

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

September 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, once again approximately 25% of candidates gained a mark less than 30%; such candidates are not properly prepared for the exam and would do better to take further study before entering for the exam.

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.

Section A

A1. This question is about **professions** and **professional bodies**.

- a) Explain the meaning of the term profession and give examples of TWO professions. **(5 marks)**
- b) Explain the purpose of professional bodies. **(4 marks)**
- c) Discuss FOUR examples of how professional bodies can contribute to professional practice. **(4 x 4 marks)**

Answer Pointers

Part a)

The answer should demonstrate an understanding of education and training issues and that members of the profession determine who is eligible. Discussion could include that profession is an occupation where individuals undergo education and training to practice in the profession. The members of a profession determine the nature of this training, and this can be used to determine who is eligible to enter the profession. Example professions could include IT, lawyers, doctors and architects. Stronger answers would include brief discussion of the examples, rather than just naming the example professions.

Syllabus Coverage: Professional Institutions, 1.1.

Part b)

Explanation of the need to promote and support the profession by protecting the interests of the professionals as well as the public interest.

Syllabus Coverage: Professional Institutions, 1.1.

Part c)

The candidate should refer to four of the following in the examples:

- To improve standards and ensure adequate training and competence plus relevant example, e.g. BCS degree accreditation or BCS HEQ.
- Serve as a forum for exchange of ideas and knowledge by professionals plus relevant example, e.g. BCS Specialist Interest Groups.
- Promote ethical behaviour through codes of conduct plus relevant example, e.g. BCS Code of Conduct.
- Help to prevent problems arising in their specialist area plus relevant example, e.g. working to respond to UK requests for consultation.
- Setting standards of competence and contact plus relevant example, e.g. entry requirements for membership and levels or details of degree accreditation.

There should be discussion for the four examples.

Syllabus Coverage: Professional Institutions, 1.1.

Examiners' Comments

The answers were of a mixed standard, although most students were able to provide average answers to the questions. For part (c), candidates did not always distinguish between the four examples or give relevant numbering and in some cases, did not identify the correct number of examples. Some answers were incomplete and didn't address all parts of the question.

A2. This question is about **selection techniques** for professional appointments and the **BCS Code of Conduct**.

- a) Discuss TWO selection techniques available to employees when seeking to make professional appointments. **(10 marks)**
- b) One section in the BCS Code of Conduct is 'Professional competence and integrity'. Explain the meaning of 'Professional competence and integrity' referring to the BCS's Code of Conduct. Using a practical example, discuss how this might have an impact on professional behaviour in IS practice. **(15 marks)**

Answer pointers

Part a)

The candidate should identify up-to two techniques from the following.

- **One-to-one interviews.** A series of one-to-one interviews with senior management and senior professional staff.
- **Interview by panel.** Although the panel will contain professionals and/or senior management from the area for which the appointment will be made, it will also contain people who are neither professionally competent nor operationally involved in the appointment so as to minimise the risk of nepotism and other forms of corruption.

- **Assessment of references.** Normally used as a final check in the private sector, whereas in the public sector a great deal more importance is given to them. Sometimes a phone conversation with the previous employer reveals a great deal more about the candidate than does a written reference.
- **Psychometric tests.** Made up of three types. Ability tests measure a candidate's ability in a general area such as verbal skills. Aptitude tests measure the candidate's potential to learn new skills applicable to the position. Personality tests measure how the candidate is likely to behave with other people.
- **Situational assessment.** Candidates are brought together and placed in a variety of situations where each candidate's performance is observed and assessed by their peers.
- **Task assessment.** Candidates will be asked to carry out some of the tasks they'll be required to do in the job.

Stronger answers might compare the two-tasks to consider if one technique is more important than the other.

Syllabus Coverage: Human Resources Management, 9.3.

Part b)

The candidate should make reference to the following when explaining the meaning, using a relevant practical example:

- Only undertake to do work or provide a service that is within your professional competence. Therefore, a person should NOT claim any level of competence that you do not possess.
- Develop your professional knowledge, skills and competence on a continuing basis, maintaining awareness of technological developments, procedures, and standards that are relevant to your field.
- Ensure that you have the knowledge and understanding of Legislation and that you comply with such Legislation, in carrying out your professional responsibilities.
- Respect and value alternative viewpoints and, seek, accept and offer honest criticisms of work.
- Avoid injuring others, their property, reputation, or employment by false or malicious or negligent action or inaction.
- Reject and will not make any offer of bribery or unethical inducement.

