

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

March 2017 Sitting

EXAMINERS' REPORT

Professional Issues in Information Systems Practice

The pass rate for this sitting was comparatively good and is in line with some of the more recent pass rates for this module. However, approximately 25% of candidates gained a mark less than 30%, which is an increase on the previous sitting; such candidates are not properly prepared for the exam and would do better to take further study before entering for the exam.

The number of candidates who register but then fail to attend the exam has risen again to 20%, compared to 16% in 2016 and around 10% in 2015.

There is a repeat of the same reasons for candidates who fail this module or obtain low marks. The main reasons are:

- Not addressing the actual question.
- Only addressing parts of the question;
- Not structuring the answer in relation to the question;
- Not providing appropriate detail/content in the answers.

Candidates should pay attention to the possible marks for parts of the question and structure the detail in the answers appropriately. It is common to see brief answers for parts of a question that have a higher mark and, therefore, needs more explanation and discussion.

It is also important that the answers are structured to match the different parts of the question. Some candidates write general content on the main theme of the question, but do not indicate which parts of their answer relates to the parts of the question. Candidates should focus their answers to the relevant parts of the question.

It would be good for the centres that teach students the material for this module to continue to work with candidates on their approaches to questions.

Section A

A1. This question is about the **Royal Charter** and the **Code of Conduct**.

- a) The BCS Royal Charter sets out the purpose of the institution; briefly describe this purpose. **(5 marks)**
- b) The BCS's Code of Conduct is divided into FOUR sections. Name the FOUR sections and discuss the relevance of each section to professional practice. **(4 x 5 marks)**

Answer Pointers

Part a)

Discussion of promoting the study and practice of Computing and to advance knowledge and education therein for the benefit of the public.

Syllabus Coverage: Professional Institutions, 1.2.

Part b)

Answers should be able to identify the four sections and discuss the section and its relevance to the overall issue of professional practice. Some outline items are mentioned below, but expanded discussion was necessary for high marks. Better answers showed awareness that the actions of professionals are guided by the Code of Conduct.

1. The Public Interest:

For members to be aware of and comply with aspects of the law and regulations that govern acting in the public interest; safeguard public health, protect the environment, have due regard for privacy and human rights and avoid discrimination.

2. Professional Competence and Integrity:

Individuals should only undertake work for which they are competent; members should also keep their professional skills up to date and be familiar with the legislation that is relevant to their professional activities.

3. Duty to the Relevant Authority:

Members should carry out their professional duties with 'due care and diligence', behaving professionally towards relevant authorities and avoiding conflicts of interest, disclosing confidential information without permission, misrepresentation etc.

4. Duty to the Profession:

To uphold the reputation and good standing of the BCS in particular, and the profession in general.

Syllabus Coverage: Professional Codes of Conduct, 8.1.

Examiners' Comments

The answers were of a mixed standard. Most students were knowledgeable of the Royal Charter and the four sections of the BCS Code of Conduct. Some students did not use appropriate headings to make it clear what was being discussed. Most answers demonstrated very good knowledge of the issues, whereas other answers were brief and only able to highlight some basic items about the topics.

A2. This question is about **appraisals** and **SFIPlus**.

- a) Most appraisals are carried out by the employee's immediate supervisor. The immediate supervisor may not get to see every detail of how the employee carries out his/her tasks, so other people may be asked to contribute to the employee's appraisal process. List THREE such potential contributors and explain the contribution each can make. **(3 x 4 marks)**
- b) Briefly discuss the SFIPlus standard. **(7 marks)**
- c) Briefly discuss THREE ways the SFIPlus framework can be employed to aid professional development. **(6 marks)**

Answer Pointers

Part a)

The answer identifies three relevant roles who could contribute to the appraisal. Examples given below. Other relevant items will be given credit. Better answers might comment on the issue of bias and whether having three contributors helps to limit this.

Peer assessment. Colleagues may be in a better position to judge a fellow colleagues work performance, as they see the actual behaviour of their peers on a daily basis.

