THE BCS PROFESSIONAL EXAMINATION
Diploma

April 2004

EXAMINERS' REPORT

Service Management

General
Perhaps due to the poor pass rate of 32% obtained by candidates last year the number of candidates selecting this option decreased by 34% this year.
Fortunately a larger proportion of candidates were better prepared this year and the pass rate rose to 53%, which is still disappointing,
The failing scripts once again demonstrated a lack of knowledge across the syllabus with many gaining very few marks on more than one question. Although candidates may be able to find one question on which they have the necessary knowledge they provide totally non-relevant answers to other questions.
In addition many of the failures are due to candidates not answering the question as set.
As stated in the report for the previous year candidates should seek advice on examination technique and ensure they study the full syllabus.
Candidates should read questions, particularly part b), more carefully. Often candidates simply repeat in part b) the points they made in answer to part a). Credit is only given where the point is discussed, or explained with relevance to the question.
Candidates are advised to reduce the tendency to discuss opinions which are not directly connected to the question.
An indication is given below of the points which were expected; however any valid point, which was relevant to the question, received marks.

Question 1
1. *a)* Discuss the different facilities which are provided by Executive Information Systems (EIS) and Management Information Systems (MIS). **(15 marks)**

   b) Suggest, with reasons, which levels within a business organisation would utilise an EIS or MIS to gain the advantages of each. **(10 marks)**

Answer Pointers
a). EIS.
 Sophisticated graphics allow interaction & makes output understandable to non-computer literate managers. Linked to external environment- information on suppliers, competitors, government legislation tax etc.
   Employs summaries & drilling down to detail
   Supports management by exception
   Flexible data manipulation & presentation
   Users analysis tools & leads to 'what if' analysis, trends etc.
   Can be personalised to managers needs.

    MIS.
 Uses output from existing TP. System to aid decision making.
Mainly internal data.
Structure is rigid more suitable to stable environment.
Analytical powers limited, produces standard reports
Deals with past performance information

b). EIS.

Strategic & tactical levels, long term strategic planning, keeping up to date with relevant government legislation.

Unstructured decision making at top level

MIS.
All levels for planning, organising, directing & controlling (short term aims)
Middle management – decision making information.

Examiners' Comments
Answers to part a) attracted good marks and covered many of the points expected.
Answers to part b) tended to ignore the requirement to give reasons and usually repeated points made in part a).
Credit was not awarded for discussing the type of report/information or contents of reports generated by EIS/MIS, nor the type of processing EIS was capable of, some candidates suggested MIS provided critical path analysis including Gantt charts.
Due to good answers given to part a) the pass rate for this question was the highest of this paper at 78%, with an average mark of 13.

Question 2
2. The organisation for which you work has offices in ten cities around the country. The staff at each office are in regular communication both by telephone and by email. With the aim of saving significant sums of money, the organisation intends to move to a single integrated network, which will support both voice and data traffic, using a single infrastructure.

a) Describe THREE service issues that would need to be satisfied before you would support this policy.
(15 marks)

b) For ONE of the service issues described in *a)*, provide a detailed report on the potential problems of this approach and how these could be addressed. **(10 marks)**

Answer Pointers
a)
Service management issues could include:

- Resilience - both services using the same infrastructure
- Safety - is the network reliable enough to use as an emergency communication system. Is a plain old telephone system still needed to give this assurance?
- Load prediction - how has the traffic been modelled? Have live tests been used to prove the reliability of the traffic model?
- Introduction to service - will this be a "Big Bang" operation or will it be introduced over a period of time. Will the developers use early information to modify policy and process in later parts of the programme?
- Disaster recovery and roll back - what facilities will be critical to the organisation in the event of network failure? How will priority for recovery be judged? What alternative services can be provided?
- Has anyone looked dispassionately at the costings and predicted savings? Have optimistic figures been challenged?

b)
A report format is required, and marks are allocated for the format. This section of the question tests the ability of the candidate to provide a coherent analysis of a fairly complex set of service issues.

Examiners' Comments

Only one third of candidates attempted this question and the pass rate was 34% with an average mark of 8.5.

Many candidates appear not to have read the question carefully. Many attempted answers were based on technical descriptions of voice/data network integration and did not address the service issues that were required.

Credit was given to candidates who provided technical responses where the candidate made clear how this could have an impact on service issues.

