BCS THE CHARTERED INSTITUTE FOR IT

BCS HIGHER EDUCATION QUALIFICATIONS
BCS Level 5 Diploma in IT

IT SERVICE MANAGEMENT

March 2016 – Morning
Time: TWO hours

Answer **any** FOUR questions out of SIX. All questions carry equal marks.

Answer any Section A questions you attempt in Answer Book A
Answer any Section B questions you attempt in Answer Book B

The marks given in brackets are **indicative** of the weight given to each part of the question.

Calculators are **NOT** allowed in this examination.

Section A

Answer Section A questions in Answer Book A

General comments on candidates' performance:

The standard was high for this examination, with 75% of the candidates achieving a pass. However, the evidence shows that, a number demonstrated poor knowledge of IT, particularly as some of the questions set were typical of everyday workplace situations.

Future candidates are advised to compare the syllabus content with their work experience.

A1

a) Describe the main functions carried out by EACH of the following computer based information systems:

i) Transaction processing systems **(5 marks)**

ii) Office automation systems **(5 marks)**

iii) Expert systems **(5 Marks)**

b) Explain THREE ways in which management information systems can impact on the work of middle managers.

(10 Marks)

Answer points:

Part a)

Transaction processing systems: support the monitoring, collection, storage and processing of data from the organisation's basic business transactions, each of which generates data. (5 marks)

Office automation systems: typically support clerical staff, lower and middle managers, and knowledge workers, by enabling them to develop documents, schedule resources and communicate. (5 marks)

Expert systems: Attempt to duplicate the work of human experts by applying reasoning capabilities, knowledge and expertise within a specific domain. (5 marks)

To gain full marks, the above points would need to be expanded. Note that relevant points, other than those above, were awarded marks.

Part b)

Management information systems may reduce the number of middle managers an organisation requires. (3 marks).

Management information systems can provide middle managers with more accurate, succinct and timely information with which to take decisions. (3 marks).

Management information systems can facilitate better supervision of geographically dispersed employees and teams. (4 marks).

To gain full marks, the above points would need to be expanded. Note that relevant points, other than those above, were awarded marks.

Examiners' comments:

This question was attempted by approximately three quarters of those candidates who attended. Around half the candidates who attempted this question attained or exceeded a pass mark.

A wide range of quality was found in the nature of the answers, with some very good material being presented. In general, the evidence shows that candidates who scored poorly gave very brief answers for each section and did little to address the detail of the question. The words "Describe" and "Explain" in the question were intended to direct the candidate to an appropriate response.

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A2

a) Describe THREE reasons why it is important for senior managers to take an active involvement in the governance of an organisation's information systems.

(12 Marks)

b) Some organisations use prototyping as a system development method.

Describe TWO circumstances in which this method would be suitable and TWO circumstances in which it would be unsuitable.

(13 Marks)

Answer points:

Part a)

Relevant points are as follows and other relevant points were awarded marks.

- Management, not technology, is the critical issue when it comes to successful selection, deployment and use of IS, particularly the need to integrate with current systems and practices.
- IS plans and business plans cannot be aligned without the active involvement of senior managers in the governance of IS.
- IS is now a fundamental resource for many organisations wishing to fulfil their organisational strategies; therefore it requires the engagement of senior managers in its governance.
- In many organisations IS represents the largest investment in capital and day to day expenditure, therefore requiring the engagement of senior managers in the governance of IS.

4 marks for each of the three points, or valid alternatives, put forward.

Part b)

Relevant points are as follows. Other relevant points were awarded marks.

Appropriate:

When developing systems that are required to solve unstructured problems.
When users find it difficult to articulate their requirements.

Inappropriate:

When developing large scale systems.
When developing systems with interface to other systems.

Examiners' comments:

This question was attempted by approximately three quarters of those candidates who attended. Around half the candidates who attempted this question attained or exceeded a pass mark.

Few very good answers were obtained from candidates and a number of extremely poor answers were presented. The evidence shows that many candidates gave only the most skeletal and generic answers, scoring very low marks.

A number of candidates lost marks because the number of examples presented in each section did not match the numbers requested in the question.

A3

a) You are the project sponsor for developing a transaction processing system. After carefully reviewing the user requirements specification, you notice that some critical functionality has been omitted. Also, some requirements are inaccurate and others are unclear. However, you are coming under extreme pressure from the project manager and the project board to sign-off the user requirements specification. They are concerned that, if you fail to sign-off, you will put the entire project at risk, as the business needs dictate that the time-frame is not negotiable.

Explain and justify the course of action you should take.

(15 Marks)

b) In the context of a retail chain, discuss the advantages and disadvantages of central processing versus distributed processing.

(10 Marks)

Indicative answer points.

Part a)

As project sponsor you have requested, and been given, organisational resources to deliver the benefits from the system, whereas the project manager has been tasked with delivering the system in accordance with the specification. It is now clear that a major part of the overall system specification, i.e. the user requirements specification, is not fit for purpose and therefore you will not be able to deliver the expected benefits from the system.