Customers. Customers can be a useful source. Information can be gathered through interview, comment cards, customer complaints and even “secret shoppers” are used to assess sales staff.

Subordinates. Not to evaluate the detailed work, but to evaluate management style and application. However, this method is not widely used as it has the potential to undermine a supervisor’s authority.

Self-appraisal. In many instances employees are asked to carry out a self-appraisal as part of their preparation for the appraisal interview.

Syllabus Coverage: Human Resources Management, 9.6.

Part b)

The answer should identify that SFIAplus describes skills for IT jobs. SFIAplus is based on a matrix of IT skills and levels, with specific criteria to be satisfied if a person is to be regarded as having a given skill at a certain level. It also describes the training and development required to move from one level to another. Better answers might comment on how this could be used in practice. For example, the lower levels cover easier tasks with less responsibility whereas higher levels represent more complex tasks that require more expertise and responsibility.

Syllabus Coverage: Human Resources Management, 9.2.

Part c)

Three of the following should be discussed with reference to professional development. Better answers might comment that these can be applied to different industries and therefore provide a way to compare across industries.

- Measure and benchmark skills to the industry standard.
- Map current skills with an IT job role.
- Identify career paths.
- Identify skills gaps and plan training accordingly.

Syllabus Coverage: Human Resources Management, 9.2.

Examiners’ Comments

Overall, answers for part a) were to identify three relevant roles. More discussion would have improved some of the answers. Parts b) and c) were not answered well, indicating a lack of knowledge about the SFIAplus framework. This would be an area where candidates could improve their knowledge of the topic and discuss how this topic forms part of professional development.

A3. This question is about **delegation** and **management by objectives**.

- a) Describe FIVE reasons why a manager should delegate authority. **(10 marks)**
- b) You are the software development manager for an IT services company. Following consultation with all executive directors, the Human Resources (HR) director has been instructed to implement a system of Management By Objectives (MBO) across the whole organisation. You are concerned that MBO is not suitable for measuring the performance of your software engineers.

Write a formal email to the director of IT outlining the effects (positive and negative) that you think the introduction of MBO will have on the performance of your team. **(15 marks)**

Answer pointers

Part a)

The answer should identify a list of five reasons and describe the reason. The following is a suggested list, but other relevant points were awarded marks. Answers that listed reasons without description would attain low marks. Better answers would have more detailed descriptions or might use examples to illustrate some of the reasons.

- A manager's time is limited.
- Managers rely on others with specialized skills 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.

Syllabus Coverage: Organisations and their structure, 2.2.

Part b)

The answer should identify the purpose of MBO and discuss relevant effects. The answer could comment that much depends on the flavour of MBO that is adopted. Many flavours insist that all objectives should be measurable. This is too simplistic for a professional role like software engineer. Not all objectives for software engineers can be specified in precise, objective and quantifiable terms e.g. targets for lines of code produced could put pressure on software developers to pay little attention to design, resulting in poor quality software. On the other hand, if the objectives are not measurable, there will be doubt as to whether they have really been achieved. Better answers might relate the discussion to the effects on the team.

The answer should have been written as a formal communication with appropriate language and tone.

Syllabus Coverage: Organisations and their structure, 2.2.

Examiners' Comments

The question was answered well by most respondents. For part a), respondents identified a set of relevant reasons and offered descriptions of the reasons. For part b), respondents covered the purpose of MBO and some effects and wrote an appropriate formal communication. Some answers thought about the use of MBO on software projects. It would have been good to see more answers able to think about the types of objectives that could be relevant for a software project.

Section B

B4. This question is about **management accounting** and **finance**.

