

**THE BCS PROFESSIONAL EXAMINATION
Professional Graduate Diploma**

April 2002

EXAMINERS' REPORT

Computer Services Management

The number of candidates selecting this option increased slightly this year. Almost all candidates were well prepared and the pass rate increased slightly to an impressive 89%.

Although candidates performed reasonably well, there were some candidates who did not attract many marks due to the brevity of their answers. Whilst there was some indication they knew the subject, much of their knowledge was left unwritten and therefore marks could not be given. As in all examinations, those candidates who structured their answers and read the precise requirements of the question, obtained better marks.

An indication is given below of the points expected; however any valid point which was relevant to the question received marks.

Question 1

You have recently started work for an organisation where the managers use laptop computers to work both at home and the office. The Managing Director of the organisation is concerned that a growing number of laptops are being stolen as the managers travel between their homes and the office. There have been several instances where sensitive and commercially valuable data has been lost and where the manager has failed to take a security copy. To compound matters still further, a number of laptops have become infected by viruses as the managers use the laptops for connection to the Internet.

Write a report for the Managing Director to:

- a) Recommend routine security practices that managers should follow to reduce laptop theft . (6 marks)**
- b) Suggest how the information contained on the laptop could be reduced to a minimum (7 marks)**
- c) Suggest how any remaining data could be protected (6 marks)**
- d) Make suggestions as to how the incidence of virus infection could be reduced (6 marks)**

Of the 94% of candidates who attempted this question 77% achieved a pass standard. The average mark was 12.

Answer Pointers

Although almost all candidates attempted the question only a narrow range of moderate marks were achieved. Of the four sections of the required report, the understanding of virus infections and preventative measures (d) attracted the highest marks, followed by the laptop security practices (a) that should be adopted. The section concerning the possible reduction of data (b) was not answered very well at all, with many candidates being too brief and failing to expand on the points made. Candidates did not obtain marks where impractical or uneconomic suggestions were made, an example being a suggestion that a security guard be employed for every laptop owned by the organisation. Clearly an expensive option.

a) Security practices:

- Do not leave unguarded in a public place
- Do not leave visible through car (or bus) windows or leave on seat whilst driving
- Do not carry laptop in a purpose-made laptop carrying case (obvious what the bag contains)
- Provide incentives/disincentives if laptop not stolen/stolen

(Six marks - one for each point raised and explained, plus an additional mark for quality of argument)

b) Reduction of information

- Keep information only on LAN and only make accessible to managers via data link
- Keep sensitive work on diskette or other media and keep separate from the laptop
- Encourage managers to archive and delete all but their current work
- Use company intranet for dissemination of information, not individual e-mails

(Seven marks - one for each point raised and explained, plus an additional mark for quality of argument)

c) Protection of data

- Password protect
- Encrypt
- Encourage use of LAN
- Keep access software separate from data

(Six marks - one for each point raised and explained, plus an additional mark for quality of argument)

d) Virus protection

- Virus check facility placed on all laptops, auto updated with latest pattern whenever LAN accessed
- Discourage use of Internet downloads (or remove this facility)
- Procedures to advise against opening unknown e-mail attachments
- Education/awareness training for managers

(Six marks - one for each point raised and explained, plus an additional mark for quality of argument)

Question 2

As a result of a merger between two business organisations, the current computer support arrangements of each organisation are being reviewed.

You have been assigned a project which is to examine the way in which Helpdesk services are currently provided, and then to recommend a single solution which will be applied to the entire, new organisation.

a) Write a memorandum to the two Helpdesk Managers, and their staff, introducing yourself and describing the background to your project.
(12 marks)

Build a work plan which will allow you to carry out the review and report back within a three month period. The plan should include a detailed description of your methods and the time allowed for each stage of the project.
(13 marks)

Of the 30% of candidates who attempted this question 93% achieved a pass standard. The average mark was 12.

Answer Pointers

This question draws in a number of different threads of IT management. The key areas are communication, project planning and management - and the way the candidate proposes the decision process should take place.

