# INFORMATION TECHNOLOGY 

Paper 0417/11
Written Paper

## Key Messages

This could have been due to the fact that there were fewer multi choice and true/false questions than in previous years. Despite this, candidates appeared to have sufficient time to record all their answers; very few candidates did not answer all questions. There were a number of high marks and few very low marks. Candidates found difficulty answering the questions concerning a proxy server, a Wiki, how to word process a report, stock control in a supermarket, the design of file structure and the processing involved in microprocessor control. Candidates appeared to have learnt a variety of technical terms without fully understanding them and consequently being unable to describe them. For example, a number of candidates knew the names of the methods of direct data entry but were unable to describe them in any detail. The wide scope of applications employed in questions on this paper meant that candidates were unable to gain high marks unless they had revised thoroughly.

The way a microprocessor uses data from sensors was a topic which most candidates found difficult.

## Comments on specific questions

## Question 1

The great majority of candidates gained full marks. The most common incorrect answer was given in part (c).

## Question 2

This was generally very well answered. However, a smaller percentage of candidates than in previous years, gained both marks. A small number did not recognise a buzzer as an output device, some thought that a graphics tablet was an output device whilst others, rather surprisingly, some candidates only circled one answer.

## Question 3

A large majority of candidates were awarded at least three marks. A number were unable to answer the third part correctly.

## Question 4

The vast majority of candidates gained full marks.

## Question 5

There appeared to be little understanding of the proxy server. Where marks were awarded it was, on the whole, for caching. There were a number of very confused answers.

## Question 6

This question was quite well answered with an even spread of marks. Where candidates did not do well it was usually because they had not made a comparison. For example, many said that memory sticks hold a lot of data or are portable but this is also reasonably true of CDs.

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## Question 7

Candidates scored highly on this question with the majority gaining full marks. A common omission, however, was the first PENDOWN instruction.

## Question 8

There were few fully correct answers for either part.
(a) This was not well answered as only just over half the candidates gained 1 mark or more. Some candidates thought it was a chat room, and a number did not even try to answer it.
(b) This was not even as well answered as part (a) with less than half the candidates gaining even one mark. Several answers related to Wikipedia instead of the term 'wiki'. A significant number did not attempt the question.

## Question 9

This question was answered with over half the candidates gaining full marks. Where candidates did not do well it was generally

## Question 10

This question was reasonably well answered with just under half the candidates gaining full marks. A large minority, however, gained no marks at all with a significant number not even attempting the question.

## Question 11

Overall, this question was not well answered.
(a) This part was better answered than the other parts. The large majority gained at least one mark.
(b) This question was not very well answered. It appeared that few candidates had read the question properly. Many candidates wrote about just spreadsheets or databases with few referring to the word processor. Many wrote about database reports. A significant number of candidates, despite the instructions in the rubric, still used brand names.
(c) Of the three parts this was the one which had the weakest answers. Many candidates still gave answers such as quicker or cheaper.

## Question 12

Candidates did not do very well in this question. A significant number of candidates did not gain any marks. It seemed that few candidates had a sound grasp of this topic.

## Question 13

(a) This was very well answered with the vast majority of candidates gaining the mark.
(b) Again, this was very well answered with the vast majority of candidates gaining the mark.
(c) This was quite well answered but a number of candidates wrote words instead of cell references or operators. Some had the references the wrong way round.
(d) This was not as well answered as expected. Only just half the candidates had the correct formula. A number of candidates, as in part (c), had square brackets in the formula. Quite a number of candidates used ' $x$ ' instead of '*'.
(e) This was not well answered. Candidates did not appear to be able to describe the process involved in such a way that it could be followed.

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## Question 14

(a) This was not as well answered as expected. Fewer than half the candidates did not gain any marks. These candidates provided a variety of answers such as methods of implementation, security threats, and even components of an expert system. A number of candidates just named the method without describing it.
(b) Most candidates did not gain any marks. Some candidates again gave the components of an expert system. A number of candidates gave general aspects of design instead of concentrating on file structure.
(c) This was the better answered part of the question with the majority of candidates gaining at least one mark. Most gained the mark for parallel running and a sizeable number gained the mark for direct changeover. Many struggled with phased implementation and pilot running.

