

BCS THE CHARTERED INSTITUTE FOR IT
BCS HIGHER EDUCATION QUALIFICATIONS
BCS Level 5 Diploma in IT

March 2016 Sitting

EXAMINERS' REPORT

Professional Issues in Information Systems Practice

General Comments on candidates' performance

The pass rate for this sitting is comparable with recent sittings for this paper. The larger centres all achieved a reasonable pass rate.

There was an increase in the number of no-shows, i.e. candidates who registered but then did not present themselves for the examination. This is a change compared to a fall in the number of no-shows in recent years.

There are students who are achieving very good marks on this paper, which illustrates a good understanding of the material and appropriate preparation. However, there is also a notable number of candidates who achieve very low marks on this paper, illustrating a problem with preparation for the exam. Further, there are students who are only attempting three instead of the required four questions. The examiners can only repeat previous statements about the need to prepare to take the exam so that candidates use their time and money sensibly.

In terms of the candidates' work in the exam and the preparation, it is important for the candidates to:

- Read the question carefully and write an answer that responds to the items asked in the question.
- Structure the answers to the questions so that they correspond to the different parts. This will help candidates show that they understand why the answer is relevant to the question.
- Expand on answers to questions. Simply listing key words related to the issue will not gain many marks as there is little depth of understanding shown. Where a question asks for an explanation, description or discussion, candidates should be prepared to go beyond simple definitions.
- Study the recommended reading resources for this topic. Where a candidate takes classes with a study centre, take time to utilise the additional learning resources and class discussions of the topics.

The following pages list each question with some examples of points that would be relevant when answering the question. There are also some comments from examiners for the questions.

- A1. a) According to its Royal Charter, what is the primary purpose of the BCS? **(5 marks)**
- b) List and briefly explain TWO ways in which BCS advances knowledge of computing. **(2x5 marks)**
- c) The BCS provides **Continuing Professional Development (CPD)** services to individual members. List and briefly describe TWO ways in which the BCS provides **CPD**. **(2x5 marks)**

Answer Pointers

In part (a), candidates should discuss that the primary purpose is to promote the study and practice of Computing and to advance knowledge and education therein for the benefit of the public.

In part (b), the candidate should have demonstrated an awareness of two different types of activities, such as the following:

- The Computer Journal - that presents the results of research carried out in industry, research establishments and universities worldwide.
- Specialists Groups – that bring together people with interests in specific areas and spread knowledge of good practice etc. This can include organising conferences.
- Public Lectures – sponsorship of lectures by distinguished researchers in computing. An example is the annual Roger Needham lecture.

In part (c), the candidate should have described two different ways, such as:

- All BCS members receive a copy of the ITNOW Magazine to provide awareness of new developments and current topics of interest to the profession.
- Opportunities for development of experience through engaging in meetings and activities through its branches and specialist groups.
- BCS offers a service for members to revalidate their skills every five years, e.g. the SFIA*plus* framework.

Syllabus Section: Professional Institutions.

Examiners' Comments

The question was attempted by a majority of the candidates, with some excellent answers, but only a low number achieved a pass mark.

The answers were of a mixed standard where students lacked knowledge of what was being asked. There were cases where candidates demonstrated a reasonable understanding of the subject and received better marks.

Where candidates failed to achieve a pass mark on this question, there are recurring problems similar to those of last year. For example, answers were not structured in accordance with the question and the students just wrote a selection of paragraphs with no clear separation of the different sections. Some answers for (b) were more relevant for (c), and vice versa. This demonstrates that students do not always read the questions correctly or believe that by including extra sections, they might be awarded a higher grade. Once again the same comment can be made that only parts of the question were addressed in some cases.

- A2. a) Provide THREE reasons why a manager should **delegate**. (6 marks)
- b) Briefly describe the purpose of each of the following psychometric tests:
- i) ability tests; (3 marks)
 - ii) aptitude tests; (3 marks)
 - iii) personality tests. (3 marks)
- c) One effect a new information system has on an organisation is the probable need to change job structures and functions. Such change is often resisted by employees. In many cases the resistance is based on fear rather than knowledge of the truth.
- For such a scenario, explain TWO methods an employer can use to deal with employees who are resistant to change. (10 marks)

Answer Pointers

In part (a), the candidate should have discussed issues such as those in the following list. For full marks, detail needed to be provided beyond just identifying the issue. Other relevant points would have been awarded marks.

- A manager's time is limited.
- Managers rely on others with specialised skill and knowledge.
- It aids staff development and succession.
- It provides staff with a degree of independence and the right to make judgments.
- It helps build team spirit.

In part (b), the candidate should have identified points such as the following. Again, there needed to be some description beyond the basic point.

- (i) Ability tests attempt to measure an individual's ability in a general area, such as numerical or verbal skills.
- (ii) Aptitude tests attempt to measure a person's potential to learn the skills needed for a job.
- (iii) Personality tests attempt to assess the characteristics of a person that significantly affect how they behave in their relationships with other people.

In part (c), the candidate should have explained two different points, such as the following. Other relevant points, appropriately explained, would have been given credit.

