CAMBRIDGE NATIONALS

Examiners' report

ICT

J800, J810, J820

R001 January 2019 series
Version 1

Contents

Introduction

Our examiners' reports are produced to offer constructive feedback on candidates' performance in the examinations. They provide useful guidance for future candidates. The reports will include a general commentary on candidates' performance, identify technical aspects examined in the questions and highlight good performance and where performance could be improved. The reports will also explain aspects which caused difficulty and why the difficulties arose, whether through a lack of knowledge, poor examination technique, or any other identifiable and explainable reason.

Where overall performance on a question/question part was considered good, with no particular areas to highlight, these questions have not been included in the report. A full copy of the question paper can be downloaded from OCR.

Paper R001 series overview

The January series always sees a smaller number of candidates sitting the paper than in the summer series. The number of candidates involved this series was very much down on previous years, as is to be expected.

Candidates' performance across the paper was in line with previous sessions, with similar strengths and weaknesses on display. Candidates generally had the wider ICT knowledge required to answer the majority of questions, and seem to have completed the pre-release tasks, thereby giving them a greater contextual awareness of the paper. However, this ICT knowledge is often lacking depth, as was shown on the more technical questions in the paper.

Candidates' ability to respond to key words in the paper remains an issue. Typically, candidates are not explaining when asked to do so. As is exemplified within this report, where candidates are asked to explain an answer, the typical structure for a perfect answer is one where they identify an issue and then say why it is a benefit, drawback or implication.

Finally, candidates must be aware of the scenario when answering questions. Questions themselves may refocus attention on the scenario, such as questions 6a and b, and these, especially, must be answered in context. Many candidates continue to give answers that would be acceptable in a general paper, but which are made incorrect by the scenario.

Section A overview

Section A of the paper was based on the first of the two scenarios.

Question 1(b)

(b) Identify the **most suitable** type of software that Sami could use to produce the booklet.

.... **[1]**

Many candidates correctly identified Desktop Publishing for this question. Please note that despite asking for a **type** of software, trade names are acceptable for these questions.

However, answers had to be a type of software. A small number of candidates identified a document type, rather than a software type. This was not acceptable and marks were not credited.

Question 1(c)

Sami has a shared area in the Cloud that she uses to share the four-page colour booklet and other documents with the managers of her shops.

(c) Explain **one** advantage to Sami of using the Cloud to distribute documents to the managers of her shops.

....

....

....

.... **[2]**

See combined commentary below Q1(d).

Question 1(d)

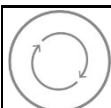**(d)** Explain **one** disadvantage to Sami of using the Cloud to distribute documents to the managers of her shops.

....

....

....

.... **[2]**

AfL: Questions where candidates are asked to explain are best approached as two-part answers. The first part may be the "issue" (in these cases, advantages of disadvantages), whilst the second part may be "why this is an issue" ("the because"). Therefore, in a question that asks for an explanation of an advantage, the explanation should be why the identified issue is an advantage.

These questions asked candidates to focus on the distribution of documents via the Cloud. As the Cloud is an Internet based resource, this question was fundamentally about using an Internet based resource.

In the best cases, candidates answered these questions as a logical pair, and focused on the Internet as the medium. Candidates therefore considered that the Cloud was available almost anywhere and, as a disadvantage, the implications caused by when it is not available.

Candidates who stated that the Cloud was "available anywhere" were not given the mark, as this is not true. In many cases, candidates identified that the Cloud as being available everywhere for question 1c, and then stated that it was not available everywhere for question 1d.

Other candidates stated that the Cloud was easy to use. "Easy to use" in any context is a value judgement and is highly unlikely to be credited on this paper.

Exemplar 1

All of the Managers can see it, make Comments or it and work on it. After working on it they can re-upload it **[2]** as a new draft.

This candidate has focused on the impact of using the Cloud on managers. As the focus of the question is on Sami, this is not relevant. Furthermore, Sami is distributing a document that she has produced. Any suggestion that managers will then critique the document does not fit the scenario.

Question 2(a)

2   Each item being purchased is scanned at the till point.

    (a)   Describe **one** technology that could be used to identify the scanned item.

    ....

    ....

    ....

    .... **[4]**

This question required a technological understanding of how Barcode Scanners or readers could be used to identify scanned items.

Due to the structure of the question, marks were credited for a correct identification of the technology with further points for understanding of the technological process up to and not including the identification of the scanned item.

Exemplar 2

Barcode Scanner — It can read the barcodes on the items that are purchased and recall its data from the stores database, like what it is and how much its price.

Also assists in stock management, each time an item is scanned, it reduces its stock by one each time.

