**THE BCS PROFESSIONAL EXAMINATION**
**Diploma**

**April 2005**

**EXAMINERS' REPORT**

**Service Management**

It is pleasing to report that the pass rate for this module has increased this year to 70%, with some candidates obtaining almost 80% of the available marks in each question. The average mark obtained across all those that attempted the paper has increased and demonstrates that many candidates appear to have taken note of the advice given by examiners in their report for 2004 and are now better prepared.

**Question 1**
**1.** *a)* Explain FOUR reasons why the implementation of new technology often fails to deliver the expected results and is frequently due to a failure to adequately manage the change process. **(16 marks)**

*b)* In the context of major applications development projects, users usually develop unrealistic expectations. Briefly discuss THREE such expectations and provide a method to manage each expectation. **(9 marks)**

**Answer Pointers**
a) Such reasons and their explanations could include the following (marks were awarded for other suitable reasons with up to 4 marks for each explained reason).

1. Education/awareness, training . All people involved in the project and its implementation, need to be educated so that they are aware of the implications of the new system. Some of this awareness can be obtained through training.

2. Communication . Successful management of any project requires constant communication between all stakeholders, to help ensure a successful implementation.

3. Lack of top management support . If top management does not support the implementation of new technology, it will fail. This is because top management support is required (and needs to be seen) as an integral part of implementation.

4. Staff rejection. No matter how technically superior a system is, if the staff who have to work the system, reject the system – then the system will fail. To overcome such rejection, management should explain the benefits of the system to the staff and the detrimental consequences should the system fail.

5. Ineffective planning. One consequence of ineffective planning is negative surprises, as the implementation progresses. Some of these negative surprises will be seen by many as a failure of the system and they will not want to be associated with such a system.

b) The unrealistic expectations and their management could include the following, with up to 3 marks for each to total of 9 marks. (Marks were awarded for other suitable expectations).

Over time the goals and objectives of the project can become distorted in the minds of some users. To help overcome this, management should ensure that the goals and

objectives are restated at various milestones along the way.

For whatever reason, users may think the system is going to function in a way different to the design. Management can reinforce in the users mind how the system will actually work, by involving the users in the design stage via such methods as prototyping and by giving the users a lead role in user testing. User training will also help reinforce how the system is going to function.

As development progresses, some users may want to make amendments to the original specification. Amendments should be managed through a formal change control procedure and if any changes should result in a later implementation date or increased budget, then senior management approval is required.

Some users might think that the new system will have little impact on their operating procedures. User training at various stages throughout development, will help the users experience at first hand, the new operating procedures.

**Examiner's Comments**
Around 47% of candidates who sat the paper, attempted this question and of those 79% obtained a pass which was the highest pass rate for any question.

Part a) 20% of respondents provided very good answers, displaying a strong awareness why good management is required for the successful implementation of new technology. A further 20% of respondents incorrectly cited weaknesses in technology rather than weaknesses in management as the primary reason for failure to implement new technology.

Part b) The vast majority of respondents discussed unrealistic expectations very well, but only 30% went on to describe a method to manage each expectation as required by the question.


**Question 2**
**2.** The Facilities Manager at the company for which you work has made the following statement:
"PC based servers do not need a dedicated machine room in the same way as the old mainframes and mini-computers did".

*a)* Using THREE different examples, discuss the ways in which you agree or disagree with the statement.

**(15 marks)**

*b)* For ONE of the examples you have given in *a)* above, write a memo to the Facilities Manager giving a reasoned account of why you agree or disagree with his statement.

**(10 marks)**

**Answer Pointers**
Mature organisations often have extensive, expensively serviced machine rooms which have heavy duty air conditioning, comprehensive interruptible power supplies and other facilities as a relic of their mainframe and mini-computer systems. These are often used for housing the PC based server systems which have, in many cases, replaced them.

While these facilities are often of high quality, organisations should address the extent to which this level of environmental support is required for the current generation of server system.

