
- Problems of keeping the staff that develop the system so that the company can maintain it more effectively.

Some of the advantages that could be included for an outsourced development are the following:

- The fixed price nature of the development work, and indeed there could be a fixed price stated for maintenance work for a defined period thereafter. The price(s) would be stated in the outsourcing contract.
- An outsourcer with experience in customer information management systems and/or the development of complex software may do a much better job than in-house IT staff with little expertise in these aspects.
- Building on possibly existing relationships with a supplier, which can then be used, if successful, to benefit future projects.
- Not burdening already stressed IT workforce with further deadlines and activities.

Disadvantages include:

- Internal IT staff may feel that they have been sidelined.
- Contracted staff may not understand the business as well as internal IT staff, and therefore not able to gather the same quality and quantity of user requirements that the in-house staff could.
- The company becomes, to some extent, reliant on the external company – what happens if they go out of business during development and/or maintenance? What happens if their priorities change during maintenance activities, and therefore their response rate to problems is lengthened? The contract clearly is vital in ensuring legal obligations between parties and any penalties if breached.

The choice of approach for this company greatly depends on the assumptions made and how the scenario given at the start of the question is interpreted. For example, selecting the off-the-shelf package approach may be considered best, as there are many CRM packages out there, and they cater for the standard requirements of most organisations (all invariably want details of customers, their contacts with the organisation and when, etc.– there is a slight assumption here.) Although the initial price may be high, the package is usually robust and well documented. A support help line and other technical assistance may well be available, albeit at a cost.

There is certainly an argument for the outsourced option, particularly as outsourcing has been used previously and that the company would be able to get a system that more closely matches the organisation's exact needs than probably an off-the-shelf package would. It is, however, difficult to justify an in-house development given the busy nature of the current IT staff and the fact that they have only really undertaken small projects in the past (the CRM software is not assumed to be a small project).

Marks:

- Discussion of advantages/disadvantages of off-the-shelf package purchase - 6 marks
- Discussion of advantages/disadvantages of in-house developed package purchase - 6 marks
- Discussion of advantages/disadvantages of contractor-developed package purchase - 6 marks
- Selection of option – 1 mark
- Justification of selection, given assumptions – 6 marks

TOTAL MARK Q3 = 25 Marks

Examiner's Comments

This was an extremely popular question, and many candidates answered it well. The average mark was a very respectable 14 out of 25.

Each of the three options for obtaining a CRM system, which were stated in the question, were fundamentally understood by most candidates. However, some candidates tended to list advantages and disadvantages of each option, with very little commentary and/or discussion, and this limited the quantity of marks they could achieve. For example, just stating that "cost" is a disadvantage of in-house development, without, for example, providing any indication of what specific costs are being considered (e.g., maintenance costs, development costs, staff costs, equipment costs, and so on) and/or whether the cost is higher or lower than any of the other stated options, is just too vague and simplistic to be awarded more than a mark or two. Some candidates said that off-the-shelf packages require no training, which reflected their view of packages as all being similar to the Microsoft Office suite. This is incorrect, as some specialised package software can be very complex, and does require both IT staff training (to aid subsequent package tailoring, for instance) and user training.

Most answers recommended one of the stated options as the preferred approach for the company, but then several candidates did not provide any real justification for that preference. This meant that they could not obtain the marks that were allocated for this component of the question.

Question 4

4. Management Information Systems (MIS) can provide management support for all activities within a product's supply chain, from raw materials procurement through to the finished product's distribution to, and use by, its customers.
- a) With suitable illustrative examples, describe the following MIS and how they can be used to support product supply chain management.
- i) Decision Support Systems (DSS). (10 marks)
- ii) Executive Information Systems (EIS). (10 marks)
- b) Briefly explain the benefits and potential problems of making DSS and EIS capabilities available via a corporate Intranet. (5 marks)

Answer Pointers

Part(a) of this question is about the DSS and EIS subtypes of MIS, and how each is used in supporting management within an organisation. Answers, in the case of each subtype, should include an overview of the MIS subtype and then a description of how it could be used by management during the product supply chain. There are many possible examples and marking needs to allow for both depth and/or breadth answers.