## Question 15

(a) This question was fairly well answered with most candidates gaining a mark. Most candidates knew what the initials stand for and a sizeable number gave examples; few could actually describe how it worked. Unfortunately, a sizeable number of candidates thought that the M stood for magnetic and described how optical magnetic readers were used with magnetic strips on bank cards. About one sixth of the candidates did not attempt an answer.
(b) This was not as well answered as part (a) or part (b) although the majority of candidates gained at least one mark. A substantial number of candidates did not attempt the question. Where marks were gained it was usually for stating what the initials stood for. Very few could describe the process and fewer still could give an example.
(c) This was better answered than (b) but not as well as (a). A large number did not attempt the question. Many thought it was used for reading bank cards and a smaller number thought it was an abbreviation for microphone.

## Question 16

(a) This part of the question was quite well answered with the large majority gaining at least one mark. Candidates seem to be unable to visualise the advantages to the company. Vague answers such as they are faster, more efficient are still frequently provided.
(b) This was not as well answered as part (a). Candidates sometimes gave the disadvantage from the point of view of the worker rather than the company.

## Question 17

This question was well answered with very few candidates gaining no marks and the great majority gaining at least half marks.

## Question 18

(a) Most candidates did well naming at least one appropriate sensor.
(b) Most candidates did very well on this question but a surprising number gave modem in their answer.
(c) This was not very well answered. A number of candidates think that the sensor controls the whole process. Some candidates answered with regard to a computer controlled greenhouse and not a washing machine as in the question.

## Question 19

(a) This was quite well answered. Some candidates, however, confused verification and validation methods but many were able to give two verification methods, although the descriptions were sometimes weak.

## INFORMATION TECHNOLOGY

Paper 0417/12
Written Paper

## Key messages

Candidates performed quite well this year. There were a number of candidates who scored very high marks and there were very few very low marks. Candidates found difficulty answering the questions concerning the processing involved in computer control, the forming of a relational database and why it is used and evaluating data input methods. The wide scope of applications employed in questions on this paper meant that candidates were unable to gain high marks unless they had revised thoroughly.

The data processing involved in a computer controlled greenhouse was a topic which most candidates found very difficult.

## Comments on specific questions

## Question 1

Nearly all candidates gained full marks.

## Question 2

The large majority of candidates gained both marks but a small minority gave the answer Blu ray instead of graphics tablet or optical mark reader.

## Question 3

The large majority of candidates again gained full marks. A small number, however, thought that a word processor was an operating system.

## Question 4

The vast majority gained at least two marks. With nearly half the candidates gaining full marks. A common fault was their confusion between hard disc and DVD ROM.

## Question 5

This was not as well answered as expected. However, the large majority of candidates gained at least two marks. The most common error was thinking that a telephone number would be stored as an integer.

## Question 6

Candidates answered this question quite well. Over half the candidates gained full marks. Where full marks were not obtained it was generally due to candidates thinking that ROM is used to store the data the user is currently working on and to a lesser extent candidates thinking that RAM is used to store the start up instructions of a computer. In a minority of cases candidates thought that both of these were true.

## Question 7

Candidates did extremely well on this question with the vast majority gaining all five marks. A small minority mixed up left and right and very occasionally the final PENDOWN was missing

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## Question 8

The vast majority of candidates gained full marks. The small minority of candidates who did not get full marks ticked printer or monitor usually instead of switch.

## Question 9

A majority of candidates gained full marks with the remainder usually scoring at least two marks. The most common incorrect answers were thinking that booking a holiday using a computer is an example of batch processing and producing credit card bills was not.

## Question 10

(a) The vast majority of candidates were able to identify two sensors though some gave pressure sensor as their answer.
(b) This part was not very well answered by the vast majority of candidates. Most appeared not to know or understand what computer processing takes place. A common misconception is that the sensors only react when there is a change in conditions. Vague answers which do not mention the pre-set value are also given. Vague answers such as the windows are opened with no mention of microprocessor involvement also occur. Candidates are also inclined to give answers which suggest the sensor is in control of the whole process. Many candidates spent too much time describing ADC conversion instead of the computer processing.
(c) This part was answered well with most candidates gaining at least two marks. A number of candidates did not make comparisons; seeming to think that a human worker might not be accurate or able to take readings frequently.