Conversely, organisations which were late to enter the networked computer environment sometimes house server systems in insecure and inadequately cooled areas which exposes the organisations to an increased level of risk.

Organisations should review the level of support required and understand the level of risk they are accepting as a result of this. Aiming to save money for the organisation is an appropriate concern – but this needs to be balanced against the operational needs of the IT service.

The marks for this question were awarded using the following model:

(a)     Up to 5 marks for each of three different examples.
(b)     Up to 2 marks for memo format.
        Up to 8 marks for the content and style of the answer.

**Examiner's Comments**
Around 43% of candidates attempted this question of whom only 50% obtained a pass. This question could be addressed successfully from either viewpoint. The key aspect of the question was a discussion of the management of risk in a business environment. In that sense, there was no "right answer" to the question. Those candidates who performed best in their response to the question used balanced analysis and argument to provide an appropriate appraisal of the issues.

The use of memo format for part b) of the question was intended to allow the candidate to demonstrate that they are familiar with the standard forms of business communication - which is likely to be a core component in the role being tested in this question. A number of candidates did not format their answer appropriately, and were unable to gain the marks allocated.

**Question 3**

3.  *a)*     You are the IT director of a finance company with its head quarters located in London and regional offices in five separate UK cities. Currently the IT department is centralised and takes all decisions relating to IT services. Members of the board have raised concerns over the way the IT department is structured. The board has suggested that a more effective IT service could be provided if the current centralised structure is replaced. You have been asked to address the issue at the next board meeting. You also believe an improved IT service could be provided.

In preparation for the board meeting, identify TWO activities you would place under direct control of the IT department and TWO activities which could be devolved to each of the five regional offices. For each of the four activities, state the potential benefits to the business.       **(16 marks)**

   *b)*     "End User Computing has transformed the way many end users use Information Technology today, compared with thirty years ago."

Briefly discuss this statement in relation to the impact End User Computing has had in the work environment.       **(9 marks)**

**Answer Pointers**
a) Activities under direct control of the IT department could include the following however all reasonable points were awarded marks.

1. Guidelines on the acquisition of hardware, software and consulting services. It makes good business sense to purchase locally, particularly from clients. However, all such purchases must adhere to group standards so that consistency is maintained across all systems (4 marks).

2. Co-ordinate IT human resource development.  Some IT personnel will be working full time in the regional offices.  They should be task managed by local management and career managed by IT management.  This will help ensure the work they carry out is business led and their careers are developed as IT professionals (4 marks).

3. Formulation of group IT strategy. All IT activities need to take place in accordance with the group IT strategy.  Such a strategy must be formulated at group level, with major input from the regions.  The strategy must support the group business strategy (4 marks).

Activities that could be devolved to the regional offices include:

1. First line support for end user computing.  To help ensure a fast and efficient support service, first line support should be placed as close as possible to the end users.  Only when first line support can't solve the problem, should the IT department become involved (4 marks).

2. Local maintenance support for PC hardware and software applications.  Local maintenance support will provide a more intimate response than a remote supplier.  It may well be that a local supplier could be, or could become a client of the organisation (4 marks).

3. Training for PC based applications.  Local training groups should be availed of as this will help reduce travel and accommodation costs associated with training.  It may well be that a local training company could be, or could become a client of the organisation (4 marks).

b). Around three points were expected with up to 3 marks available for each point. Examples are as follows, however other valid points, which were discussed, were awarded marks.

Flatter organisations.  End User computing was not available to middle and senior management thirty years ago.  Today, by availing of End User Computing middle and senior management can sift through, analyse and aggregate information.  Thirty years ago these tasks used to be done by junior managers.  These junior managers along with some middle managers are no longer required, thus flattening the organisation.

Teleworking.  People can now work from other locations (e.g. home).  This has dramatically changed the work environment for those who are full time in the office and for those who are teleworkers.  Fewer people are now in the office on a full time basis, while others may feel isolated.