Should you sign off on the user requirements specification, the transaction processing system that will be delivered will not contain the functionality required by its users. This will cause serious problems for the organisation when trying to carry out its day to day activities, thus having a major negative impact on business performance. You, as project sponsor, will be held accountable for this failure.

You have no option but to refuse to sign-off on the user requirements specification. In doing so, you need to inform senior management of the organisation that to go ahead with the system as specified in the user requirements specification will result in major problems for the organisation in carrying out its day to day activities. The alternative is to continue to run the organisation using its current systems until an investigation is carried out to determine why the user requirements specification has so many errors. Only upon completion of the investigation should you, as project sponsor, recommend to senior management what action to take. Above all, you should not recommend a solution that does not conform to user requirements.

Part b)

Assuming two advantages and two disadvantages for both centralised and distributed processing – 2.25 marks each.

Central Processing

Advantages:

Control over all backup & recovery.
All data and report production is managed from one location.

Disadvantages:

If system goes down ALL stores are affected.
Less likely to satisfy specific local needs.

Distributed processing

Advantages:

If a system crashes in one store, only that store is affected.
Local reports can be designed and printed locally.

Disadvantages:

More difficult to manage from an organisation-wide perspective, as local IT and business professionals may tend to place local IT and business needs ahead of organisational IT and business needs.
Need for regular auditing of IT standards and policies in each location.

Examiners' comments:

This question was only attempted by around a fifth of the candidates who attended with a pass rate of only around 20%.

There is evidence that the responses for this question were not at the standard expected in an examination at this level.

The question covers areas of professional expertise which are of vital importance both to the industry and to society in general.

Part B

B4.

Following the theft of equipment from a server room in your organisation, you, the IT Operations Manager, are asked by the Managing Director to review the physical security of the facility.

a) Describe the THREE aspects of physical security that you think are the most important in a small to medium scale organisation.

(12 marks)

b) In a memo to the Managing Director, explain in non-technical terms how you would implement the physical security aspects you identified in Part a) of your answer.

(13 marks)

Answer points:

Part a)

For full marks, three of the following aspects (or valid alternatives) were required, complete with an appropriate description:

- Locked doors
- Key management
  Staff and visitor identification
- Non-labelling of IT rooms
- Physical access logs
- Security guards
- Formal security policy

(3 descriptions required, 4 marks each.)

Part b)

An answer was required in memorandum format and using the requested non-technical terminology. (3 marks).

Some form of explanation would be required, including the appointment of someone to implement the security measures, the preparation of a project plan, the communication of the planned measures to appropriate staff and the reporting of progress. (5 marks)

Costs and timescales would also need to be included, together with an assessment of risk versus the cost benefits of implementation. (5 marks)

Examiners' Comments

All candidates (100%) attempted this question, with Part a) being answered particularly well.

For Part b), the majority of candidates provided their answer in memo format and used the requested non-technical terminology. Few candidates made reference to costs in relation to risk.

B5.

You are recruiting a new member of staff to join an existing IT operations team in your organisation.

a) Discuss THREE essential steps you would take during the recruitment process to ensure that the new staff member will not put the security of your data at risk.

(15 marks)

b) Describe in detail how you would manage the selection and interview process.

(10 marks)

Answer points:

Part a)

Up to 5 marks for each of 3 essential steps (other valid steps were credited).

- Use of references
- Background check – criminal record
- Professional qualification – code of practice

Part b)

Up to 5 marks for the selection and short-listing process.
Up to 5 marks for the interview process.

Points that could be covered included, but not exclusively, the following:

- Use of standard set of questions
- Use of anonymous selection process to avoid bias
- Matrix for marking candidates in standard and transparent manner
- External representative from (e.g.) HR to ensure interviews carried out fairly
- Adherence to equal opportunities legislation regarding age, race, religion, gender, disability, etc.

Examiners' comments:

78% of the candidates who sat the examination attempted this question, with Part a) being answered well.

Part b) was not answered so well. The evidence shows that a number of candidates were unable to distinguish between the selection process and interviewing.

B6.

You are a software consultant who has been employed to introduce a new computerised workflow system into a small manufacturing company.

You quickly realise that there is a serious breakdown in communication between the three groups of staff who will be using the new system. You feel that the introduction of the new system is an attempt to resolve issues that are not software related – and that the implementation will almost inevitably fail.

a) In a letter to the head of the company, outline your concerns about the project as currently envisaged.

(12 marks)

b) Write a proposal for the company that addresses the issues of poor communication between the groups of staff. You should state any assumptions which you make.

(13 marks)

Answer points:

Part a)

Candidates were awarded up to four marks for the style and sensitivity of the approach used. Clearly, the consultant needs to put the concerns tactfully and positively.

A further eight marks were given for identifying the possible non-software concerns. These could include personality clashes, mis-communication, optimistic ambitions, lack of investment, poor assessment of time and costs.

Part b)

Candidates were awarded up to three marks for the style of the proposal and ten marks for explaining how the issues might be addressed. The consultant would need to have considerable skills in organisational management and negotiation and to be aware that the organisation could have employed him/her just to divert attention away from the non-technical factors.

Examiners' comments:

Whilst only 34% of candidates attempted this question, 93% reached a pass mark standard, with Parts a) and b) both being answered well.