

OCR Report to Centres

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This report on the examination provides information on the performance of candidates which it is hoped will be useful to teachers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding of the specification content, of the operation of the scheme of assessment and of the application of assessment criteria.

Reports should be read in conjunction with the published question papers and mark schemes for the examination.

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Any enquiries about publications should be addressed to:

OCR Publications
PO Box 5050
Annesley
NOTTINGHAM
NG15 0DL

Telephone: 0870 770 6622
Facsimile: 01223 552610
E-mail: publications@ocr.org.uk

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General Certificate of Secondary Education

Information and Communication Technology (J461)

General Certificate of Secondary Education (Short Course)

Information and Communication Technology (J061)

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Overview

There were a reasonable number of candidates entered for unit B061 and a smaller, but not insignificant, number entered for B062 and B063. There were only a small number of entries for B064. The detailed reports from the principal examiners for these units follow this brief introduction and overview for the session.

It is clear some progress has been made in the way candidates approach the level of response questions but, as can be seen in the reports for units B061 and B063, many candidates still fail to read the entire question and miss vital information. For example, many candidates in B063 provided responses that explained the benefits to customers of Frontline18 when the question asked for the benefits to the business. In B061 there are references to candidates failing to comment on all aspects, for example the impact of on-line banking to customers, the bank and the bank employees. Having said this there were some good answers to these questions and it was clear many candidates had been taught the concepts outlined in the B063 release and in the specifications for B061 and B063. Many candidates still feel they have to write large amounts for the level of response questions and use additional sheets, or end up writing sideways along the edges of the answer book. Candidates would benefit from practice with these questions focussing on how to write a brief response covering the key points in the questions. OCR has issued some advice on how to answer these questions which is available from the website. It was particularly pleasing to see so few candidates leaving questions unanswered and it is clear few candidates had any issues with completing the paper within the allocated time. A good number of candidates were well-prepared for this examination and provided some interesting responses to the questions on both papers.

The small number of centres who submitted work for B062 had clearly benefited from the support provided by OCR through the materials on the website, consultancy services and INSET. There were some excellent solutions submitted for moderation and, for the large part, well organised electronic submissions. It is clear that by submitting the electronic versions of the work alongside a detailed diary or commentary on the development provides the candidates with more opportunities to demonstrate the features and quality of their solution to the moderator. We strongly recommend that centres submit work in electronic format, either via the OCR repository or on CD.

There were so few entries for B064 that it is difficult to draw any conclusions from the work submitted but the principal examiner's report at the end of this document will provide very useful guidance for centres entering candidates in future series.

B061 ICT in Today's World

General Comments

The question paper performed as expected discriminating well across the ability range. Most candidates were able to access all of the questions. There were very few candidates leaving questions unanswered. Candidates had sufficient time to answer the questions.

Centres are again reminded that candidates should have practice in answering those types of questions that require a discussion and/or are used to assess the Quality of Written Communication. It was noted that there were more instances of poor hand-writing and more answers were using the space around the lines, making marking more difficult, than in previous examinations series.