Overview of DSS could include: **(1 mark each good point, to a maximum of 5 marks)**

- Definition: A computerised system that support management through the interactive use of data and analytical models.
- Architecture: follows the Data-Dialog-Model paradigm – candidates may draw and describe this.
- Types of Models: Models include individual and group ones. Individual models include Linear Programming (LP) models, simulation, weighted score technique, forecasting and decision trees.

- Target: predominantly a middle management tool, although can be of benefit at both operational and strategic management levels.
- Examples mentioned and/or described, such as Connoisseur Foods.

Overview of EIS could include: **(1 mark each good point, to a maximum of 5 marks)**

- EIS are data retrieval systems that provide selected and summarised information for (traditionally) senior management.
- EIS provide a computerised support environment communications environment that is useful to help senior management to monitor organisational performance, track competitor activities, spot problems, identify opportunities, and forecast trends, and thereby answer questions such as:
 - o “what business should we be in?”
 - o “what are our competitors doing?”
 - o “what is our current financial position?”
- EIS tend to be very user friendly and tailored to each manager’s needs.
- Examples include Lockheed Georgia’s EIS and the EIS at London Underground.
- EIS have become management tools that are used across the management levels, rather than simply at senior management level (i.e., EIS also stands for “Everybody’s Information System”).

The description of the supply chain application of DSS could include the following points: **(1 mark each good point, to a maximum of 5 marks)**

- There are several areas along the product supply chain where DSS could be of benefit.
- Analysing potential suppliers – using ad-hoc databases and small models to come up with a measure of potential suitability.
- Simulation of the manufacturing process – candidates could talk about this at great length, discussing the setting up of a mathematical model of the process, changing different input variables (e.g., shift length, number of working shift, time taken to process some aspect of manufacture, set up time, etc.) and seeing their combined impact on the output variables (throughput, cost, etc.).
- Keeping tabs on the logistics side of deliveries – where is a given customer’s batch of products, how soon is the batch to be delivered, which lorry is going to take the batch to the customer, etc. Here, the amount of modelling is very low and the DSS would closely resemble a database application system for operational management.
- After sales service – analysis of customer queries regarding the product. “Quality of service” analysis.

The description of product supply chain application of EIS could include the following points: **(1 mark each good point, to a maximum of 5 marks)**

- EIS essentially provides high level reporting of aspects concerning products, customers, suppliers, finance, etc.
- Could see all aspects of the supply chain generating the data that could be of use within an EIS.
- The EIS may enable a briefing book facility with structured high impact reports on aspects of company operations, or enable a (typically) multi-dimensional analysis of the data using the GUI facilities and user-selected operations provided by the EIS. The data that was fed in from the supply chain operational activities would form the basis for the EIS data analysis and presentation. Example reports within a briefing book could be a report to show distribution and % late deliveries of the product, or a customer reject rate report (possible versus last year at same time or on a month-by-month basis), a repeat orders analysis report and a new customer orders analysis report.
- The EIS may allow the analysis of Dow Jones financial information to keep abreast of competitor and possibly supplier news, and trends with respect to same or substitute products, for example. It may also allow the ad-hoc multi-dimensional analysis (e.g.,

looking at product sales per month per region) of company sales versus those of direct competitors, etc.

- Diagrams of screens and reports may be provided to illustrate concepts further.

TOTAL Marks (a) = 5 + 5 + 5 + 5 = 20 Marks

Part (b) required candidates to consider briefly the benefits and disadvantages of Intranet-based MIS (of which DSS and EIS are subtypes) for company personnel as opposed to those MIS that are not Intranet-based. Answers may include the following points:

Benefits

- The 24/7 nature of Intranet-based MIS for corporate employees.
- The “available out of the office” nature of Intranet-based MIS.
- The standard interface that comes with Internet-based MIS (use of standard browser facilities across several applications).
- Usually the Internet-based package is less expensive than if multiple single-use licence copies are required.