.... **[4]**

This candidate has identified the technology and stated that details are retrieved from a database, but has then introduced the issue of stock control. Many candidates chose to do this.

Stock control was not part of the question, and so no marks were credited for this expansion.

Question 2(b)

Sami's Supermarkets uses a scanning system to find the price of each item to calculate the bill for each customer. In other shops, staff have to key the price of each item into the system.

(b) Compare the use of the automatic system as used by Sami's Supermarkets with a system where prices are entered manually.

Your answer should consider cost of the system, accuracy and ease of use.

....

....

....

.... **[8]**

Candidates who followed the instructions in the question and covered cost, accuracy and ease of use in their answer did extremely well, as was the case for the majority of candidates. However, without a clear descriptive comparison, candidates were restricted to Level 2.

In order to compare effectively, candidates need to deal with both automatic and manual systems in one flow. Where candidates did so, and in depth, full marks were credited.

Exemplar 3

While the scanning systems may cost a lot of money outright, which is a disadvantage in itself, these systems will save money in the long run. It will take far less time to serve customers, which means more products can be sold in a shorter time. Less staff will need to be hired, as a result of self serve tills, and the chances of a mistake being made in calculating costs with these systems will be 0, whereas they will be a lot higher with staff calculating manually A big issue however, is that if the power goes out, then these scanning systems cannot operate, meaning products can't be sold untill the power comes back on.

In this answer, the candidate has made a series of points on each area of focus. None of these points are expanded on and so this was credited 5 marks.

Exemplar 4

Using a system where prices are entered manually would be time consuming and someone could easily make a mistake - charges the wrong price of a product. could be harder and more complicated to use, so would need to train the staff how to work it. If the customer was in a rush, using the entering it in manually could make them impatient and so they would never come back again in the future.

The automatic system could be more expensive, however its more cost-effective and easier to use. All you need to do is scan the items that are being purchased. Its also faster and you're less likely to make a mistake. Also it would help in stock management. because it is automatic system, it would still need to recall from the supermarkets database, and when an item is scanned, the stock is reduced by one each time. **[8]**

This is a well-balanced and structured answer. The candidate has addressed all three areas and has expanded each area so that not only is it a clear comparison, but other points are made. This candidate was credited full marks for this answer.

Question 3(b)

(b) Explain, with the use of examples, how line graphs could be used to compare the daily sales of different shops in the Sami's Supermarket chain.

....

....

....

.... **[4]**

This question required an understanding of how line graphs could be used for a specific purpose. The clear guide was the reference to different shops and sales.

Candidates who understood that line graphs can show information with different lines were able to give fairly good answers, but few candidates fully described the full process.

Question 3(c)

(c) Line graphs include a number of features. Complete the table below to show the purpose of each of the listed items. **[3]**

Item	Purpose of this item
Title	....
Legend	....
Units on the x axis and the y axis	....

The majority of candidates achieved at least one mark by correctly stating the purpose of the title of the table, with most correctly stating the purpose of the units on the y and x axes (although the quality of these answers were not always as clear as they could have been).

Few candidates knew the purpose of the Legend, and some confused the purpose of the legend and units on the x and y axes.

Question 4

4 The Sami's Supermarkets website has had a Denial of Service (DoS) attack that has affected the web server.

Describe how a DoS attack prevents a web server from being able to carry out its usual tasks.

....

....

....

....

....

.... **[3]**

> This question was answered extremely well by a great many candidates, with many giving full and descriptive answers of the impact of a DoS attack.

Exemplar 5

A DOS ~~attacks~~ overloads a server with requests which ends in the web server crashing, this then stops it from being able to carry out usual tasks, until they are able to recover and retreive any ~~tha~~ information, **[3]** as it make the server unviable for users.

> The candidate goes a long way towards giving a full answer. They clearly understand what a DoS attack is, but use the term "crash", which loses them the third mark.
>
> They have dealt with the concept of overload and requests. Had they stated that there were multiple or many requests, or explained that the server is unable to deal with so many requests, a third mark would have been given.

Section B overview

Section B focused on the second scenario in the pre-release tasks.

Question 5(a)

5   Northern Frozen Foods Ltd operates a Virtual Private Network (VPN).

   (a)   Describe what is meant by the term 'Virtual Private Network'.

   ....

   ....

   ....

   .... **[2]**

Few candidates were able to describe the term with confidence and instead picked up marks for individual points about VPNs.

Question 5(b)

(b) Identify **two** benefits to Jensen of being able to use the VPN. For **each** benefit, explain why it is a benefit to Jensen. **[6]**

Benefit	Why this is a benefit to Jensen
1	....
2	....