The discussion should cover an appropriate example. This might be about integrity, such as only seeking work as an expert witness if there is relevant experience and deep knowledge of the domain and practices.

Syllabus Coverage: Professional Codes of Conduct, 8.1.

Examiners' Comments

Part (a) was answered less well, with some candidates focusing on details such as inviting candidates to an interview. The focus should have been on techniques such as those listed in the answer pointers. Part (b) was answered well overall and most students included a relevant example. A common problem for this question was that answers were not structured in accordance with the question; the students just wrote a selection of paragraphs with no clear separation of the different sections.

A3. This question is about **management structures**.

- a) Many organisations divide their management into THREE levels i.e. top, middle and lower. Discuss the main skills required at each level. **(12 marks)**
- b) The matrix management structure enables an employee to be assigned to different projects over time.
- i) Discuss TWO advantages of the matrix management structure for the employee. **(6 marks)**
- ii) Discuss TWO advantages of the matrix management structure for the organisation. **(7 marks)**

Answer pointers

Part a)

Discussion including indicative points:

- At the top level, the individual needs to be able to think in conceptual terms. They should have the ability to grasp the big picture, develop strategy and analyse abstract data.
- At the middle level, the individual requires the ability to bring people together through the use of positive interpersonal skills, so that strategy can be implemented through shorter term implementation plans.
- At the lower level, the individual requires competence and expertise in a particular field.

Stronger answers might consider some types of information at each level. For example, the top level should be able to process data that is external to the company or division, the middle level might be concerned with forecasting and budgets and the lower level focuses on the operational issues.

Syllabus Coverage: Organisations and their structure, 2.2.

Part b) i)

Relevant discussion of two examples, which could include:

- Broadens work experience in both terms of skill and social interaction.
- Increases skill and knowledge level.
- The variety is likely to increase motivation.

Stronger answers may discuss why these are relevant to the employee.

Syllabus Coverage: Organisations and their structure, 2.2.

Part b) ii)

Relevant discussion of two examples, which could include:

- A more flexible workforce.
- Becomes less dependent on key individuals because of the wider skills/experience of the workforce as a whole.
- The need for expensive formal training is reduced because individuals have more opportunity to learn from each other.

Stronger answers may discuss why these are relevant to the organization.

Syllabus Coverage: Organisations and their structure, 2.2.

Examiners' Comments

Overall, part (a) was well answered by the majority of candidates. Candidates who received the highest marks, complemented their answer by including the types of information systems utilised at each level (i.e. transaction processing systems, management information systems and executive information systems), and the skills required to operate these information systems. Part (b) had a range of answers. It was clear that a number of candidates had little or no knowledge of a matrix management structure.

Section B

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

a) Explain the following terms with at least one example of each term. The examples should be relevant for a manufacturing company.

- Direct cost
- Indirect cost
- Fixed cost
- Variable cost
- Overheads

(5 x 3 marks)

b) Cowley Industries bought some computer equipment in January 2010 which includes a printer worth £1500, a file server worth £15,000 and 50 computers worth £700 each. Its depreciation policy for computer hardware is to write assets off over five years using straight line depreciation method. At the end of year 4, all of the equipment was sold for £10,000.

i) Create a yearly depreciation chart for this equipment.

(8 marks)

ii) Calculate the effect of the sale of the equipment on the Cowley Industries annual accounts at the end of year 4.

(2 marks)

Answer Pointers

Part a)

For each item, candidates must include a description and at least one example of the type of cost.

- **Direct costs** are traceable to a specific product. The cost of the raw materials used to produce an item is a direct cost. The cost of any consumable used to manufacture an item can also be considered as direct costs.
- **Indirect costs** cannot be attributed to a unit of an item during production. These could include administrative expenses, salaries, security, equipment maintenance etc.
- **Fixed costs** do not fluctuate and remain the same regardless of production quantities. These include rent, property taxes, depreciation of assets etc.

- **Variable costs** change directly and proportionately to changes in activity level or volume of production. Raw materials, wages for temporary staff, packaging and shipping costs etc.
- **Overhead costs** do not contribute directly to the profitability of a business but they are necessary to run the operation of a business. Examples include rent, depreciation, utilities, insurance etc.

Syllabus Coverage: Management Accounting, 4.1.

Part b)

i)

The answer should describe the following information, which shows the workings for the answer. The general answer should demonstrate the appropriate process, although there may be some problems with the figures used, e.g. miscalculates the value of the computers.