Productivity.  Productivity gains through End User Computing are difficult to measure, as the gains have been in efficiency and effectiveness.

**Examiner's Comments**
Around 36% of candidates who sat the paper, attempted this question, of whom a very disappointing 41% obtained sufficient marks to reach a pass standard.

(a) 20% of respondents answered this section very well, showing a good understanding of the strategic role IT can have within business and the role both IT and user management should play in helping to ensure a good service in a distributed business environment.  A further 20% of respondents did not fully answer the

question and failed to state the potential benefits to the business and thus were not eligible for the available marks.

(b) Only 15% of candidates who attempted this section displayed an understanding of end user computing. Approximately 50% of others incorrectly equated end user computing systems with core transaction processing systems.

## Question 4

**4.** Electronic mail is a key element of business communication in many organisations.

*a)* Discuss THREE areas of information security risk to which organisations are exposed when staff have free access to electronic mail across the Internet. **(15 marks)**

*b)* With reference to ONE of these areas, discuss how the risk to the organisation could be controlled and managed. **(10 marks)**

### Answer Pointers

a). Candidates should be able to provide a number of examples of this either from their own experience and/or from their awareness of current issues obtained from reading.

Areas of risk cited are likely to include:

- Virus attack – particularly in attachments
- Trojan horse attacks
- Spoofing of email addresses to get employees to disclose confidential information
- Phishing attacks
- Denial of service attacks flooding email system
- Spam presenting improper material to employees (duty of care of employer)
- Uncontrolled distribution of company information by staff
- Staff entering into contracts without authorisation

Up to 5 marks for each of three areas of risk.

b) This part of the question could be met by a combination of training, policy definition and the positive engagement of management in controlling the issues around electronic mail. Up to 10 marks for how one risk could be controlled and/or managed.

### Examiner's Comments

The most popular question, with 95% of candidates making an attempt to provide a suitable answer. Unfortunately there were a few weak answers such that 63% obtained a pass.

With the use of email being used across the world as a business communication tool in IT-enabled organisations, there is a need for IT staff to be able to demonstrate that they can balance the advantages and risks associated with this medium.

The profile of risk associated with email is rapidly changing - so it was left to the candidate to provide evidence of their current understanding. Most candidates who attempted this question provided acceptable examples - although some presented examples which differed only in detail. In these cases, marks were awarded to reflect the overall answer - and candidates did not receive marks twice for the same information.

The second part of the question appears to have caused some problems to candidates. A number of candidates provided an answer which covered all three areas of risk which they had identified in part (a). The question clearly asked for <u>one area</u> to be explored, and candidates are reminded to read the question carefully.

## Question 5

**5.** *a)* The traditional view of an organisation is that information flows through three levels of management i.e. strategic, tactical and operational.

Discuss EACH of the three levels in relation to:
*i)* the information required at each level **(8 marks)**
*ii)* the tasks carried out at each level **(8 marks)**

*a)* Assume you are the managing director of the European division of a large USA software development company. As the person responsible for deciding where to locate the European software distribution centre for your organisation, identify THREE key issues you need to consider and explain why each one is important. **(9 marks)**

## Answer Pointers

a)
i). Information required at each level.

Strategic. The time period is long term. The information needed isn't required instantly. The information needn't be totally accurate. You will never have full and complete information. The breadth of information will be very wide. The information will be high level and not detailed.

Tactical. The time period is short to medium term. The information needed is required sooner rather than later. The information should be very close to accurate. You should have close to full and complete information. The breadth of information will vary between narrow to broad. The information will be summarised.

Operational. The time period is short term. The information needed is required instantly. The information should be accurate. You require full and complete information. The breadth of information will be very narrow. The information will be detailed.

ii). Tasks carried out at each level.

Strategic. Policy setting. Long term planning, with particular focus on the external environment. Market and competitor analysis with a view to leading the organisation in a particular direction.