The memorandum should be presented in memo style - with marks not being awarded to a number of candidates for not producing a memo. There is a need to explain the situation clearly and without bias - so that the staff involved will be happy to give their co-operation to the exercise.

In part b) the time allocated to the project is quite short - so key information will have to be sought in a timely and effective way. A number of candidates proposed hugely detailed exercises which would have taken an impractical level of resources to undertake. Such responses gained few marks.

Methods may be derived from current industry standards such as ITIL - or they can be built from the candidate's own experience and expertise. The principle need is for the methodology to match the situation described - plus any other context supplied by the candidate.

The outcome of such a project should enable the organisation to carry out a restructuring exercise - if that is found to be necessary - using the information that has been collected as a transparent and definitive document.

Part (a) - 12 Marks:

- Up to 2 marks for the use of an appropriate memorandum style
- Up to 3 marks for the background description and the introductory text
- Up to 3 marks for the overall style of the text
- Up to 4 marks for the overall impact of the piece and the likelihood of success

Part (b) - 13 Marks:

- Up to 2 marks for the overview of the work plan
- Up to 4 marks for the description of the methods which would be employed
- Up to 4 marks for the way the timing of the project was proposed and defended
- Up to 3 marks for the degree of credibility the work plan showed

Question 3

Your employer's computer systems have become fragmented over the years and it has been decided that all systems will be physically relocated to one central purpose-built computer centre with offices for support staff and communications links to the company's various offices. A building site has been found and relevant planning consent granted for a two-storey building containing offices, a secure computer room, a restaurant area, a boiler room and a standby generator. Vehicular access to the building is on one side only. Once the building has been completed and the systems transferred, your employer wishes to start charging internal departments for all services used with the aim of keeping usage, and therefore costs, to a minimum.

- a) Giving reasons, describe the ideal location for the computer room within the new computer centre. (10 marks)
- b) Describe what other features should be included within the building design to cater for the use of computing equipment by many staff. (10 marks)
- c) List and describe the elements of the new consolidated computing service that could be identified and charged. (5 marks)

Of the 66% of candidates who attempted this question 73% achieved a pass standard. The average mark was 12.

Answer Pointers

The question was in three parts and the first part, concerning the location of the computer room, was enthusiastically answered and reasonable marks obtained. The second part required suggestions as to the building design, given that it would be used by many staff, all using computers. Although some answers were very comprehensive and demonstrated a practical understanding, many were superficial and raised issues with only tenuous links to the use of computers within a building. Obvious design aspects such as raised floors, server closets and lighting were frequently omitted. The third part of the question raised the issue of charging for computing services and the answers received for this fundamental computer services activity were very disappointing. This prevented most candidates from achieving high marks.

a) Ideal location

- On second floor (for security and flood reasons)/or ground floor if concerns over particular natural disasters local to the area.
 - Away from kitchen or boiler (fire and fumes hazard)
 - Away from standby generator (fuel fire hazard)
 - Distant from reception (improve security)
 - Near to vehicular access (to deliver hardware, consumables etc)
- (Ten marks - one for each point raised and another for each explanation)

b) Other building design features

- Quality lighting (staff using VDUs)
- Raised flooring/concealed ceilings (cabling)
- Cabling closets with a/c (for LAN equipment) (a/c on its own = one mark)

- Tinted glass and blinds (reduce glare on VDUs)
- Anti-static materials (effect on computer equipment)
- Fire security measures
- Duplicate computer room for DR

(Maximum ten marks - one for each point raised and another for each explanation)

c) Charging

- Pages printed
- Computer usage/units used
- Disc accesses/disc space used
- Number of peripherals used
- Level of service provided

(Five marks - one for each point raised and explained)

Question 4

At a recent board meeting, a senior Board member was deeply critical of the service provided by the IT department. The company has been running the same set of desktop software for the past three years, which is viewed as unsatisfactory. The Board member requires all personal computers in the organisation to be provided with the latest versions of the operating system and standard software set, within three months of these products being released.