Comments on Individual Questions

- 1 (a) (i) The vast majority of candidates answered this question correctly with the most common response being instructions on what to enter. However, some candidates mistakenly gave PIN as being displayed on the screen. Also, it is not usual for Pin & Chip machines to display the balance of the account or the full credit/debit card number so these responses were not given credit.
 - (ii) The vast majority of candidates answered this question correctly with the most common response being PIN. Candidates should be encouraged not to give vague answers such as "numbers" or "text" as these do not gain credit.
 - (iii) The vast majority of candidates answered this question correctly with the most common response being to note that a stripe reader would be necessary to read the card data if the card had no chip or the chip did not work in the reader.
 - (b) Most candidates could explain that, when entering the PIN, a user should ensure that the numbers were not over-looked but few could provide further explanations. Centres should ensure that candidates understand how to use a chip & PIN reader safely.
- 2 This question was, disappointingly, not answered very well. Candidates seemed unfamiliar with the devices shown. Centres must ensure that candidates are familiar with specialised input devices so that they can answer this type of question successfully. Common misconceptions included the use of the suck/puff switch for speaking and hearing and the use of the Braille keyboard for composing music.
 - 3 This question was marked as a Level of Response question and a number of candidates were able to give a good response discussing the impact of online banking. However, the majority did not fully answer the question failing to discuss the impact on both the bank and its customers. A number of candidates confused online banking with online shopping and so were unable to score marks.
 - 4 The vast majority of candidates answered this question correctly.
 - 5 Most candidates appeared to know about The Computer Misuse Act but could not describe how it attempts to protect data. A significant number of candidates confused this Act with the Data Protection Act and did not score any marks. Candidates are expected to be able to describe the application of the various Acts that relate to ICT.

- 6 This question was very poorly answered with most candidates failing to score any marks. Candidates should be taught, and should have experience of, the use of relational databases.
- 7 (a) Many candidates confused the devices so did not score many marks on this question. The better responses referred to the storage and sharing uses of the server and the connectivity purpose of the hub.
- (b) The question was answered quite well by many candidates but many responses were vague and too generalised. Candidates should not be expected to rely on their general knowledge or experience of the use of wireless but be taught about it.
- (c) This question was answered quite well by many candidates but most could not expand on the single point that they made. Good responses made a point eg limited range and then went on to explain why this might be a problem.
- 8 (a) The use of RFID tags was confused with devices that actively send out signals such as tracking devices so many answers were poor. Candidates must be made aware of the differences so they are able to answer questions such as these. Good responses referred to the setting of alarms, the greater distance over which RFID tags can be read compared with eg barcodes and the fact that RFID tags can be so small as to be unnoticed.
- (b) As in (a), candidates confused RFID tags with active tracking devices such as those used to keep track of convicted criminals. This question was not answered well.
- 9 Most candidates scored well on this question but some responses were vague and did not apply to the actual invitation shown in Fig.1. Other answers that did not score were those that repeated the reason for each change suggested eg “more professional” for each way was not credited.
- 10 Most candidates described either or both verification and/or validation and not why these should be used. Good responses explained the need for both and gave an example related to the school database mentioned in the question.
- 11 This question was marked as a Level of Response question and a number of candidates were able to give a good response discussing the use of ICT to monitor people. However, to gain the top marks candidates were required to discuss the “where” and “what” as given in the question. Many candidates described only one ICT method eg CCTV, others described RFID tags as a means of actively tracking criminals and others gave only a passing reference to invasion of privacy as an issue. To score good marks on these questions, candidates must address each part of the question, in this case “impact”, “ICT”, “where people are” and “what people are doing” and discuss different view points.

B062 Practical Applications in ICT

General Comments

It was apparent in this session that many centres had either taken the opportunity to attend INSET courses run by OCR for this unit, or they had used the CA consultancy service. Where centres had taken the advice to submit the systems electronically, either on CD or through the repository, it was much easier for the moderators to see the range of software features used and the efficiency of the final working system. Candidates who had kept a detailed diary alongside an electronic submission of their system, including different versions, were better able to gain higher marks across different sections, as they recorded testing and evaluation, for example, as they developed the work.

Most centres made full use of the URS mark sheets, highlighting the criteria achieved in each band and annotating where in the work the evidence could be found. This was most helpful to the moderation process and an example of good practice by the teachers concerned.

Investigating a Need

As stated in the previous report, there needs to be a strong link between the research that the candidates carry out and the design of their system. Some candidates had a detailed analysis of both the data formats and the software features used in the systems they found, which enabled them to make justified decisions about the design of their own systems. However, many candidates carried out superficial research which was then not used to inform them about how to design or develop their own system.

It was good to see that candidates had mostly carried out research into actual systems used in similar situations, rather than making up research, as this gave them more potential for justifying their own system.