Printer	1500	
Server	15000	
Computers 50 x 700	35000	
Total Value	51500	
	Depreciation	Book Value
Year 0		51500
Year 1	10300	41200
Year 2	10300	30900
Year 3	10300	20600
Year 4	10300	10300
Year 5	10300	0

ii)

Book value at the end of year 4 = 10,300. A £300 loss will be recorded in the Profit and Loss.

Syllabus Coverage: Finance, 3.1.

Examiners' Comments

Overall, the candidates offered good or reasonable answers. Answers for part (a) were varied, with some candidates showing appropriate knowledge of all of the items, whereas some candidates were only able to discuss a few of the items. Part (b) was answered well, overall. Some candidates made mistakes with the initial calculations on value, so did not always calculate the correct book value at the end of year 4.

B5. This question is about **Legal Obligations**.

- a) Discuss what a UK public authority such as a Fire and Rescue Service would need to do to comply with the UK Freedom of Information Act 2000. **(12 marks)**
- b) A UK police force is investigating a case of suspected terrorism. The suspected terrorists all use the same Internet Services Provider. Discuss how the Internet Services Provider would need to support the police investigation under UK investigatory powers legislation, e.g. the UK Regulation of Investigatory Powers Act 2000. **(13 marks)**

Answer Pointers

Part a)

Under the UK Freedom of Information Act 2000 a public authority should make information available to the public as a matter of routine through a publication scheme. This could be done via the public authority's website.

Under the UK Freedom of Information Act 2000 any person has the right to make a request for information held by a public authority. An individual could request information regarding what the public authority does, or how something is done.

Stronger answers might consider other methods of publication, e.g. flyers, and the possibility of a fee for providing the information requested.

Syllabus Coverage: Legal obligations, 5.2.

Part b)

The discussion should identify that the police have authority to request relevant information. Under the UK Regulation of Investigatory Powers Act 2000 the Internet Services Provider would be required to:

- Disclose any relevant data currently held to the police officers or their agents conducting the investigation of suspected terrorism.
- Obtain and disclose any data required for the police investigation of suspected terrorism. This might involve monitoring activities and providing encryption keys for data.

Stronger answers might offer further detail in areas such as the monitoring activities, e.g. the type of data that can be monitored.

Syllabus Coverage: Legal obligations, 5.2.

Examiners' Comments

Candidates generally answered part (a) poorly, showing limited understanding of the UK Freedom of Information Act 2000. Further study of that area is required for future candidates. Students generally answered part b) reasonably well showing a reasonable understanding of the UK Regulation of Investigatory Powers Act 2000.

B6. This question is about **patents** and **trademarks**.

- a) A UK company has developed a novel computing device which is completely flexible and can be rolled up. Discuss the protection for the company that could be provided by a patent and a trademark. **(12 marks)**
- b) For the company in part a), discuss what the company would need to do to obtain a patent and a trademark. **(13 marks)**

Answer Pointers

Part a)

A patent would protect the new invention and would cover how it works, what it does, how it does it, what it is made of and how it is made.

A patent would give the company the right to prevent others from making, using, importing or selling the invention without permission, for a fixed period.

A trademark would prevent others from using the trademark in the countries or regions for which that class of goods (computing devices) had been registered.

There should be an appropriate discussion of the above issues.

Stronger answers would show an awareness of how patents and trademarks are applied for, e.g. the need to think about regions for patents and classes for trademarks.

Syllabus Coverage: Intellectual Property, 6.1.

Part b)

Discussion of the following issues:

A patent is only effective in the country in which it is granted. For this reason, the company will probably want to apply for patents in a group of countries such as the EU. It is possible to make a single application for multiple patents through the European Patent Office or the World Intellectual Property Organisation.

A patent application should include a full description of the invention (including any drawings), a definition of the invention, and an abstract summarising the technical features of the invention.

The company would need to devise a suitable symbol or logo that customers will come to recognise and associate with the company. This symbol will be the trade mark, it should not resemble the trade mark used by any other company for similar products.

The company would need to register the trade mark in all jurisdictions in which it hopes to have significant business.

Syllabus Coverage: Intellectual Property, 6.1.

Examiners' Comments

Candidates generally answered part (a) reasonably well, showing awareness of the protection offered by patents and trademarks. Some answers were brief, and would have benefited from more detail in the discussion. Candidates generally answered part (b) rather poorly showing a more limited understanding of the process of applying for a patent or trademark. There was basic knowledge that there is a need to apply for patents and trademarks, but limited knowledge of what might be needed in such an application. Few answers considered the issue of jurisdictions.