

# INFORMATION TECHNOLOGY

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Paper 0417/11

Written Paper

## Key Messages

Candidates performed on a par with last year. Candidates appeared to have sufficient time to record all their answers with most candidates able to answer all the questions. There were a number of very high marks and few very low marks. Candidates found difficulty answering the questions concerning batch processing, expert systems and assessing reliability and bias of a website. Candidates appeared to have learnt a variety of technical terms without fully understanding them and consequently being unable to evaluate them. For example, many knew the types of security measure but were unable to provide the advantages and disadvantages. A number of candidates knew the names of the methods of collecting information about an existing system but were unable to describe them. The wide scope of applications employed in questions on this paper meant that candidates were able to gain high marks if they had revised thoroughly. Candidates need to differentiate the difference between optical media and other forms of storage media. Candidates also need differentiate between the terms 'media' and 'devices'.

Establishing the reliability or bias of a website was a topic which most candidates found difficult.

## Comments on specific questions

### **Question 1**

The great majority of candidates gained full marks.

### **Question 2**

Almost all candidates gained both marks; a small minority gave the answer magnetic tape or DVD RAM.

### **Question 3**

The large majority of candidates were awarded at least four marks. A small number confused the last two options.

### **Question 4**

The majority of candidates gained full marks, a small minority confused validation and verification, particularly with regard to length checks and range checks. A tiny minority confused verification with validation and vice versa.

### **Question 5**

- (a) Many candidates scored well on this question.
- (b) Candidates scored highly on this paper, with most getting the right answer.

### **Question 6**

Candidates did not answer this as well as expected. Many confused file and field.



### Question 7

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

### Question 8

Candidates gained few marks on this question. There seemed to be a lot of misunderstanding of batch processing. Candidates often described the taking of a cheque to the bank and how a cashier would deal with it. A number of candidates seemed to think that cheques were collected and then not processed until the end of the month.

### Question 9

This question was reasonably well answered.

- (a) The majority of candidates gained at least one mark. A number of candidates were still using words like 'cheap' and 'fast' for their answers.
- (b) The majority of candidates gained at least one mark. The most common reason for marks not being awarded was the vagueness of the answers. Not many candidates understood how large companies carry out video conferencing.

### Question 10

This question was not as well answered as expected.

- (a) (i) The majority of candidates answered this correctly.
  - (ii) Far fewer candidates were able to give a good reason with many answering that it was so you could see if the car had air conditioning or not.
- (b) (i) Virtually all candidates answered this correctly.
  - (ii) Few candidates were able to give a good reason with many rewording the name of the field.

### Question 11

Candidates did fairly well on this question, with many candidates gaining at least 3 marks.

### Question 12

Candidates did not do very well in this question. Many gained marks for describing a user interface and the outputs but very few managed to describe the actual processing.

### Question 13

This was not well answered with a number of candidates answering with pen drives and magnetic media. The advantages and disadvantages were often too vague with the actual comparison missing.

### Question 14

This question was not as well answered as expected. A number of candidates confused WLAN with WAN, referring to a Wide Local Area Network and answered accordingly.

### Question 15

This question was well answered with many candidates gaining full marks.



### Question 16

This question was not well answered. Candidates were able to name the methods but were frequently unable to describe the advantages and disadvantages. A number of candidates did not identify the need for a user name as well as a password.

### Question 17

This question was better answered, though few candidates answered the first part well.

- (a) A number of candidates did not appear to understand the question and gave very vague answers, with others just naming the method without describing it.
- (b) This was better answered; however, some candidates did not read the question as instead of producing a screen for one book, they produced a table or grid for the entry of many books rather like a spreadsheet or database table. Many candidates' designs were very vague with lines of varying lengths indicating where data should be entered. A number referred to borrower details rather than book details.
- (c) This was fairly well answered with many candidates gaining two out of the three marks available.

### Question 18

This question was fairly well answered. A number of candidates did not answer this question. Those candidates who attempted the question gained full marks for (a), (b) and (c).

### Question 19

This was not answered as well as expected with few candidates scoring highly. It appeared to be a topic unknown to a number of candidates. Those candidates who could identify the two types seemed unable to name more than one component of each. A number of candidates did not attempt this question.

### Question 20

Many candidates did not do very well on a difficult, discriminating question. Higher performing candidates scored fairly well. Candidates tended to comment on comparing websites or the author's reliability rather than other aspects.



# INFORMATION TECHNOLOGY

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Paper 0417/12

Written Paper

## Key Messages

Candidates appeared to have sufficient time to record all their answers. There is still a tendency of some candidates to rote-learn answers from previous mark scheme. This led to many incorrect answers particularly on **Question 9a** where some candidates described how to create an expert system rather than listing the constituent parts or described the processing rather than how it actually works. In **Question 12** candidates listed any security method regardless of whether it was an authentication technique or not. This practice can cause candidates to lose many 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.