Disadvantages

- The increased security threats from hackers
- The increased possibility of viruses due to Internet connection
- The extra cost in securing the Intranet via use of firewalls and virus software

Marks

- **Maximum of 2 marks each benefit or disadvantage explained to a total maximum of 5 marks**

TOTAL Marks (b) = 5 Marks

TOTAL MARK Q4 = 20 + 5 = 25 Marks

Examiner's Comments

This was another popular question on the examination paper. The majority of candidates understood the requirements of the question sufficiently to pass. Indeed, the average mark gained for the question was approximately 11 out of 25.

Part a) required candidates to describe the EIS and DSS subtypes of MIS, and to show how they could be used to support product supply chain management. The question defined what a product's supply chain was, to help the candidates in forming their answers. The best answers here provided good overviews of the relative purpose and capabilities of both DSS and EIS, and explained, using specific examples, how each system could be used at appropriate points during a product's supply chain. Many candidates provided good overviews of both DSS and EIS, yet omitted any application to product supply chain management. Several candidates did try to apply the systems, yet their examples were either too vague (e.g., stating that “DSS supports logistics management” or “EIS can provide product supply chain reporting”, with no further description) or inappropriate. Some thought EIS and DSS were the same as E-Commerce (which they are not – you don't, for example, find electronic billing and payment activities in a DSS or an EIS) and others thought EIS and DSS made automatic decisions on the decision maker's behalf e.g., deciding when to reorder stock. All these aforementioned shortcomings in candidates' answers meant that lower marks were attained.

Part b) concerned the placing of the EIS and DSS within an Internet (Intranet) environment, and the advantages/disadvantages that this environment brings. Many candidates failed to appreciate the crux of this question, instead concentrating on the advantages/disadvantages of using EIS and DSS to support management work. Some candidates indicated that the Intranet made the systems

available to everyone, and therefore forgot that user identification and authentication activities before allowing access to the EIS or DSS can still be present when the system is Intranet-based. Others mentioned that key customers and suppliers could now have access to the DSS and EIS when Intranet-based, which is incorrect as an Intranet is a company-only network that uses Internet technologies (it is an Extranet that makes possible the access by key customers and suppliers to a company's Internet-based resources).

Question 5

5. A Management Information System (MIS) should either complement an organisation's existing structure and processes, or enable the realisation of planned organisational changes.

- a) With supporting examples, discuss what is meant by the above statement. **(9 marks)**
- b) Describe how Strategic Information Systems Planning (SISP) activities enable an organisation to align its MIS with its business strategy. Include a brief overview of what SISP entails as part of your answer. **(16 marks)**

Answer Pointers

This interesting yet challenging question is concerned with the bi-directional influences between an organisation and its IS/MIS. Part (a) asks candidates to explain what is meant in the opening part of the question. This is basically about the fact that IS/IT and the organisation should be in alignment, and that each can influence the other (i.e., the organisation influences the IS/IT need, and IS/IT itself can influence the organisation). For example, you should not choose a new MIS that is counter to the current culture within the organisation unless change in culture to compliment the new MIS is expected. You would not, for example, put a shared data warehouse in an organisation that is built upon a closed and isolated view of people within the workplace – data warehousing relies on departments sharing data, not hoarding it. However, you may put a data warehouse into a company and seek to change the corporate culture so that it becomes more open and cooperative in nature. The data warehouse facility at First American Corporation (FAC), for instance, was put in to enable the company not only to be better informed of customer needs, but also to facilitate a more open culture between FAC employees.