Tactical. Implement the policy and long term plans set out by strategic management, by producing and implementing short to medium term plans. Monitor progress against plan and adjust accordingly.

Operational. Carry out the day-to-day activities in accordance with short term plans, designed to meet the plans devised at the tactical level.

b) Three points were being sought. Examples are as follows, other reasonable points were awarded marks.

Wage rates (1). Software distributed will be based on customer orders and orders will vary extensively. Their will be a need to employ graduate caliber personnel to undertake this role. The payroll costs will form a major part of the organisation's overall costs, therefore information in relation to wage rates in the various locations being considered needs to be obtained (2).

Telecommunications infrastructure (1). The product (software) can be ordered, paid for and distributed electronically anywhere in Europe. In deciding where to locate the distribution centre, it is essential to know the current status and future plans for the telecommunications infrastructure in the various locations under consideration (2).

Political stability (1). Because your organisation is a USA organisation, the political stability of the locations under consideration is of major importance. You may well decide to locate in a country that has strong political ties with the USA (2).

**Examiner's Comments**
85% of candidates who sat the paper, attempted this question, of whom 77% reached the pass standard.

a) The majority of candidates correctly identified the tasks carried out at each level. Approximately 50% of respondents concentrated on the systems used at each level (e.g. Executive Information Systems, Management Information Systems and Transaction Processing Systems) rather than on the <u>information</u> required at each level.

b) In general, section (b) was answered quite well. Only a small percentage of candidates referred to wage rates, while the majority referred to the need for a good telecommunications infrastructure.

**Question 6**
6.  The organisation for which you work is seeking to replace a large number of its desktop computers, which no longer have sufficient processing performance for the main software packages used by all staff.

    *a)*  Discuss THREE issues which will need to be addressed when selecting a replacement model of PC.

    *b)*  One option under consideration is to move from outright purchase of PCs to leasing. Write a memorandum to the Head of IT outlining THREE points which would need to be discussed before the decision is made.                                                **(13 marks)**

**Answer Pointers**
a) Issues which will need to be addressed could include the following:

*   Benefits of sourcing a single model to reduce maintenance, training and compatibility issues.
*   Obtaining a sufficient increase in performance to benefit the organisation both immediately and until a defined point in the future.
*   Vendor organisation is stable enough to complete the contract and provide support for the product.
*   Specification is high enough to meet the requirements of the software and the end user.
*   Specification is not too high so that the high end facilities are not used productively during the anticipated life of the PC.

Up to 4 marks for each of three issues.

b) The use of a memo format is intended to demonstrate that the candidate can make cogent arguments in a standard business format.

The purchase /leasing debate might include the following elements:

- Obtaining new systems without major capital investment.
- Having a known and consistent cost profile for PC hardware
- maintenance and insurance of the systems should be addressed in the contract discussions
- Ultimate disposal of the systems – with secure deletion of hard drives – should be negotiated. PC systems are likely to have very low residual values and there are likely to be costs associated with disposal..
- Controls over limits to system modification may need to be put in place.
- Responsibility for software licensing needs to be carefully understood.

Up to 4 marks for memo format and style. Up to 3 marks for each of 3 points for discussion.

**Examiner's Comments**
The second most popular question with 92% of candidates selecting the question. Of these 670% reached the pass standard.

The question covers issues which are central to many aspects of IT support, and many candidates provided answers which obviously drew on their own experience in this area. In a few cases, candidates chose to include their views on different commercial products, which had no relevance to what the question was seeking to establish. Candidates were not penalised for this, but they obviously were left with less time to address the real issues.

The second part of the question asked the candidate to discuss the issues around the leasing of PC equipment. A number of candidates provided sound, commercially aware answers to this part of the question - although this level of understanding was far from universal. The memo format was, again, intended to allow the candidate to demonstrate their business communication skills. Many candidates provided well presented memos - although some candidates took no notice of the requirement in the question to "Write a memorandum to the Head of IT" and were unable to obtain the marks allocated for memo format and style.