- Communication, early and throughout the process. Explain why the new system is being introduced, the benefits it will bring and the changes it will bring to job roles. This will help alleviate employees' fear and the spreading of unfounded rumour.
- Provide training in the use of the new system so that employees' fears about not being able to use it will be minimised.
- Involve employees in the design of the new jobs that will be required under the new systems.
- Negotiate new terms and conditions if the new system warrants this.
- Introduce a program of stress management to help employees overcome their fears.

Syllabus Section: Human Resources

Examiners' Comments

This question was attempted by a majority of the candidates and overall there was a better pass rate for this question.

Overall, part (a) was well answered by the majority of respondents.

Part (b) was not well answered by the majority of respondents. There was a distinct lack of knowledge displayed in the responses with many candidates unable to distinguish between aptitude and ability tests.

Part (c) was well answered overall, however a number of respondents incorrectly focused on "job design" and "team structure" as core solutions.

- A3. a) Explain what is meant by a **limited company**. **(4 marks)**
- b) When a new private limited company is incorporated, it is necessary to submit two documents: the **Memorandum of Association** and the **Articles of Association**.
Describe the purpose of these two documents. **(9 marks)**
- c) Provide THREE advantages and THREE disadvantages of a functional structure for an organisation. **(12 marks)**

Answer Pointers

In part (a), the candidate should have discussed the key parts identified by the following. Other relevant points were considered.

- A limited company has a corporate legal identity.
- The ownership of a limited company is divided into a number of shares. The shares can be traded.
- If the company incurs legal liabilities, the shareholders have no obligation to pay these.

In part (b), the answer should have demonstrated an understanding of the two documents. Example points are listed below.

- The Memorandum of Association is a short document that confirms the basic details about the company, including the name, country of registered office and the authorized share capital. The document should be signed by the founding shareholders.
- The Articles of Association are more detailed and explains the rules that govern the running of the company. These include the number of directors, how the directors should be appointed and removed, what their powers are and what happens when shares are to be issued. The document also specifies the process to be followed if the articles are to be modified. An advanced answer might observe that there is a standard set known as Model Articles, formerly Table A.

In part (c), the following is a suggested list – other relevant points were accepted.

Advantages:

- Centralised decision making helps provide each function with an organizational perspective.
- Pooling of specialists enhances coordination and control.
- Facilitates specialist career development.

Disadvantages:

- Specialists can develop a narrow functional orientation and consider themselves part of an “ivory tower” rather than an integral part of a bigger organisation.
- Functional area conflicts will arise more frequently.
- Differences in functional goals can reduce communication and coordination between functions.
- Difficult to establish organisational wide performance metrics.

Syllabus Section: Organisations and Their Structure

Examiners' Comments

This question was attempted by a majority of the candidates and overall there was a better pass rate for this question.

Most candidates provided two of the relevant items for part (a), but very few discussed all three areas. Candidates who answered part (b) of the question, generally did so very well. For part (c), candidates who demonstrated an understanding of a functional structure provided good answers. However, such candidates were in the minority.

- B4. a) Employees of SoftNet Software plc work a five-day week over a 52-week year. They are entitled to 28 days of company holiday including 8 days of public holiday. Assume that on average 20 days a year are unproductive due to various reasons such as staff training and seminars. In accordance with government regulations, employers must pay social security and pension contributions equal to 8% of total salary.

Calculate the average direct cost of one day's work for a **Team Leader** earning £40,000 per year and a **Programmer** earning £25,000.

State explicitly any assumptions you make. **(10 marks)**

- b) SoftNet Software plc bought a file server for £25,000. The useful life of the server was expected to be 5 years. Due to upgrading plans for all the computer equipment, the file server was sold to another software development company for £12,000 after three years.

Calculate the depreciation amounts and explain the effect of this transaction on SoftNet's accounts using the following two methods:

- Straight line method. **(7 marks)**
- Declining balance method. **(8 marks)**

Answer Pointers

For part (a), the following calculation would have been an appropriate set of calculations.

Number of days worked = $(52 \times 5) - (28 + 20) = 212$ days

Total direct cost of TL = $40,000 \times 108\%$ (or 1.08) = £43,200

Direct cost per day of TL = $43,200 / 212 = £204$ per day

Total direct cost of programmer = $25,000 \times 108\%$ (or 1.08) = £27,000

Direct cost per day of programmer = $27,000 / 212 = £127$ per day

Syllabus Section: Management Accounting

For part (b), the following would have been an appropriate basis for the answer.

After 3 years the server's book value would be £10,000 using straight line method while it was sold for £12,000. This will be recorded as a profit of £2,000.

Year	Depreciation	Book Value
Year 0		25000
Year 1	5000	20000
Year 2	5000	15000
Year 3	5000	10000
Year 4	5000	5000
Year 5	5000	0

After 3 years the server's book value would be £12,800 using declining balance method while it was sold for £12,000. This will be recorded as a loss of £800.