- a) Explain what is a cash flow statement and discuss its uses and importance for a business. **(5 marks)**
- b) NetMast Solutions purchased some computer equipment for £22,000. The transportation costs were £1,200 and installation charges were £750. Some equipment was repaired during first year which cost the company £550.
NetMast Solutions depreciated the equipment at 10% each year.
What is the net book value of this equipment after one year? **(5 marks)**
- c) Discuss each of the following pairs of terms. Give at least ONE example for each term.
- Income and Profit. **(3 marks)**
 - Fixed Assets and Current Assets. **(6 marks)**
 - Tangible Assets and Intangible Assets. **(6 marks)**

Answer Pointers

Part a)

The cash flow statement provides a breakdown of a company's inflow and outflow of cash from three main activities: operating activities, investing activities, financing activities. A cash flow statement provides an overview of a company's financial strength. Strong cash flow gives an indication that the company is in a good position to expand its business or is capable of investing in new projects and make dividend payments to shareholders. Better answers might briefly mention the relevance of the cashflow to working capital.

Syllabus Coverage: Management Accounting, 4.2

Part b)

Total value of asset is $£22,000 + 1200 + £750 = 23950$. Depreciation for the year first year would be £2395. Net Book value at the end of year 1 will be £21,555. Better answers will demonstrate an understanding that the repair cost of £550 is not included in asset's cost.

Syllabus Coverage: Finance, 3.1

Part c)

The discussion should include points such as the following. Better answers might show more detailed understanding, e.g. for fixed assets the candidate might consider subdivisions of investments, tangible assets and intangible assets.

- **Income** is the sum of revenues generated by a company, e.g. income from license sales or service charges, while **profit** is calculated after deducting expenses from revenue (gross profit / net profit).
- **Fixed Assets:** Assets which are purchased for long term use and are used in the production of its income and are not likely to be sold in near future (normally within one year) are fixed assets such as buildings, equipment etc. **Current Assets:** Any assets which are expected to be converted to cash within one year period are generally regarded as current assets. Cash, Accounts receivables, inventory etc. are examples of current assets.
- **Tangible Assets:** Any assets which have physical presence (regardless of fixed or current assets) such as cash, building, equipment etc. are all tangible assets.

Intangible assets: Intangible assets are long term resources which have value but might not have physical presence are called intangible assets. Some examples may include Brand Name, Reputation (goodwill), Intellectual property (knowledge or experience)

Syllabus Coverage: Finance, 3.1.

Examiners' Comments

The question was answered reasonably, with a majority achieving a pass mark. However, often the answers were based on a limited understanding of the issues. A large proportion of students were unable to perform calculations involving the straight-line depreciation method or provide examples of some accounting terms. There were good answers, but the overall level suggests two opportunities for improvement: (i) students should be spending time on this material and looking to practice basic techniques, and (ii) that the centres teaching the material should review what is taught and how candidates are able to study and apply the material to problems.

B5. This question is about the **UK Copyright, Designs and Patents Act 1998** and the **UK Computer Misuse Act 1990**.

- a) You are a computer forensic analyst investigating the distribution of illegal pirate films via a network. You have identified a person who has downloaded numerous illegal pirate copies of films, and has also made these available to others via the network.

Explain how the UK Copyright, Designs and Patents Act 1998 would apply to this situation. **(12 marks)**

- b) You work for a social media company and have identified an individual who has been spreading a computer virus via a social media account. The individual has attempted to gain access to other social media users' computers in an attempt to obtain credit card data.

Explain how the UK Computer Misuse Act 1990 would apply to this scenario. **(13 marks)**

Answer Pointers

Part a)

Answer should show an understanding that that this is an infringement and that the copyright holders could take this matter to court. This should be illustrated with explanations of each of the following. Better answers might comment on the differences between different types of infringement and might discuss the penalties that can be applied.

- The downloading of films without the permission of the copyright holder would be an infringement of the UK Copyright Designs and Patents Act 1988.
- Making copies of films available without the permission of the copyright holder would be an infringement of the UK Copyright Designs and Patents Act 1988.
- Under the UK Copyright Designs and Patents Act 1988 the copyright holders of the films involved would be able to take the individual to court for infringement of the Act.