## Question 11

(a) and (b) The majority of candidates gained a mark for both these. For the small minority who got wrong answers it was either because they confused records with fields and vice versa or that they counted the number of data items altogether.
(c) This part was not answered well. Many did not understand the question. Those that did understand did not mention tables and usually only gained a mark for writing about primary keys. A number of candidates did not attempt the question.
(d) Most candidates were unable to come up with even one mark point. Frequent vague answers were 'more efficient', saves time' and similar.

## Question 12

(a) The vast majority of candidates gained at least three marks. It seemed that a number of candidates did not think that defining a field length is not part of the design of the file structure.
(b) This part of the question proved difficult for most candidates. The majority of candidates did not gain any marks. Candidates who understood the topic tended to gain full marks but this was much less than half the candidates. However, there were a large number of wrong answers completely unrelated to the question. Some described different methods of implementation, some gave methods of researching a system, and some gave stages of the systems life cycle whilst others described validation checks.
(c) This part was answered well by most candidates with the majority gaining at least three marks. It was, however, a number of candidates thought that producing technical and or user documentation was part of evaluation.
(d) This part was not answered well by most candidates. Most appeared to know items of the documentation without saying why they were needed.

## Question 13

(a) The large majority of candidates gained the mark by mentioning modem or router.
(b) This large majority of candidates gained the mark but too often candidates did not get the mark as they gave brand names.
(c) This part was not as well answered as the previous two parts. A number of candidates appeared to guess the answer but again, a large number gave brand names.
(d) Only just over a third of all candidates gained this mark. Despite the way the question was phrased many candidates gave answers relating to hardware such as a switch or network card.

## Question 14

(a) This part of the question produced a spread of marks. Candidates often gained marks for making one point about each method but were often unable to go on to make a second point. Passwords seemed to be the method that most struggled with.
(b) This part provided the weakest answers for this question. Some of the answers were very vague such as 'provides easier access', 'easier to manage', 'more reliable' and 'it is faster'.
(c) This was fairly well answered with most candidates gaining at least one mark. Some candidates wrote down the disadvantages.

## Question 15

Candidates provided fairly good responses with the majority of candidates gaining 3 or more marks. There were, however, some quite vague answers such as it being faster, there being eye to eye contact, you can not see documents, and it's cheaper. In a discuss question it is expected that these types of answers are expanded upon.

## Question 16

There were a wide range of answers. Some candidates did not know what phishing or pharming was. Some could define one but not the other. Other candidates managed to define both but few managed to define it in the detail required to explain the difference. There were a sizeable number of candidates who did not attempt this question.

## Question 17

This question was generally badly answered as candidates seemed unable to compare the methods. Very few candidates were able to name more than two methods.

## INFORMATION TECHNOLOGY

Paper 0417/13
Written Paper

## Key Messages

Candidates performed on a par with last year. Candidates appeared to have sufficient time to record all their answers with very few candidates not answering all questions. The tendency of some candidates to learn answers from previous mark schemes off by heart continued; this led to many strange answers. This practice can also cause candidates to lose marks as they clearly do not necessarily understand the concepts they are memorising. The wide scope of applications employed in questions on this paper meant that candidates were unable to gain high marks unless they had revised thoroughly. In particular in Question 14b a number of candidates had learnt previous paper mark schemes off by heart and used the components of an expert system to answer the question, or wrote down navigation aids as both these topics had been mentioned in previous design questions. Candidates struggled with the differences between optical and magnetic media. They seemed to be a lack understanding of authentication techniques, file structure and command line interfaces.

## Comments on specific questions

## Question 1

The vast majority of candidates gained full marks. Those that did not tended to put $A$ as pen drive.

## Question 2

Virtually all candidates gained both marks.

## Question 3

The large majority gained full marks. Those that did not tended to think that parallel running was the cheapest method of implementation or that direct changeover requires two sets of workers.

## Question 4

The majority of candidates gained full marks.