Year	Depreciation	Book Value
Year 0		25000
Year 1	5000	20000
Year 2	4000	16000
Year 3	3200	12800
Year 4	2560	10240
Year 5	2048	8192

Syllabus Section: Finance

Examiners' Comments

This question was attempted by approximately half of the candidates, and there was a reasonable pass rate.

Part (a) was generally answered well, although there were some common mistakes regarding the issue of the number of days worked, particularly with the issue of public holidays. Part (b) had some good answers, but there were candidates who were only able to comment on the use of straight-line depreciation. The declining-balance form of depreciation was not covered as well by the candidates.

- B5. a) Explain THREE different ways that the UK Data Protection Act 1998 provides protection for individuals. **(15 marks)**
- b) Explain the role of the UK Office of the Information Commissioner with regard to the UK Data Protection Act 1998. Illustrate your answer with an example of how the Information Commissioner's Office has used its powers. **(10 marks)**

Answer Pointers

For part (a), appropriate ways would include:

- The UK Data Protection Act 1998 states that personal data held by an organisation about an individual should be accurate and up to date. Individuals have the right to get incorrect information corrected.
- The UK Data Protection Act 1998 gives individuals the right to know what personal data is held about them, as well as the right to access personal data held about them by an organisation. A fee may be charged to access the personal data.
- The UK Data Protection Act 1998 states that personal data held by an organisation should be relevant for the purpose for which it is held and not be held longer than necessary.

In part (b), a description should explain issues including the following.

The UK Office of the Information Commissioner provides guidance and advice regarding the UK Data Protection Act to individuals and organisations.

The UK Office of the Information Commissioner has enforcement powers regarding misuse of personal data by organisations that includes investigating suspected breaches of data protection law, applying financial penalties and bringing criminal prosecutions without going through the CPS.

Several possible examples are discussed in the book. For example, Sony had a monetary penalty of £250,000 when it was found to have failed to keep software up to date, which enabled a hacker to attack the PlayStation Platform, thus compromising personal information for millions of customers.

Syllabus Section: Legal Obligations

Examiners' Comments

This question was attempted by approximately half of the candidates, but there was a low pass rate.

Candidates answered part (a) reasonably well, showing awareness of the protection provided by the UK Data Protection Act 1998. Candidates generally answered part (b) poorly, showing limited awareness of the role of the UK Office of the Information Commissioner with regard to UK Data Protection Act 1998.

There were candidates who only answered parts of the question, therefore limiting their ability to achieve a pass mark for the question.

- B6. a) Explain the law relating to the sending of 'spam' to individuals within the European Union. **(8 marks)**

How does this law differ from the corresponding law in the USA? **(4 marks)**

- b) Briefly explain the responsibilities of Internet Service Providers (ISPs) under the European Directive 2000/31/EC in relation to customer content on their servers. **(8 marks)**

- c) Suppose that an internet site in the USA, hosted by an American ISP, contains a statement by someone from France about a businessman living in the UK that would be considered defamatory in the UK but not in the USA. For example, the businessman in the UK might be accused of fraud.

Briefly describe the jurisdiction issues related to this case and the potential action the businessman in the UK can take to defend himself. **(5 marks)**

Answer Pointers

For part (a), the outline reasoning would include the following.

Unsolicited e-mail can be sent to individuals (as opposed to companies) only if they have previously given their consent. It is unlawful to send unsolicited e-mail that conceals the address of the sender or does not provide a valid address to which the recipient can send a request for such mailings to cease. If an email address has been obtained in the course of selling goods or services, the seller may use the address for direct mailings, provided that the recipient is given the opportunity, easily and free of charge, with every message, to request that such mailings cease.

In the USA, it is legal to send spam provided that the person sending the spam has not been informed by the recipient that they do not wish to receive spam and the spam contains an address that the recipient can use to ask that no more spam be sent.

For part (b), these regulations identify three roles that an ISP can play, namely mere conduit, caching and hosting. Under these regulations, ISP's have no legal liability arising from material with respect to which they are acting as a mere conduit or which they are caching. With regard to content that they are hosting, they have no liability provided that:

- it did not know anything that should have led it to think that something unlawful might be going on; or
- when it found out that that something unlawful was going on, it acted expeditiously to remove the information or to prevent access to it, and
- the customer was not acting under the authority or the control of the service provider.

For part (c), the candidate should note that Jurisdictions are legal regions. The internet creates a global issue as content created in one region can be read in another. There are three potential jurisdictions here: that of the author, the complainant and the ISP. A court in the USA will not enforce UK law in such cases, so it is possible that the businessman should take action in the UK but this will only be possible if the ISP has a legal presence in the UK.

Syllabus Section: The Internet

Examiners' Comments

This question was attempted by fewer candidates and overall had a lower pass rate.

Candidates generally answered part (a) reasonably well, demonstrating an understanding of the law in this area both in the UK and USA. Most candidates answered part (b) reasonably well, demonstrating an understanding of the Directive. Candidates generally answered part (c) rather poorly showing limited awareness of the jurisdictional issues.

There were candidates who only answered parts of the question, therefore limiting their ability to achieve a pass mark for the question.