Most candidates require as greater understanding of the role of microprocessors in control systems.

## Comments on specific questions

### **Question 1**

The great majority of candidates gained full marks. Those that did not usually chose ink jet instead of dot matrix printer.

### **Question 2**

Almost all candidates gained both marks.

### **Question 3**

The vast majority of candidates gained full marks. A small number, however, thought that PDAs could not be used unless plugged in to an electricity socket.

### **Question 4**

Candidates did quite well on this question with many gaining full marks. Incorrect answers were spread evenly amongst the different statements.

### **Question 5**

The vast majority of candidates scored well. A small number gave queries as an answer instead of 'whatifs'.

### **Question 6**

Most candidates were able to name the instructions but descriptions of the instructions were sometimes not in sufficient detail. PENUP and PENDOWN seemed to cause the candidates most issues when it came to defining them.



### Question 7

Candidates gave many incorrect answers for this question including 'it is more private to send a fax'.

### Question 8

The candidates need a further understanding the concept of real time processing. Many answers given did not contain sufficient detail.

### Question 9

Candidates need further undertaking to be able to answer the question in more detail.

- (a) A number of candidates had learnt previous mark schemes by rote to a differently phrased question, that of creating an expert system. This meant that these candidates found it difficult to gain any marks.
- (b) Most candidates were able to name at least one other use.

### Question 10

This question was quite well answered. Most candidates were able to name at least two appropriate checks.

### Question 11

This question was answered very well.

### Question 12

Candidates frequently provided answers which were general security techniques rather than authentication techniques. Many candidates answered with encryption and firewalls. A number of candidates did not mention usernames and passwords together.

### Question 13

Candidates did very well on this question.

- (a) The vast majority of candidates were able to provide correct answers.
- (b) A number of candidates had rote-learnt previous mark and gave answers which were methods of preventing health problems. Others continued on from part (a) and gave another two health problems. The majority of candidates were able to gain both marks.

### Question 14

This question produced a mixed set of responses with virtually all candidates able to gain at least one mark. Many candidates gave business type answers rather than answers that referred to schools. Candidates answered the advantages part better than the disadvantages part.

### Question 15

Many of the candidates failed to pick up on the requirement for navigation aids and instead gave answers relating to features of the screen such as font size, filling the page etc. a number of candidates gave the names of fields that would be found in the database.

### Question 16

Most candidates performed better on part **(a)** than they did on **(b)**

- (a)** Many candidates knew the names of the methods. Candidates found it difficult to give an advantage, preferring instead to describe the method, and many could not provide a disadvantage. A sizeable number of advantages of the first method were then given as disadvantages of the second method and vice versa, thereby limiting the number of marks available.
- (b)** Candidates did not appear to know how evaluation is carried out. Many referred to other aspects of systems analysis instead.

### Question 17

Many candidates gained just one mark for the laziness aspect. A sizeable number of candidates tended to write about the devices but did not relate these to the effects on lifestyles i.e. how we lead our lives. High performing candidates scored very well.

### Question 18

Overall, this question was very well answered in parts **(a)** and **(b)** but then poorly answered in part **(c)**.

- (a)** The vast majority of candidates gained full marks.
- (b)** Most candidates gained full marks.
- (c)** Candidates need to mention the microprocessor or what function it performs. Many candidates incorrectly stated that the sensors controlled the process.

### Question 19

Most candidates managed to gain at least one mark with the higher ability candidates gaining 3 or 4 marks.

Most candidates who scored well concentrated on phishing and pharming.

### Question 20

This question was better answered with the majority of candidates gaining at least two marks. Most gained marks for portability and having a smaller display but did not mention other mark scheme points.



# INFORMATION TECHNOLOGY

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Paper 0417/13

Written Paper

## Key Messages

Candidates appeared to have sufficient time to record all their answers. There were a number of very high marks awarded. The tendency of some candidates to rote-learn answers from previous mark schemes continued; this led to many incorrect 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 10** a number of candidates had learnt previous paper mark schemes and answered how to use an expert system rather than how to create one. There were aspects of Systems Analysis which a number of candidates appeared to be unfamiliar with. Candidates are required to demonstrate and understanding of microprocessor control.

## Comments on specific questions

### **Question 1**

The vast majority of candidates scored full marks.

### **Question 2**

Most candidates gained both marks. Occasionally candidates gave the storage devices as their answers.

### **Question 3**

Most candidates scored full marks although a small number thought that DTP is used to create databases.