Practical use of Software

Many candidates submitted work showing a range of advanced software features, although there were still some centres where only basic software features such as SUM function and use of mathematical operands were used. Some of the work from some centres exhibited the use of the same software features and very similar systems. It is important that candidates have enough knowledge of different advanced software features before starting the work to be able to choose appropriate features for themselves, without being restricted by too little prior knowledge.

An area that tended to be neglected in this section was the testing of the systems. Sometimes candidates would draw up a test plan in the early stages of the work but failed to provide evidence of the tests actually taking place. A good method for candidates to use is simple video evidence, such as using CamStudio, which just needs to be referred to in the test plan results.

Practical use of Data

As commented in the last report, this was again an area where candidates did less well. There is a strong link between this section and the section Investigating a Need. Candidates need to write about their choice of data and data formats, which could be done in the design stage early on; this was often lacking in much of the work. The system also needs to be tested by changing the data and/or the rules in the system, to see the effects this has.

Present the solution

Most candidates were able to gain a reasonable mark in this section, by producing a PowerPoint presentation, leaflet or video of the finished system. A few centres were still not submitting any separate evidence for this section, which immediately limits the marks that can be achieved to the low mark band. The key point to gaining a higher mark is the suitability of the presentation to the audience in the task, so if the presentation is just a report of what work was carried out then again, marks are restricted to the lower marks. This is an area where the majority of candidates could gain a good mark regardless of marks achieved in the other sections, just by producing a PowerPoint presentation of what their final system looks like and what it does, with the language aimed at the audience in their chosen task.

Evaluation

Where candidates had kept a detailed diary, much of the evaluation had been done before the candidates reached the end of the work, as they had tested and evaluated their systems as they developed them. This approach is to be encouraged, to prevent candidates running out of time and not having enough time to give this section the required effort. Some candidates were unable to identify strengths and weaknesses and areas for improvement in their systems, other than superficial comments. Most candidates remembered to evaluate how their group had worked on the collaborative research, which is part of the marking criteria.

B063 ICT in Context

The questions covered a range of difficulties enabling the better candidates to show their knowledge and understanding. However, misunderstandings and misconceptions led to a number of candidates failing to gain marks on particular questions despite their answers elsewhere suggesting that they knew the relevant facts.

The most noticeable issue was with not reading the entire question and focussing on customer rather than store as many of the questions required. There were also issues with lack of knowledge of items flagged in the pre-release such as e-commerce, line of business and digital divide. A number of candidates had remembered stock phrases such as magic mirror, gesture-based interface and visual merchandising and gave these as answers to a number of unrelated questions.

In contrast there was clear evidence that many candidates had been taught the concepts identified in the pre-release and had managed to focus on the frontline 18 business concept.

Comments on Individual Questions

- 1 The majority of candidates scored well here, with many gaining full marks.
- 2 (a) There was a general misunderstanding of precisely what e-commerce related to. Many candidates described general website features rather than e-commerce features.
(b) A number of benefits were readily identified including 24/7 opening, global audience and reduced costs. However, some candidates focused on the benefits to the customer rather than to the retailer.
- 3 There was some appreciation of social networking features evident in the answers but a number of candidates failed to go on to explain how these would work for Frontline18 specifically.
- 4 A significant number of candidates failed to connect stock taking and WiFi instead referring to using the WiFi for connection to the internet. A number did identify the value of hand-held portable devices connected to the stock control system in store.
- 5 An accessible question for almost all candidates.
- 6 (a) Candidates who understood what was meant by 'Line of Business' software scored well here with PoS, Stock control, Retail demand forecasting and Customer engagement frequently cited. Some candidates simply gave a list of other common software applications, and a significant number listed items of hardware.
(b) The responses to this question covered three main ideas; use of CCTV, feedback from sales data and use of CAD for store design. Many candidates were able to get started by identifying one of these concepts but many failed to appreciate the context and went away from the point, using the data from these to inform the manager how best to reposition stock within the store.
- 7 The term 'digital divide' was not well understood, When candidates were able to describe the concept they rarely went on to relate this to shopping.

