

THE BCS PROFESSIONAL EXAMINATION

Professional Graduate Diploma

October 2010

EXAMINERS' REPORT

COMPUTER SERVICES MANAGEMENT

General comments on candidates' performance

Most answers were of a higher standard than in recent examinations, apart from those from around 10% of candidates who performed very badly. The importance of studying computer services as practised in organisations cannot be over-emphasised. Candidates are advised that their performance in the examination is likely to be enhanced if, in addition to reading the recommended material, they visit the computer services departments of their own or other organisations. This will put their theoretical knowledge into context and make the whole subject easier to understand and remember.

With some questions, rather than give the required answer, some candidates merely provided a commentary about the question, completely rewrote the question or provided a long, completely unrelated answer. A number of candidates, particularly for Q2, provided answers unrelated to IT, which failed to gain credit. Too many candidates failed either by not reading the question or by not answering all parts. Also, instead of providing a meaningful answer, some candidates spent too much time on introductions and conclusions, writing two or three pages that gained no marks. A number of candidates provided an answer that was effectively illiterate – and completely failed to address the question in any sense.

As candidates had an hour for each question, the examiners were surprised by the high number of brief and unstructured answers. Often, candidates identified valid answer points but then failed to provide further expansion or examples to illustrate those points.

The answer pointers below are for guidance only; to gain full marks, they would have to be expanded. Valid alternative answers that were relevant to the questions set would also attract full marks.

Section A

- A1.** You work within the Computer Services department of a large organisation and have recently been appointed Systems Maintenance Manager. There is a backlog of maintenance tasks amounting to several years' work for your department and the users are dissatisfied with the way IT resources are allocated. They complain loudly and often, at every opportunity, and your line manager has made it clear that your future career depends on how well you manage this situation.

You are also informed that many maintenance changes fail in live operation, even though the users sign off these changes at the testing stage.

- a) Discuss how the resource allocation issue could be overcome. **(8 marks)**
- b) Describe three measures which could reduce the maintenance backlog. **(8 marks)**
- c) Explain, giving examples, possible reasons that the maintenance changes fail in live operation. **(9 marks)**

Answer Pointers

This question required the candidate to demonstrate an understanding of a common computer services problem.

Part a) – Resource allocation

This is a very common situation where users place work on the IT departments and then step back from the responsibility of resource allocation/priority setting. Possible solutions:

- **Categorise the maintenance tasks.** If tasks were categorised into a natural order of priority, for example, regulatory changes, essential business changes, desirable changes, cosmetic changes, etc, the Maintenance Department would then have some guidance. This would be the only advantage, as there would no priority order within each category and the arguments could continue.
- **Spread the resources between different operating parts of the company.** If, for example, there were three main divisions – sales, administration, production - the resources could be split three ways so that each division had even resources. The main disadvantage is that this would not allow for business need.
- **Make the users decide.** Let the users form a Change Control Committee and become responsible for allocating the resources. They could then argue with each other, rather than with the Maintenance Department.
- **Other valid method.**

(Marks: At least two expanded points for maximum 8 marks. Maximum marks could also be gained for a greater number of points in less depth.)

Part b) – Reducing the maintenance backlog

- **Gain budget approval for more resources.** Argue with senior management that the maintenance load can only be reduced if more resources are made available.

- **Make only essential business changes.** Raise issue with senior management so that only essential business changes are performed.
- **Introduce end user computing.** Provide facilities whereby users can make their own queries or develop simple departmental applications.
- **Better application systems.** Develop new systems that match current business needs, reducing the requirement for maintenance.

(Marks: At least two expanded points for maximum 8 marks. Maximum marks could also be gained for a greater number of points in less depth.)

Part c) – Reasons for live failures

- Inadequate testing approach, lack of user involvement or test plan, inadequate test services, etc.
- Inadequate or small-scale test databases/files
- Lack of configuration control
- Poorly trained staff/staff with inadequate business knowledge
- Unmaintainable/unsupported systems
- Lack of user documentation
- Poor standards

(Marks: At least three expanded points, with examples for maximum 9 marks.)

Maximum marks (8+8+9 = 25)

Examiners' Comments

About 60% of candidates attempted this question, which was not answered particularly well. Although Part a) represented a typical computer services scenario, many candidates had little idea how the issue of resource allocation could be approached.

Similar comments apply to Part b). Although the question asked for three measures, many candidates relied on repeating points made in Part a) or provided brief and incomplete answers.

However, Part c) was answered well, with candidates clearly applying their practical knowledge and experience. Even the weaker candidates picked up a few marks.

A2. You are Computer Services Manager for a national supermarket company that uses large-scale IT systems for stock control, logistics, payroll/personnel and customer loyalty management. The Chief Executive, who has a special interest in climate change and green/sustainability issues, wishes to gain good publicity and popularity for the company by lowering its carbon footprint in all departments. The Chief Executive also wants to reduce administration costs and pass on these savings to customers by lowering the prices of goods.