## Question 5

Virtually all candidates gained full marks.

## Question 6

Candidates did not do well on this question. Candidates often did not give a specific use and just stated the differences. Many candidates thought that optical media store more data than magnetic tapes.

## Question 7

Candidates did well on this question with the majority gaining 4 or more marks; PenDown and PenUp were often poorly explained.

## Question 8

This was also well answered with the majority of candidates gaining at least two marks.

## Question 9

(a) Virtually all candidates gained the mark.
(b) Most candidates gained both marks; a sizeable minority did not appear to know about the analogue nature of physical variables and/or the digital nature of a computer.
(c) This was also well answered with the vast majority of candidates gaining at least two marks.

## Question 10

(a) and (b) The vast majority of candidates gained both marks although a few candidates got them the wrong way around.
(c) Again, most candidates gained the mark but a sizeable number wrote 'garlic paste'
(d) The majority of candidates did not understand the importance of the leading zero. The most common answer was numeric or number. Very few candidates gained a mark for this part.
(e) This was not well answered. Many candidates could not explain the process and some did not read the question and answered in the form of how the receipt was produced.

## Question 11

This question produced a wide range of marks with most candidates gaining one or two marks. Candidates often gave at least one feature but without giving its use.

## Question 12

(a) This was reasonably well answered with the majority of candidates gaining at least one mark. A number of candidates gave answers related to the benefits of using the Internet rather than connecting computers to form a network.
(b) This was slightly better answered with a greater majority of candidates gaining at least one mark. Some candidates gave one word answers such as virus or expensive.

## Question 13

(a) This was not well answered. Candidates often just named the technique and did not describe it.
(b) This was much better answered with a greater majority of candidates gaining at least one mark. Candidates made one point but did not follow it up with another.

## Question 14

(a) This was not at all well answered. A number of candidates were unable to give any methods. The majority of candidates could only give one or two. Most candidates could not explain why the method would be used; often just stating the method would be used to gather data about the system which was just a rewording of the stem of the question.
(b) This was the least well answered question or part question on the paper. The vast majority of candidates did not appear to have any understanding of this topic. A variety of answers were given such as methods of implementation, items of documentation, steps in evaluating a system even components of an expert system. A number of candidates did not attempt to answer this part of the question.
(c) This was better answered than part (b) but was still not well answered by the majority of candidates with only just over half the candidates gaining one mark or more. Some who did give the correct answer just repeated the reasons in the stem.

## Question 15

This was not well answered with many candidates not gaining any marks. Many candidates did not know what a CLI was and could not explain it therefore. With a GUI many stated it was like windows.

## Question 16

(a) The vast majority of candidates gained at least one mark. A number of candidates gained one mark because they thought router and modem counted as separate answers, candidates often gave credit card as an answer.
(b) This was not as well answered as expected although the great majority of candidates gained at least one mark. A number of candidates gave answers such as can shop from home or does not have to travel without going on to explain that this would save money or time.
(c) This was slightly better answered than part (b) with more candidates gaining marks. A number of candidates just stated virus, phishing and pharming without the explanation that they would be more vulnerable to them.

## Question 17

This question produced a good spread of marks with a large majority of candidates gaining at least two. A number of candidates spent a lot of time explaining what actions the customer takes rather than the computer processing which takes place.

## Question 18

The great majority of candidates gained at least one mark with a large number getting both marks. A number of candidates stated it would be cheaper without explaining why.

## Question 19

This question produced an even spread of marks with the majority of candidates gaining at least two. Many candidates could not name the method but compensated by gaining a mark for the description. There were a number of candidates who did not seem to have knowledge of either method.

# INFORMATION TECHNOLOGY 

Paper 0417/02
Practical Test A

## Key Messages

The paper performed well giving candidates opportunities to demonstrate their skills fully to get maximum marks, while at the same time being accessible to the full range of skills. The paper covered communication skills, document editing and integration, with database skills. The paper also contained presentation skills (as has been made clear, the two practical papers cover all the skills of the relevant units of the syllabus but will not always be divided up in the same way). A chart appeared in the presentation in this paper. The paper did not start with the familiar email to receive source files and the search for additional materials. So, on this paper, all files were provided to the candidate. This was because more realistic searches of the Internet had been designed into the paper 3 skills.