The ability to identify and explain advantages to different groups affected by technology is a central requirement of this course. The ability to discriminate between these different and differing groups was lacking across the candidates as a whole.

In questions where an impact on one specific group is required, candidates should seek to provide an impact that is clearly relevant to that one group. In this case, Jensen was an employee of the organisation and therefore examiners were looking for benefits to an employee, such as the ability to access worldwide. Many candidates gave answers that were benefits to the organisation itself.

Question 5(c)

Users who want to access the VPN must supply a user name and password.

(c) Explain why users have to supply this information to access the VPN.

....

....

....

.... **[2]**

This relatively straight forward question seemed to cause many problems for candidates. Rather like locking a garage door because it holds valuable equipment, access to the VPN is restricted because it holds valuable and personal information. Despite this, many candidates stated that the purpose was so that usage could be tracked or that the network manager knew where the employees were.

Question 6(a)

6   Jensen has to choose between using his smartphone or a laptop to contact his manager when he is visiting customers.

(a)   Explain **one** situation where it would be better for Jensen to use a smartphone rather than a laptop to contact his manager.

....

....

....

.... **[2]**

See combined commentary below Q6(b).

Question 6(b)

(b)   Explain **one** situation where it would be better for Jensen to use a laptop rather than a smartphone to contact his manager.

....

....

....

.... **[2]**

In an applied paper, such as this, context is paramount. Candidates were told that Jensen was visiting customers as part of the question. Therefore, answers that did not fit this restriction were unacceptable. Furthermore, the use of "rather than" within the question was deliberately chosen to make it clear that there was a choice. As there was a choice, it follows that both devices could at least be switched on (although examiners did accept answers that suggested absence of WIFI for 6a). It was also safe to assume that the manager would have a phone or computer on which to communicate.

Candidates were also asked to identify a situation. Therefore, examiners were fundamentally looking for "when" or "where" followed by a scenario and why this scenario required the specific device.

The successful candidates knew that smartphones were available for quicker answers whereas laptops had larger screens and so were more suited to videoconferencing. They also knew that laptops had greater processing power, but may lack microphones, all of which were perfectly acceptable answers.

Question 6(c)

Jensen has received a complaint email from a person claiming to be one of his clients. The email is asking Jensen to click an attachment to find out more about the complaint.

Jensen does not recognise the name of the person who has sent the email.

(c) Explain what Jensen should do in response to this email.

....

....

....

.... **[2]**

As with previous questions in other sessions that have assessed e-safety, candidates did well on this question. Many candidates fully appreciated that Jensen should not open the attachment and explained that this was because it may include a virus.

Question 7(a)

7 Jensen uses a web-based email service to arrange and confirm appointments with clients.

(a) Explain **one** advantage of using an email rather than a person-to-person conversation on a telephone to arrange and confirm appointments.

....

....

....

.... **[2]**

The standard answer for this question was that an email provided a written record, whilst a telephone call did not, therefore the email could be referred back to if there was a problem, such as details being forgotten. As this question required an explanation, candidates needed to state more than emails are written and telephone calls are verbal, and needed to make the point that they could then be referred back to.

Many candidates answered this question successfully, relying on the above argument. The second most popular answer was that an email could be accessed when convenient or that the receiver was not required to be present when it arrived, plus an expansion, such as that the call message would not be missed, or that the person receiving the message had time to check if they were available.

As with other questions, any reference to "professionalism" was not given marks, as this is subjective and so open to interpretation.

Question 7(d)

Jensen has deliberately changed the timing of his reminders from 15 minutes before each appointment to 24 hours before they occur.

(d) Explain **one** possible reason why Jensen has changed the timing of his reminders.

....

....

....

.... **[2]**

This was another seemingly straightforward question that caused problems for some candidates. Simply put, why would someone want to know 24 hours in advance of a meeting, rather than 15 minutes? Successful candidates identified the ability to be more aware and so better organised, but a lot of these answers were not clear. Candidates suggested that without a 24 hour notice, Jensen would not be able to book hotels, for example, or travel to the location and then attempted to expand on these answers. These answers were not acceptable.

Exemplar 6

As Jensen travels alot, he may be out g the country, so he has done this so he can make arrange-ments to reach the meeting on time [2]

This is a good example of a candidate who misinterpreted the context of the question. Moving a reminder from 15 minutes to 24 hours before a meeting is not going to give Jensen the opportunity to arrange to be at the meeting in time. Jensen's ability to attend meetings is central to his job role and therefore, arranging to attend would be something he has done already and not be something he can achieve in 24 hours if he has yet to do so.

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