To meet these objectives, you are to propose a new technology strategy which will identify changes within Computer Services that could reduce the carbon footprint **and** reduce costs.

Discuss how you would meet these objectives.

(25 marks)

Answer Pointers

This was a “discuss” question and the candidates were required to apply their knowledge of computer services to the growing demand for sustainable computing. Points raised should have related to computer services actions which would reduce the carbon footprint and/or costs. There were many alternative answers but points that could be mentioned in any discussion included:

- Audit of all operations to see if older systems could be discontinued
- Purge systems of old data
- Increase automated operating
- Discuss with users the possibility of reducing the frequency of standard reports
- Look at alternatives to printing
- Procedures for switching off equipment when not being used
- Look at the economics of replacing older equipment with energy-efficient new equipment – monitors, disk drives, etc
- Review use of servers and other network equipment to see if single units could replace several older multiple units
- Review software licences used and cancel unwanted ones
- Review DR arrangements – could these be reduced in cost, given technology/mobile computing
- Consider all aspects of SLA to identify savings

The mark given was dependent on how closely the answer fitted into each of the following criteria.

Candidate **explained** 2-3 possible IT areas for either sustainable computing or administrative savings but the answer lacked depth. **(0-9 marks)**

Candidate **described** 4-5 IT areas for sustainable computing and administrative savings. **(10-17 marks)**

Candidate **analysed** 5 or more areas for sustainable computing and administrative savings and provided valid and contemporary examples. **(18-25 marks)**

Examiners' Comments

This was answered by only 30% of candidates but there were some enthusiastic answers and some original ideas. However, some candidates concentrated solely on non-IT aspects, such as replacing plastic bags with paper bags; those answers gained no marks. Others ignored either the requirement for administrative cost savings or the requirement for reduced carbon footprint. In consequence there were few balanced answers which addressed both points.

A3. ABC, a national provider of broadband services, has expanded its business very rapidly. However, ABC's internal support processes have not kept pace with the business. There is no help desk software in operation and ABC's staff have little factual information to assist them.

a) Describe how help desk software could assist ABC.

(9 marks)

b) Discuss, using computer services examples, the type of reports likely to be required by the Computer Services Manager, the Help Desk Manager and the Help Desk Assistants.

(9 marks)

c) Explain how the personal views and satisfaction levels of ABC's users could be obtained.

(7 marks)

Answer Pointers

Part a) – Help desk

The candidate was being asked to describe a help desk, explain how it could be used to help ABC to understand the service being provided and identify areas where attention should be directed.

Description of help desk. The following non-exhaustive points could be included in the answer:

- A central facility where all faults are recorded and advice is given
- Faults can be logged against individual hardware and software items via an asset register. Most help desk packages include an asset register facility.
- Staff allocated to log all help calls, direct them to the appropriate resource and update store managers with progress
- Help desk staff able to understand the urgency of the call and monitor progress with Computer Services
- Help desk staff may themselves be able to provide help with very simple and common calls (logging on, renewing passwords, planned downtime, etc)
- Help desk statistics can provide an absolute record of all service communications
- Statistics can also indicate trouble spots in relation to hardware and software
- Can be used to suggest/direct user and IT staff training
- Gives early warning when common errors are reported from more than one area

(One mark for each key point identified and described. Maximum nine marks.)

Part b) – Type of reports

The CSM is likely to require high-level reports for use at the strategic level. These reports should identify trends in the provision of broadband services, examples being failure rates at exchanges used, staff responses, average connection speeds achieved, growth of demand for broadband services, etc. This information could be used to determine future equipment provision, plan for staffing changes, etc.

The help desk manager would require reports at the tactical level. These should show performance of the service at the weekly or monthly level, such as the average time taken to resolve errors. This would enable resources to be diverted where necessary, shift patterns to be changed and items of equipment to be replaced according to the level of failures.

The help desk assistants would require reports to assist them in the day-to-day work. This could include outstanding errors, contact details of those reporting errors, availability of engineers to repair faults, etc.

(Three marks for each level, maximum nine marks.)

Part c) – Measuring satisfaction levels

Because personal views are required, any method whereby subjective views can be recorded would be acceptable. An on-line or paper questionnaire could be used or a focus group of a cross section of users could be engaged. Other methods are acceptable.

Typical questions could be:

- Do you believe that ABC's staff have sufficient technical knowledge?
- Is the service generally reliable?
- Is the performance adequate for you?
- Are you content with the level of communication provided by the support staff?
- Are they also polite and respectful?
- If promises and undertakings are given, are they always met?

(Seven marks.)

Maximum marks (9+9+7 = 25)

Examiners' Comments

This was the most popular question, answered by 95% of candidates, and was generally answered well. The highest marks were given to candidates who demonstrated a knowledge and understanding of help desks beyond that of the "man in the street". Answers with high marks would therefore have mentioned the link between help desks and asset registers; the use of statistics to identify failing hardware/software; and the need for training in areas with the highest incidence of help requests.