## Step 1

An evidence document was provided for placing various screenshots captured during the examination with the intention of reducing the number of files to print. This document would contain evidence of the contact added to the address book, the database structure and evidence of the outgoing email message with its subject, message, attached file and the two recipients. There was no problem if these pieces of evidence were not placed in the evidence file and were printed directly.

## Step 2

The candidate had to add a new contact to their address book. This contact would be used later in the examination as a copied recipient to a new message. Note that evidence of the contact name, job title and the correct email address was required.

## Document editing

## Steps 3 to 22

After opening the supplied source file, there were instructions to format the document in a consistent way using specified fonts, sizes and emphasis, applying a particular page layout which changed from one to two columns. Text was added as title and subtitle, and header and footer items were inserted. These were familiar skills accessible to most candidates. Common errors included application of the wrong font, incorrect setting of margins, occasional incorrect page orientation and the exact alignment of header and footer items to the text margins. Some candidates also confused left and right placement of items at various points in the paper. Occasionally the space between the columns was incorrect, i.e. not two centimetres.

## Steps 23 to 24

A new subheading was inserted at the start of the document. The existing subheadings in the document had to be identified and all subheadings had to have specific and consistent formatting applied to them. While the new text was frequently inserted accurately, the correct and consistent formatting of all of the subheadings was less commonly carried out with full accuracy.

## Steps 25 to 29

The candidates had to search for a file that contained a tabular data, placing this into their document. The table was then formatted following specific instructions for font, emphasis, alignment and formatting. Having found the file and placed it in the document, the most common errors were that the font was not matched to the body text, and top row text was not centred or underlined. Border lines were usually printed, but sometimes not as specified with an outside border only set to a thicker line style. Occasionally the whole

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background to the table was presented as black with no lines visible. Data in the table was later to serve as the source for the construction of the chart in the presentation.

## Step 30

The candidate was instructed to find and place an image of a harbour or boat. An appropriate image to meet the requirements was placed in the text. It was to be placed accurately within the text and resized. Text wrapping had to be set on. Many candidates chose to use the image supplied for use in the presentation (they were not aware that this image would serve for that purpose later in the paper and were not penalised for choosing to use this one - it met the specification of the question). Others searched the Internet or clipart for their image and a wide range of pictures were found meeting the criteria of "harbour, port or boat". Some latitude in accepting "appropriate" images was allowed by Examiners to cater for candidates who might have limited access to images. Images were accepted even though they might not be strictly appropriate to a cargo port scenario, as long as they met the search criteria.

## Steps 31 and 32

The document was complete at this point as it did not depend on the database for integration material. It was now ready to be checked for layout to ensure no widows or orphans had been left and to adjust text if such were noticed. It was then saved and printed. Most candidates provided this printout.

## Presentation authoring

## Steps 33 to 37

A short presentation was constructed using a source file to create five slides each containing a heading and bullet points. The slides might be created by importing the text from the file or by copying and pasting the text into the presentation slides. Master slide items were created and these consisted of an image, a line, some text, slide numbers and personal details. These did not appear in their default placeholder positions or styles. They did, however, have to be present on all slides. When a new slide was created as a title and subtitle slide layout, the master slide items should have appeared on this slide also. Sometimes only some or even none of these master slide items were applied to the title slide. The slides were then edited by changing the order in the slide show.

## Steps 38 to 40

A chart, created from data found in the table already inserted into the document, was inserted on a specific slide. Often the chart data was not well identified and the year data was charted along with the export figures. The years should have become the category series labels. The chart needed to be labelled with title, axis titles and series labels. Different interpretations of the data to be charted were accepted as reasonable (i.e. years as the categories with planned and actual volumes as the legend or planned and actual volumes as the categories and years as the legend).

## Steps 41 and 42

Slides were printed individually and as audience handout layout.