Syllabus Coverage: Intellectual Property, 6.1.

Part b)

Answer should show an understanding that distributing a virus is an infringement under the act because of the modification of computer materials section. This should be illustrated with explanations of the following. Better answers will show awareness that different parts of the act apply.

- The spreading of the computer virus would fall under the modification of computer materials section of the UK Computer Misuse Act 1990.
- Attempting to access in an unauthorised manner the other users' computers would be unauthorized access under the UK Computer Misuse Act 1990.
- If the attempted obtaining of credit card data was intended for the purposes of fraud or another criminal offence, then the individual would be guilty of unauthorized access with intent under the UK Computer Misuse Act 1990.

Syllabus Coverage: Legal Obligations, 5.1.

Examiners' Comments

The question had a mixture of answers. There were answers that showed more detailed understanding of the issues. However, some answers were brief and only identified basic points. This suggests that there is the opportunity for candidates to dedicate more study time to these topics. Study centres could review how the material is covered and the opportunities for students to discuss the details.

B6. This question is about the **UK Data Protection Act 1998** and **UK Consumer Legislation**.

- a) You are an IT contractor who has been hired by a small company to develop an e-commerce system to handle selling goods to consumers. The company is based in the UK and selling to consumers in the UK. Explain to the manager of the company what will need to be done to ensure that the company complies with the UK Data Protection Act 1998. **(15 marks)**
- b) For the company in part (a) explain to the manager of the company what would need to be done to ensure that the company complied with UK Consumer legislation, e.g. the UK Consumer Protection (Distance Selling) Regulations 2000. **(10 marks)**

Answer Pointers**Part a)**

Answers should show an understanding of the need to store data securely and make sure that the data is up-to-date. There should be discussion of different issues from the data protection principles and how they relate to the company, covering the following. Better answers would offer detail for the five points, but good answers might cover fewer points but with more detail.

- Having a policy to manage what information is gathered, for what purpose and how long it is kept for. In addition to having a policy, the company must manage the data in accordance with the policy.
- The company would need to maintain the data so that it is up-to-date with known changes.
- There would need to be a process to ensure that data is deleted when appropriate, including back-ups of the data.

- There will need to be measures to guard against unauthorized access or unlawful processing. For example, password controls, integrity checks, auditing and vetting personnel.
- The company will need to take decisions about where the data is stored. The eighth principle states that personal data should not be transferred outside of the EEA unless the destination country has adequate levels of protection. Therefore, consideration needs to be given to the location of the data on servers – it raises issues about the level of protection in the USA and whether a company has taken steps to be compliant with EU law (e.g. by Safe Harbor and the more recent Article 29).

Syllabus Coverage: Legal Obligations, 5.1.

Part b)

Answers should show an understanding of the need to provide information before the contract is agreed and that there is the right to cancel.

Suppliers need to clearly provide information before the contract is agreed. The answer should identify several items of the information, such as Supplier Name and Address, Description of what is being offered, Costs and taxes, Delivery Charge and Delivery Method, Rights to Cancellation, Duration of the Contract, etc.

The company must make sure that the information is presented in a clear way and it is possible for the customer to store the information (digitally or physically).

The company needs to ensure that the contract can be fulfilled within 30 days.

There needs to be an automatic right to cancel the contract, up to 7 days after the goods are delivered, for services, of the contract being signed.

Better answers might note that if all the information is not provided, the customer has longer cancellation terms.

Syllabus Coverage: Legal Obligations, 5.2.

Examiners' Comments

Part a) was generally answered well, showing an awareness of the relevance of the UK Data Protection Act 1998. However, some respondents merely listed the principles of the Act. We do want to see answers that are able to talk about the issues in relation to the given scenario, therefore showing a better understanding of the issues. Part b) was answered reasonably well. Some responses were a list of issues, so the comments from part a) also apply. Answers were better at covering basic information. Better answers covered more details, such as storing information, fulfilment times and cancellation times.