A number of answers were based on discussions of voice/data networks on a much smaller scale than the scenario given in the question. Credit was given for information which would be equally valid in a larger scale operation.

A number of candidates lost marks by not providing the answer to section (b) in report format. The aim of this requirement is to demonstrate that candidates can provide this kind of analysis in a standard business format.

Question 3

3. "IT outsourcing is a broad definition of Facilities Management to cover the contracting out of specified services to a third party within a controlled flexible relationship".

   a) Discuss the perceived benefits and problems associated with outsourcing. **(15 marks)**

   b) Discuss any changes in attitude to outsourcing which are currently taking place within the outsourcing market. **(10 marks)**

Answer Pointers

a) <u>Benefits</u>. Hardware, development, operation, accommodation, staff
     Cost savings
Access to IT skills
Improved quality of IT systems/services
Head count reduction
Outsourcing costs fixed, contract-better budget control.
Allow company to concentrate on core business
Option in Disaster Recovery Plan
Reduce backlog of work, e.g. data input.
     <u>Problems.</u>
Loss of IT knowledge within company, need to contact outsourcer to fix problems.
Dependence on outsourcer, cost escalation, lack of control.
Staff morale may be affected.
Health & safety issues
Locked into contract, need to renegotiate for changes to meet new business requirements.
Security- Outsource company could use your data, (e.g. Virgin/British Airways issue.)

b) Outsourcing companies starting to specialise in software & hardware packages/platforms.
     Outsourcing companies becoming more competitive
     More careful selection of what to outsource, multiple outsourcing.
     -    use of Application Service Providers
     Lack of internal IT/IS expertise
     Outsourcing costs cheaper in some countries, outsource overseas.
     Returning to in-house provision of IS.

Examiners' Comments
Parts of answers were too general to obtain high marks. There were some good points made relating to benefits & problems of outsourcing but limited views on the changes in attitude to outsourcing. This suggests candidates are not reading readily available material. Generally the answers pointed to outsourcing used to develop software systems or production of 'products', cleaning/security etc. being outsourced. Correctly some candidates considered loss of confidentiality a potential problem where outsourcers could pass information to competitors in some cases it was suggested that staff would go to work for the outsourcer.
The most popular question, however the pass rate was only 43% with an average mark below the pass mark at 9.

Question 4
4. The networked computer systems in the main server room of your company are critical to the continued operation of the organisation.

a) Describe THREE controls which should be in place to ensure the security of the server room and its environment. **(15 marks)**

b) Describe TWO controls which should be in place to control access to the server room by IT staff and other personnel. **(10 marks)**

Answer Pointers
a)
This question relates to key issues which will be found in most organisations of significant size. The loss of a core computing facility has frequently led to the failure of a company when there has not been an adequately conceived, resourced and tested plan for the maintenance of service under adverse conditions.

Key controls should include:

Protection of staff - safety of staff with key knowledge and experience is a critical issue.
Protection of power - UPS and line filtering to prevent against loss of service from spikes, brownouts or total loss of power. This will be backed up by generators in most organisations. Regular tests are needed to ensure that the facility will work when needed.
Protection of air quality, temperature and humidity - are air conditioning systems adequate for the technical requirements of the server systems? Is the room environment monitored and the units maintained?
Physical security - locked doors to the computing facility with access only available to known staff. Access logged by a mechanism which is difficult to falsify. Control of access by maintenance personnel and contractors - careful supervision of staff in the core facility. No external indications of the function of the server room - no external windows. Use of CCTV and other monitoring techniques. New equipment brought into a quarantine store - not the core facility - until tested and accepted.
Protection from fire - alarm systems sensing smoke, temperature rise, presence of flame. All alarms should be centrally monitored with the functionality for the service to shut down cleanly - but automatically - in the event of more than one alarm.
Protection of data - multiple copies of key data, with at least one set being held off site. Audited backup and archiving regime, with regular tests to indicate that backups are recoverable to a known state.
Protection of key documents and media in a certified fireproof cabinet. Note that a firesafe certified solely for documents will probably NOT be safe for magnetic media.

b)
This section should demonstrate that the candidate has an understanding of the importance of human factors in infrastructure security.

There should be reference to protection of staff from social engineering and duress situations - including means of providing silent alerts in this situation.

Examiners' Comments
Many of the answers to this question relied on a very limited scope in terms of controls. This may reflect the experience and breadth of reading of the candidates. Where candidates gave three very similar sets of controls in response to part a), there was very limited scope for gaining high marks.