## Database manipulation

## Steps 43 to 46

The database involved the import of a csv format file to specified field types. Descriptions of the fields were added to the paper particularly to clarify the meaning of the VIN field number. Some candidates added this information to their database and were not penalised (or credited) for doing so. Candidates had to identify and apply specified filed types to some fields and format the data when displayed, for example, as currency with a Euro sign, or to assign the text "Yes" or "No" to a logical field containing numeric data. One field (Engine size) was sometimes mistakenly identified as a numeric field when the paper specified that it should be a text field. This often resulted in import error messages or for the text data to be ignored by the database software.

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## Steps 47 and 48

Two reports were generated from the database records after adding three new records. The first report was based on two selection criteria. Specified fields had to be selected for display and the records sorted on the VIN number. Candidates need to make sure that all required fields and headings are displayed in full, especially for the first field in this report as this is used as evidence of sorting the records. It means that additional marks for added records will be lost if all data is not visible. Candidates should also be aware that a very long report is probably due to a selection error as Examiners do not make reports very long when based on correct selections. In this case a correctly selected report produced some 43 records out of the total of several hundred. A runtime calculation of the number of records in the report was generated. It was noted that some candidates did not make this an automated count. This was deduced when the number they displayed was not the actual total for their list. Candidates were credited for count results which matched the actual number of records in the report even if this number was the result of an error in selecting or adding records.

## Steps 49 and 50

A second report was designed to be printed as a page of labels. Each label contained some heading text and the contents of records selected on three criteria. Only four fields from each record should appear on the labels and the labels should also be laid out with the relevant field names before the contents. At the foot of each label, personal details of the candidate had to appear. For those who had met this report design previously, this was not a difficult task. The most common error was the omission of the field names.

## Steps 51 to 54

An email message was created with two recipients, one of whom was the contact added earlier in the paper. With the document file attached and a short text, the message was ready to send and was printed as evidence in the evidence document. Any file name for the document file was accepted unless it was the original filename. This served as evidence of saving a file with a new name as specified at step 7. It also had to be the document file as last saved at step 32 and not the presentation, evidence file, database or any of the source files. This evidence document was then printed as the final step of the examination.

# INFORMATION TECHNOLOGY 

Paper 0417/03
Practical Test B

## Key Messages

Candidates must be aware of extracting the correct data from an Internet search. For a significant number of candidates, the website authoring section of the paper was their strongest element, a follow on from the results found in recent sessions. The paper gave a good spread of marks.

Centres should not staple together their work; work should be submitted in the ARF along with the question paper which should have hand written on it the candidate's name, Centre number and candidate number as well as the date that the candidate sat the examination. In future sessions it will be essential that ALL candidates comply with these instructions in order for their work to be processed. The majority of candidates completed all elements of the paper. There were vast differences in the range of results from Centre to Centre. There is evidence that some candidates are rote-learning sets of skills to pass the practical examinations, rather than having the underlying knowledge and understanding to underpin these skills and allow them to be applied in any context.

There were a significant number of typographical errors. Many of these inaccuracies could have been avoided with more careful checking and correction. A very small number of candidates did not print their name, Centre number and candidate number on every document submitted for assessment. These appeared to be significantly fewer than found in previous year's submissions. It is important that candidates do this, as without clear printed evidence of the author of the work, marks can not be awarded for these pages. It is not acceptable for candidates to hand annotate their printouts with their name as there is no real evidence that they are the originators of the work.

A small number of candidates omitted one or more of the pages from the required printouts. In general, candidates seemed prepared for this examination and the vast majority who submitted their work showed sound knowledge, skills and understanding. Some candidates submitted multiple printouts for some of the tasks and crossed out those printouts that were draft copies. If multiple printouts are submitted, only the first occurrence of that page will be marked.

## Comments on specific questions

## Question 1

Almost all of the candidates created the evidence document successfully.

## Question 2

Almost all of the candidates included their candidate details as specified in the header of this document.

## Data Analysis

## Question 3

The majority of the candidates completed this step successfully.

## Question 4

The majority of the candidates completed the first part of this correctly; some candidates did not place an automated filename with the full file path in the footer of the page. Of these candidates, some included the file name but no file path.