Marks

- For a reasonable understanding of the statement evident – 3 marks
- For any reasonable point and/or example regarding IT to organisation influence – to max 3 marks
- For any reasonable point and/or example regarding organisation to IT influence – to max 3 marks

TOTAL (a) = 9 marks

Part (b) requires a description of SISP and how it can be used to identify MIS projects. An overview of SISP may include some or all of the following aspects:

- Possible definition: the activity of establishing a framework for the effective identification of IS/IT projects.
- SISP Process:
 - o Setting the terms of reference for the SISP study.
 - o Analysing the business and its environment (top down and middle-out approaches to SISP used here).
 - o Analysing the existing IS/IT in the organisation (bottom-up approach to SISP used here).
 - o From the assessments, identify the set of IS projects that need to be considered, and any IT infrastructure and management issues.

- o Prioritise projects and plan for them, which includes financial assessment.
- o Put in place the support mechanisms that will help to advance the planned objectives.
- o Report findings to senior management.
- Techniques that can be used: Porter's Value Chain, Warren & McFarlan's Strategic grid, Porter's Five Forces Model, CSF identification and analysis, project planning techniques e.g., Critical Path Analysis (CPA), etc.
- Frequency: large scale planning every 2-3 years, although with frequent monitoring and changing (where necessary) of implementation activities
- Who involved: management, key employees, IT specialists, and the people actually doing the study.

(1 mark per useful SISP point or example, to a maximum of 8 marks)

Candidates need to show how they might take a company and follow the SISP process through, leading to various IS/IT projects being identified, some of which are of an MIS nature. The use of SWOT analysis, for example, may show that the company's competitor analyses have been very poor. This could lead to a definition of an EIS project which could provide more effective competitor monitoring and analysis. Porter's Five Forces Model gives an organisation a way of analysing what it needs to do to ensure a healthy position in the current market, and the IT that needs to be in place. Some of those IT systems identified from analysing how IS/IT could positively impact each of the five forces may well be MIS development projects. Warren & McFarlan's Strategic Grid analysis and CSF analysis may also lead to proposals of suitable MIS requirements.

(1 mark per useful SISP to MIS point or example, to a maximum of 8 marks)

TOTAL (b) = 8 + 8 = 16

TOTAL MARK Q5 = 9 + 16 = 25 Marks

Examiner's Comments

This was the least popular question on the examination paper, attempted by only a third of candidates. The results were wide-ranging, with some candidates providing excellent answers but with others struggling to appreciate what was required. Overall, the average mark was a disappointing 8 out of 25.

Part(a) required candidates to understand that MIS can enhance existing processes and structures as well as enable new structures and processes to form. Many candidates used the management hierarchy (i.e., that comprising top, middle and lower management levels) and their differing requirements for MIS to illustrate how MIS can support existing structures and processes/activities. This was, in most cases, an effective approach to this aspect of the subquestion. Only a few candidates, however, remembered to consider the second direction of influence between MIS and the organisation, where MIS themselves can incite changes in existing structures and processes. Where candidates did attempt to explain this component of the statement, the arguments were not always coherent and convincing.

A handful of candidates thought an MIS is a person, which is an incorrect interpretation for this module and therefore gained minimum marks.

Part(b) was about the Strategic Information Systems Planning (SISP) process and how it can lead to the identification of MIS projects for an organisation. Some candidates, who understood the question and had clearly revised the SISP topic, gained very good marks but there were many candidates that either did not know enough about SISP to answer the question in a sufficient manner or simply misinterpreted the question. A few thought SISP was a person, which is incorrect. Some confused SISP with corporate strategic planning, and therefore did not mention anything about IS/MIS project identification. Some confused Strategic Information Systems (SIS)

with SISP – whilst the latter can result in the identification of the former, they are not the same! All these shortcomings in the answers meant reductions in the marks awarded.

Showing how SISP can lead to the identification of MIS projects was poorly done by many candidates attempting the question. Some attempted to describe techniques such as SWOT analysis, Critical Success Factor (CSF) analysis, Porter's Five Forces Model and Value Chain Analysis (VCA) in general strategy development terms, but then did not show how the application of these techniques could lead to the identification of suitable MIS projects (and even to suitable IS/IT projects generally). As such, they could only obtain a maximum of half the marks on offer for this subquestion.