There was a general emphasis on controls which would help provide the server room with physical security, but the question included reference to the "security of the server room and its environment". This gave an opportunity for the candidate to provide a broader analysis of the risk factors in such an installation and how that risk can be managed.

Given the critical importance of infrastructure security, it is strongly recommend that course providers place greater emphasis on this area of the curriculum.
Of those selecting this question only 38% achieved a pass and the average mark was 9.

Question 5
5.   E-mail is now accepted as a common communication medium both locally within a business organisation and globally across the Internet.

   a)   Discuss how the use of e-mail would impact on an organisation. Include in your discussion the possible changes to methods of working. **(15 marks)**

   b)   Discuss situations where you would consider e-mail would NOT be an appropriate medium to use within an organisation. **(10 marks)**

Answer Pointers
a) Need to set up mailbox for each employee.
Speed of working instant receipt/reply
Communicate with staff anywhere in world, (lap top/hand held)
    can interrupt work flow
    pressure on staff to learn/use e-mail
    forces staff to check for messages
    reduces communication time
    send/forward messages to many
    reduces need for meetings, therefore time/travel etc reduced
    increase in non-essential messages/junk mail
   loss of social contact/interaction
   Reports electronic, reduce post costs, less paper,
Encryption for relevant security.
Security against virus
failure =loss of communication.
Establish written working practice, policies. Can confirm email accessed, Use receipt function.

b) Secure systems required, firewalls, anti virus.
personal meetings – interviews
passing confidential information. E.g. personal data, Legal/medical reports
transfer of large files
replacing meetings of several people – no body language/quick interaction needed
Too much email can be a distraction, reduces efficiency.
Beware making instant response to important email, need to formulate reply (as would be done in a letter or report).

Examiners' Comments

As expected this was a popular question although for many it was the final question answered, possibly indicating that although candidates knew about email they were unable to consider the impact. The examiners were surprised by the lack of ability by the candidates to recognise the changes which email has brought to organisations. Many candidates provided the advantages and some the disadvantages of using email, relevant points attracted marks. However the pass rate at 37%, with an average mark of 8, was very disappointing.

a) the majority of answers did not address the question, many discussed
- how all communications media operated – Fax/Telephone/Mail etc.
- also what facilities were available in software e.g. Lotus Notes or what could be done using e-Mail listing or discussing the detail of how it worked.

There was some confusion over e-Mail & on-line capability of systems.

b) Many candidates failed to answer the question as set.

Candidates discussed the mis-use of e-mail; sending defamatory messages or using for personal use, comments that PC's etc. were not available or that people did not understand IT.

Question 6

6. Consider that you are the supervisor of an IT Helpdesk which supports several hundred office staff in a company. From your daily contact with the issues facing Helpdesk staff you can identify several areas of the overall IT service that could be improved.

a) Write a memorandum to the Head of IT Services suggesting how, with your input, areas of the service could be improved and how the information you have obtained, during your period as the supervisor, could be made more visible to your management. **(15 marks)**

b) Describe how you would pursue the issues if the Head of IT Services fails to respond to your suggestions. **(10 marks)**

Answer Pointers

a)
- The Helpdesk Supervisor is often in a position to see aspects of service failure or inadequate response which are not visible at other levels in the service structure. The supervisor needs to show the communication and influencing skills with which to make this information useful in the context of service improvement.
- The memorandum form is an integral part of the question - and candidates who do not use this form will not attract the marks allocated.
- The style should be positive and inclusive (coming from a service provider) - with the accent on continual improvement rather than criticism.

Section b) is a test of how the candidate would handle the escalation process if the line manager fails to respond to the service issues. The process proposed should be open and defensible - again, with the accent on solving the service problem rather than generating a "political" stance.

Examiners' Comments

The least popular question with only 25% of candidates selecting this question, of those 56% passed and the average mark obtained by all candidates was 9.

The results for this question suggest that it was only attempted by those with some direct experience of this type of service management. The scenario is fairly typical of the issues which might arise when the candidate is at a fairly early stage of their career in service management.

A number of the answers provided thoughtful and potentially effective discussions of how the problem could be managed, although a few candidates gave confrontational and antagonistic proposals which would be unlikely to be effective in a corporate environment.

Once again, the use of memo format is intended to demonstrate the familiarity of the candidate with standard business document formats, and marks were lost by those who did not meet the usual requirements of style and content.