Section B

- B4. The new Director of Services in your organisation is responsible for the successful operation of all support services in the company, including Finance, Human Resources, IT Services and Logistics.

In her previous company she worked within a process-driven environment where service requirements and support activities were formally defined using a structured, standards based approach. She is surprised to find that these matters are dealt with less formally in her new company, with many decisions being based on personal discussions and informal arrangements.

She has asked you to lead a team which will introduce a more accountable structure. The new structure should have the potential to become certified to an international standard for service management.

a) Write an article for the company intranet which introduces the concept of a formally structured service environment. You should state any assumptions you make about the existing service environment or the organisation itself.

(10 marks)

b) Discuss THREE areas where you believe the organisation will need to take particular care in this cultural change. For each area, suggest a way in which the project team can help ensure the successful development of the process structure.

(15 marks)

Answer Pointers

Section a):

Up to 5 marks can be awarded for an appropriate style and approach being taken with the article. Up to 5 marks can be awarded for how the approach taken by the candidate fits with the requirement expressed in the question and the stated assumptions introduced by the candidate.

- The need is for a “popular” article for the company Intranet – so should be formatted and structured with that outcome in mind.
- It must get across to staff the nature and extent of the proposals that the company is presenting – what will change, how will it change and what will be the impact
- It should be clear on what will happen and not give rise to confusion, uncertainty or fear. Change in an organisation brings risk – which can be managed with clear and informed information being provided to staff in a timely and approachable way.

Section b):

Up to 5 marks can be awarded for each of THREE areas where particular care is needed by the organisation in the way the cultural change is approached. Examples of this could include – but are definitely not limited to – the following:

- The new Director will have a mandate for change from senior management, so the outcome is “non-negotiable”
- Cultural change brings risk, which needs to be carefully and visibly managed
- If handled badly, existing working arrangements may “break” before new structures can be introduced

Candidates should note that the project team – being composed of existing staff – holds a key role in delivering the changes, as they have an intimate knowledge of the organisation and are in a position to interpret and inform on matters specific to the company.

Examiners' Comments

The requirement in part (a) is for a popular article suitable for a company intranet. A number of candidates failed to address this – and answered in the form of a narrative discussing what they understood by a formally structured service environment. Those who failed to format the answer appropriately lost marks as – although credit was given where appropriate for the technical information – the question was testing the ability of the candidate to present information in an approachable style.

In part (b) the aim is to demonstrate that the candidate can understand, interpret and manage the risks that are inevitable in the introduction of service change. A few candidates gave very good answers to this section, and this was reflected in the marks given.

B5. A company laptop has been stolen from the car of a senior member of staff. Sensitive business documents were stored on the laptop. As a result of the theft, the company has decided to review its policy regarding information security and mobile computing devices. The Head of Information Services has asked you to carry out the review and report back with a set of proposals within one month.

- a) As the IT Operations Manager, discuss how you would approach this task and ensure that your proposals reflect the core business requirements of the organisation. You should state any assumptions that you make about the company and its operating environment.

(13 marks)

- b) Taking your assumptions into account, describe THREE possible recommendations of the review which you believe would give immediate benefit for the minimum cost.

(12 marks)

Answer Pointers

Section a):

Up to 3 marks can be awarded for the style of the approach

Up to 5 marks can be awarded for the coverage of core business requirements

Up to 5 marks can be awarded for the nature of the solution given by the candidate

Candidates should note especially that:

- In the context of the question, you are the IT Operations Manager, but information security covers many other aspects of the corporate environment – you need to explain how this additional expertise is to be captured.
- There is a need to collaborate across the various interest groups in the organisation and ensure that the solution is not a solely technical security one – but that it reflects the practicalities of what the company and the staff are seeking to achieve.

Section b):

Up to 4 marks can be awarded for each of THREE recommendations

- Technical fixes will include encryption of mobile data resources, limiting local access to sensitive data outside the working environment – replacing it with on-demand access to protected central data-stores

- If the candidate is to score high marks, the business requirements must be demonstrably understood and reflected in the comprehensive nature of the solutions proposed.
- The recommendations should reflect the assumptions stated by the candidate. The solutions must reflect the cultural, technical business and legal constraints implied by the assumptions.

Examiners' Comments

This was a popular question, which was attempted by the majority of candidates. There has been significant publicity in recent years about similar events to the one described – and most candidates clearly had at least a basic understanding of the issues.

Those candidates who scored well generally provided answers which stepped outside the merely technical – providing a policy which could be seen to reflect both the wider requirements and the constraints of the organisation.

Candidates who regularly read the trade-press and technical news magazines will gain a current understanding of the issues discussed in this question. This will help them both in answering such questions and in their development as competent IT professionals.