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## Question 5

Almost all candidates showed evidence that they had searched for records for the men's and women's javelin event, but the majority of candidates did not include the reference to the Olympic record holder. A large number of candidates discovered the information relating to the world record holder and some presented the information of the winners from the Beijing games. A number of candidates did not enter the distance thrown as a numeric value to 2 decimal places. As the data was being entered into a spreadsheet for candidates to use to perform subsequent calculations this data should not have been entered as a label with 'metres', 'meters' or ' $m$ ' on the end. This information was almost always placed in the correct cells.

## Question 6

Almost all of the candidates completed this step successfully, although a small number of candidates printed out the entire spreadsheet rather than selecting a specified print area.

## Question 7

The majority of candidates used LOOKUP or HLOOKUP functions to look up the country name in full. Many candidates did not use the specified file N1COUNTRY.CSV or the correct range of cells for the lookup array. A small number of candidates attempted to use named ranges, despite a clear instruction that these were not to be used within these formulae. Candidates were instructed to use the Code column for the lookup value. Candidates must determine the correct cell within this column, a small number of candidates appeared to select a single cell, yet have it offset either a row above or below the required data. The instruction to use both absolute and relative referencing was placed to ensure that a single cell reference was used for the lookup rather than a default range; this single reference should therefore have been a relative reference. A number of candidates lost marks by using an absolute range for this variable.

## Question 8

The majority of candidates used correct formulae to calculate the longest throw. The majority used a MAX function, although other alternatives like LARGE were also seen. Some candidates used a list of individual cells within the function rather than an appropriate range. For future sessions it is important that candidates use the most efficient methods in their solutions, although the use of inefficient lists of cells rather than ranges of cells were not penalised for this session.

## Question 9

Many of the candidates used correct formulae to calculate the total distance from all the valid throws. The majority used a SUM or SUMIF function. Again some candidates used a list of individual cells within the function rather than an appropriate range. For future sessions it is important that candidates use the most efficient methods in their solutions, although inefficient lists of cells were not penalised for this session. A significant number of candidates allowed the software to select the range rather than specifying this for themselves, leading to a number of ranges showing cells in columns E to K rather than cells in columns E to J.

## Question 10

The majority of candidates entered formulae to count the number of valid throws. The majority used a COUNT or COUNTIF function. Again some candidates used a list of individual cells within the function rather than an appropriate range. For future sessions it is important that candidates use the most efficient methods in their solutions, although inefficient lists of cells were not penalised for this session. Some candidates erroneously used COUNTA functions.

## Question 11

This question was more challenging for many candidates. Few candidates used the most effective formulae that divided the answer from step 9 by the answer from step 10. Some candidates calculated the correct average using an AVERAGE function with the range from columns E to J . Few candidates rounded the average to 2 decimal places using a ROUND function. A small number of candidates used ROUNDUP or

ROUNDDOWN functions which gave erroneous results. Other candidates incorrectly used the INT function to obtain the integer value.

## Question 12

Candidates who were successful at completing these formulae used a mixture of absolute cell referencing to the current Olympic record for male and female athletes and relative referencing to each individual athlete's best throw.

## Question 13

The majority of candidates set the alignment as specified for columns D to O . A small number right aligned all cells in the spreadsheet.

## Question 14

Almost all of the candidates completed this step successfully.

## Question 15

Almost all of the candidates completed this step successfully.

## Question 16

Many of the candidates completed this step successfully.

## Question 17

Many candidates printed the formulae printout as specified with the printout placed over two pages. A small number did not submit a formula printout of any sort and a significant number of candidates produced this evidence as a single page wide. Few candidates followed the instruction to make sure that all row and column headings are visible when printed.

## Question 18

The majority of candidates completed this step successfully.

## Question 19

The majority of candidates selected the athletes from Great Britain and used the correct averages to produce the required vertical bar chart.

## Question 20

A large number of candidates did not carefully check their data entry in the chart title. There were many candidates who introduced data entry errors in this text.

## Question 21

The majority of candidates who submitted a chart completed this step successfully.

## Question 22

The majority of candidates who submitted a chart completed this step successfully.