- 8 Generally well answered with many candidates able to identify communication methods but many only managed to score half the marks available because they failed to put these methods into a business, rather than social communication, context.
- 9 (a) There was some confusion over exactly what was meant by the term 'multimedia kiosk', with many candidates taking it to mean a self-service checkout or 'magic mirror' type technology. Where candidates interpreted this as some form of information kiosk a number of appropriate answers were seen.
- (b) Responses were coloured by the candidates' interpretation of what the kiosk was. A significant number of candidates focussed on the benefits to the customer rather than the store.
- 10 This question was quite well answered. Most candidates were able to get at least half the marks available for this question.

B064 Creative use of ICT

This was the second session in which entries for B064 were made and the number of entries was still small with only three centres choosing to submit the work. It was pleasing that most centres, like the summer, opted for digital submission (on CD) where the products produced were available for the moderator to use. One centre even uploaded the websites created to an external facing web server, which is certainly not a requirement of the specification but was very useful.

It is vital when submitting work digitally that evidence is well presented. It is recommended that the written element of the unit is compiled into a single document so moderators don't have to open lots of different files to try and find different bits of evidence. Design specifications produced during the analysis task certainly should be one single document. There are lots of free portable document creators available on the internet which can be used to turn word processed documents into a single file.

It would be helpful that before submission that centres check, that the products still work properly. Websites especially will often work on candidate's areas but sometimes in the transfer process graphics can become omitted. Setting up a root folder in the candidate's work area and ensuring that all related files are saved to that folder is considered good practice. Multimedia presentations can also have a problem of missing media when videos and sounds are linked rather than embedded – care needs to be taken when transferring these also.

Care needs to be taken when choosing a submission mode for this unit. Entry code B064/01 is for repository submission whilst B064/02 is for postal submission. Although we encourage electronic evidence rather than paper based for this unit sometimes due to the complexity of websites and other products, entering students on using B064/02 and posting the evidence on a CD can avoid hours of frustration trying to upload work to the OCR Repository.

Most of the work was assessed a little leniently and assessor comments on the mark sheets helped with the moderation process. Centres should be reminded that marks are awarded using the best fit principle where candidates are awarded for what they have achieved rather than being penalised for omissions. Advice on awarding marks for the work can be found within the "Success in B064" booklet available on the OCR website. It was pleasing to see that no clerical errors were encountered with all candidates' marks being summed and transferred to the MS1s correctly.

The sample candidate assessment material available on the OCR website is meant to show how candidates can answer the controlled assessment. Candidates need to be aware that under no circumstances should they copy this material within their own work, or use it as a template. Those who choose to include parts of the sample materials within their work will face malpractice proceedings as it's a clear breach of coursework handling regulations.

Most of the analysis section of this unit should be completed at a low level of control and candidates should share ideas with one another when researching existing solutions to a similar problem to the one which they are trying to solve. Candidates should then enter controlled conditions to propose their own solution. It is important that the research links to the proposed solution for higher marks within this section. Too often candidates would present their research, then a solution but there was no link between the two. When presenting the proposed solution candidates should state how their decisions have been influenced by their research. The design specifications produced need to include a clear explanation of the solution and how it solves the problem, a list of tasks which need to be carried out to develop the solution with appropriate timings, consideration of hardware and software required to develop and run the solution and detailed user requirements including measurable (both quantitative and qualitative) success

criteria. In some cases parts of the design specification were missing or not detailed enough for the award of band 3.