As the head of the IT department write a report to the Board which;

a) Gives in detail, three benefits and three impacts which the adoption of this policy would have on the users and the company. (12 marks)

b) Provides a comparison of the benefits and of the impacts, then recommends a way forward. (13 marks)

Of the 69% of candidates who attempted this question 96% achieved a pass standard. The average mark was 12.

Answer Pointers

The IT department's principle aim in this case should be the advancement of the organisation's business in the most advantageous manner. It should not be assumed that the criticism by the senior board member is spurious or ill informed - despite the temptation on the part of the IT department to make a spirited defence of the status quo!

When you find yourself in a hole, the best advice is to stop digging.

There may well be significant business advantages for a more rapid rotation of desktop software - provided that this can be supported within the business model and financial structure of the organisation.

The important thing is to show the board that you are receptive to the comments and are willing - indeed, keen - to explore the potential options.

If the board members are to have confidence in you, they will need to be able to trust the way you present information on their options for development. This means the report needs to be clear, unambiguous and understandable to a decision maker who may have limited technical knowledge.

Part (a) - 12 marks

- Up to 2 marks for each of three benefits and each of three impacts that adoption of the policy would have (i.e. 6 marks for benefits, 6 marks for impacts)

Part (b) - 13 marks

- Up to 3 marks for the format of the report
- Up to 5 marks for the comparison between benefits and impacts

Up to 5 marks for the discussion of the way forward from this point

Question 5

You are working in an organisation that uses client-server technology and is organised around five separate IS areas, as follows:

- **A help desk for recording and monitoring of all problems and requests**
- **A technical support department who deal with all mid-range and mainframe equipment and software**
- **A network department responsible for the maintenance of all desktop equipment**
- **An operations department responsible for all aspects of live operation and the configuration management of operational code**
- **An applications department who develop and maintain all applications code irrespective of the platform used**

A business user reports an error that he believes is within the application code resident on a mid-range server.

- a) List in sequential order the departments that would be involved in the resolution of this error. (10 marks)**
- b) Describe the work each department would undertake. (15 marks)**

Of the 40% of candidates who attempted this question 87% achieved a pass standard. The average mark was 13

Answer Pointers

This question was concerned with the departments involved in routine fault resolution. Those who did attempt this question generally achieved high marks, as it provided an opportunity for those with practical knowledge to expound on an everyday occurrence. There was some evidence of candidates running out of time for the second half of the question and they missed the opportunity to collect marks by continuing with an essay format. In order to gain those essential extra marks, future candidates would be advised to consider providing the answer in bullet point form, if they are running out of time towards the end of an examination.

The departments involved and their functions are listed below:

- 1 Helpdesk. They would record the error and maintain basic communication with the user. They would use their best judgement to allocate this to the appropriate department for rectification. Possibly using helpdesk management software they would also keep statistics and MI for use by the IS management

- 2 Technical Support. The helpdesk would be likely to pass this error to Technical Support in the first instance. Technical support are usually responsible for the continued reliable operation of all non-application code, such as operating systems. Possibly in conjunction with the applications department they would determine that the error is within the application code.
- 3 Applications Department. This department would work to determine the cause of the error and its resolution. They would need to obtain a copy of the operation code from the operations department and would need to test the correction, possibly in conjunction with the user. Once the code had been corrected it would need to be formally handed back to the operations department.
- 4 Operations Department. Operations would liaise with the applications department and, once the error has been corrected, implement the corrected code in the live environment and inform the help desk that the work has been completed.
- 5 Help Desk. The helpdesk would monitor problem resolution throughout, communicating with the user and the IS departments as appropriate. At the end of the process the helpdesk would record completion of the error correction.

Marking: Two marks each (maximum 10) for each department identified in the process in the correct order. A further three marks each (maximum 15) for each description of the departmental process. Marks also given for inclusion of the Networks Department, provided the functions/processes described were appropriate.