## Questions 23 and 24

The majority of candidates completed these steps successfully

## Question 25

A large number of candidates showed evidence of completing this correctly for row 6 but in the printout row 7 was missing so could not be awarded the mark. Almost all candidates had enhanced the cells shown with bold and italic text. Some candidates did not centre-align the cell contents.

## Question 26

This was well done by the vast majority of candidates submitting printouts for this section of the paper, although a number of candidates used AutoFilter and filtered out row 7 of their sheet.

## Question 27

A significant number of candidates performed the sorts (either correctly or otherwise) but did not highlight all of the data to be included with the sort, therefore losing the integrity of the data.

## Question 28

The majority of candidates completed this step successfully.

## Website Authoring

## Question 29

Most of the candidates completed this step successfully.

## Question 30

The majority of candidates completed this step successfully.

## Question 31

Many candidates completed this step with 100\% accuracy, showing good evidence of the image resizing. A variety of different packages and approaches were used to obtain the correct results.

## Question 32

The majority of candidates completed this as specified a number chose to use image resizing to reduce the overall image size rather than editing the resolution. Many of these candidates set the overall image size to approximately half the physical size, which also led to some interesting background tiling in the browser view of the page. Most saved the image as specified and many candidates also printed screen shot evidence of the file names and file sizes, ensuring that they obtained the mark.

## Question 33

The majority of candidates completed this step successfully.

## Question 34

A whole range of permutations of reflection and rotation were submitted. The final image should have been facing the left side of the page. Many candidates did attain the correct answer which was evidenced in the browser view printout of the webpage. A significant number of candidates did not save this with the specified filename N1SWIM2.JPG.

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## Question 35

The majority of candidates completed this step successfully.

## Question 36

This question gave the candidate the opportunity to test different background images and font styles with their webpage. The most appropriate stylesheet was N1STYLE8.CSS which should have been attached to the webpage in place of N1STYLE6.CSS. A number of candidates attached all of the stylesheets to the page. The last attached sheet takes priority so this was the sheet that was marked. A number of candidates erroneously included an absolute file path when attaching the stylesheet.

## Question 37

Few candidates completed this step successfully. The resizing of their browser window seemed to present many candidates with an issue. This would be understandable for candidates who had reduced the image size in step 32 rather than reducing the image resolution.

## Question 38

The majority of candidates completed this step successfully, although a significant number also removed the text 'Last edited by' as part of this process and therefore did not attain the mark.

## Question 39

Most of the candidates set the image width to 80 pixels wide, but less set the image height to 103 pixels or alternatively omitted the height attribute which forces the image to maintain its aspect ratio when resized within the browser.

## Question 40

The majority of candidates set the cell padding to 4 but omitted the units, in this case pixels. Some candidates omitted this step.

## Question 41

The majority of candidates set the cell spacing to 4 but omitted the units, in this case pixels. Some candidates omitted this step.

## Question 42

The step instructed the candidates to replace the word with the most appropriate images from those provided. A number of candidates included both the words and images, ignoring the instruction to replace. Most candidates selected the correct images for the names, although a few candidates replaced the Archery text with another image. If candidates were unsure they could have searched the Internet to find the sport (of say Athletics) and used this to guide their image selection.

## Question 43

A number of candidates did not read the question and set the image heights to 50 pixels rather than the widths. Some changed both height and width attributes and therefore distorted the images from their original proportions.

## Question 44

A number of candidates failed to set the target window as specified to "_hothouseweb" or to point this with a hyperlink reference to the correct website. Some used the URL they had open within the RockICT website as the URL for the hyperlink which was not the same as the one specified in the question paper. A small number of candidates set up this hyperlink and the correct target window but did not create it from the two specified words of text.

## Question 45

Many candidates had saved the image with an incorrect filename (in step 34) so many did not attain the mark for using the correct image as a hyperlink. Most correctly referenced this hyperlink to the file specified, with only a small number of candidates incorrectly using an absolute path for this file. The instruction to open this file in the current window appeared to be ignored by many candidates. Of those attempting this part of the question, the vast majority were $100 \%$ correct.

## Question 46

A small number of candidates from a range of centres failed to correctly print one of the required printouts. A number omitted the html printout completely.

## Question 47

The majority of candidates completed this step successfully.