The design section should be conducted under controlled conditions and requires candidates to produce designs for their proposed solution and comment on how the designs meet the user requirements defined within the analysis task. It should be noted that both elements and screen layouts for the products should be designed. Designs can be completed on paper or using vector drawing tools on a computer. The quality and detail of the designs should determine the mark awarded for this task along with the level of explanation of how the designs meet the user requirements. At the lower end brief designs will be included which another ICT competent person may struggle to follow. For the award of mark band 3 candidates need to fully design all elements of their solution in enough detail so another ICT literate person could create their solution. Some of the designs produced by candidates didn't include the necessary detail even though a mark in band 3 had been awarded. Mark band 3 for this criterion also requires candidates to explain how the proposed solution meets the user requirements; this was sometimes missing from the work seen. A simple way to demonstrate this is to list each of the user requirements after the designs and underneath each explains how it is going to be met. How the solution is going to be tested is also an essential part of the design process. The inclusion of a test plan within the design notes is good practice however there needs to be some explanation of how this test plan is actually going to be used. Statements such as "I will use this test plan to test my website upon completion within 2 different browsers and on a smart phone" and "I will make a questionnaire and ask 3 teenagers to comment upon my interactive bus shelter" turns a test plan into a testing strategy.

The development of elements task should be carried out under controlled conditions and requires candidates to show how the various components which make up the final product have been made. This specification was not designed to be a test of how competent candidates are at producing write ups and the focus needs to be on the skills used however these skills need to be overt and it has to be clear how at least 3 different types of elements were made for the award of mark band 3. A straightforward way for candidates to produce evidence for this task would be for them to produce a diary noting down how things have been made – with a few selected screen shots to explain things which they may be having trouble describing with words. In some cases more evidence of developing elements for the solution should be included for high marks.

The development of the overall solution task should be carried out under controlled conditions and marks should be awarded for the functionality and quality of the product which the candidates have produced. The best way to showcase these to the moderator is to submit the work either via the repository or on CD. For mark band 3 a wide range of features need to be included and the products should be fully functional – missing graphics and hyperlinks within websites are not acceptable for the award of marks within band 3. The products need to be of a high quality for mark band 3 showing a wide range of features has been used – pixelated graphics are not appropriate within products being award mark band 3. The range of features depends on the product being developed for example if a multimedia product is being produced it is expected that candidates include graphics, text, sound, video and other media, self created templates, styles, timings and triggers, animation effects, navigational bars/buttons to create a non linear route through the product, drag and drop/popups/other interactive features whilst for a website the use of graphics, text, hyperlinks, styles, self created templates, rollovers, hotspots, drop down menus, web forms, animation and sound should be amongst other elements.

The testing task should be carried out under controlled conditions and requires candidates to follow the test plan developed in the design section to check that their product works the way in which they intended. All of the mark bands within the testing section require some form of user testing and unfortunately some candidates had not carried this out which should lead to lower marks being awarded. Higher marks for testing should only be awarded when there is clear evidence that testing in different situations has been considered. Testing websites, games and multimedia products on different hardware, operating systems/browsers and screen resolutions

should be considered and carried out as far as possible. Some candidates this session produced some excellent evidence of testing their websites on different browsers and even smart phones.

The evaluation task should be carried out under controlled conditions and should critique the product made and the candidate's performance when working within groups. For the award of mark band 3 candidates are expected to produce a high quality evaluation which reflects upon what the solution does, its strengths and weaknesses, areas for improvement, how limitations found during testing have been dealt with and an evaluation of their and others contribution to group work. Some of the evaluations seen, failed to include enough sufficient detail and a lower mark would have been more appropriate.

B065 Coding a Solution

There were no entries for this unit.

OCR (Oxford Cambridge and RSA Examinations)
1 Hills Road
Cambridge
CB1 2EU

OCR Customer Contact Centre

Education and Learning

Telephone: 01223 553998

Facsimile: 01223 552627

Email: general.qualifications@ocr.org.uk

www.ocr.org.uk

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OCR (Oxford Cambridge and RSA Examinations)
Head office
Telephone: 01223 552552
Facsimile: 01223 552553

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