### **Question 4**

Candidates performed very well on this question, a tiny minority thought that a dot matrix printer was used to produce high quality printouts.

### **Question 5**

Candidates did generally quite well on this question

- (a) Most candidates gained full marks for this part with incorrect answers being equally dispersed amongst the other options.
- (b) Candidates did not do very well on this question with many candidates giving general answers rather than specific to this scenario.

### **Question 6**

Candidates answered this very well with few candidates gaining less than four marks.

### **Question 7**

This was well answered with many candidates gaining full marks. Those that did not tended to think that dot matrix printers produced high quality hard copy and plotters were used to output multipart forms.

### **Question 8**

This was well answered with most candidates able to give the meaning of the check but a sizeable number did not appear to fully read the question and did not give an example of candidate data preferring to give any type of example instead.

### Question 9

Candidates generally scored very well in this question.

### Question 10

There were some candidates who wrote about using an expert system. Other candidates incorrectly answered the question from a full systems analysis approach including the analysis/design/implementation/testing/documentation phases.

### Question 11

This question was very well answered with only part **e** requiring further expansion of detail.

- (a), (b), (c) and (d)** These parts were all well answered with the vast majority of candidates answering correctly. There were just occasional incorrect answers e.g. 28 fields in **(a)**. Sense and Sensibility being the most common incorrect answer in **(c)** candidates sorted in descending order, and occasionally Full Circle in **(d)**.
- (e)** The name of a validation check for this field was often identified but a description rarely followed. Some candidates came up with suggestions like 'date check' or suggested a field type rather than a validation check.

### Question 12

Most candidates gave very vague answers required more detail to gain marks.

### Question 13

Many candidates missed the point of the question which was simply to provide access to the Internet and communicate with other companies.

- (a)** Many candidates came up with answers such as firewalls and malware protection. While these would be advisable in a network connected to the Internet, they would not be required to achieve access. The higher-performing candidates clearly saw this and gained marks accordingly. Many mentioned router but were unable to describe it in this context.
- (b)** This question was well-answered with many candidates describing distraction hacking and viruses.

### Question 14

Many candidates gave health issues or data security issues as in incorrect answer.

### Question 15

A number of candidates ignored the question and included navigation aids. Many candidates provided field names and other features of database design rather than screen design.



### Question 16ab

Many candidates concentrated on the methods of implementation, methods of analysis and evaluation rather than focus on testing.

### Question 17

Most candidates require further knowledge of burglar alarms and the role of the microprocessor in such a system.

- (a) This was the best answered part of the question with most candidates gaining marks. Higher candidates tended to gain at least three marks. Candidates seemed able to name at least one sensor but were unable to describe them. A number answered 'heat sensor' instead of 'temperature sensor'.
- (b) Many candidates gave very vague generalised descriptions without homing in on the specific actions a microprocessor takes. Some gave answers such as ADC or DAC without explaining the role of the microprocessor.
- (c) This was better answered than (b) but responses required further detail. Many candidates gained just marks for the laziness aspect or more time available for leisure activities. A sizeable number of candidates tended to write about the devices but did not relate these to the effects on lifestyles i.e. how we lead our lives. Higher candidates scored very well.

### Question 18

Candidates frequently gave answers which did not relate to the scenario. Most common correct answer points were "cost" related and "not everyone has computer/email/Internet".

### Question 19

This question was fairly well answered; candidates did better on part (b) than part (a).

- (a) Candidates were able to name suitable devices but did not provide an appropriate description of the device or providing no description at all.
- (b) Most candidates did well on this managing to give at least two advantages.

### Question 20

This was well answered. The majority of candidates gained at least two marks.



# INFORMATION TECHNOLOGY

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**Paper 0417/21**  
**Practical Test A**

## **Key Messages**

Two practical papers were set for this summer examination series. While different in the detail of the skills tested, both papers gave candidates opportunities to demonstrate their skills to get maximum marks, while being accessible to the full range of skills. Both papers covered communication skills, document editing and integration, with database skills. Paper 21 contained presentation skills (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). Paper 22 explored skills of file management and exporting data to a new file format. Charts appeared in both papers; in the presentation in paper 21 and in the document in paper 22.

## **Paper 21**

### Step 1

An evidence document was provided for placing various screenshots captured during the examination with the intention of reducing 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 issue 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 both the contact name and the correct email address is 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.

### Steps 23 to 24

Editing the document continued with the insertion of a new subheading and identification and formatting of the existing subheadings in the document. While the new text was frequently inserted accurately, the identification of all the existing subheadings and correct formatting of all of these was less commonly carried out with full accuracy.

### Steps 25 to 29

The candidates had to search for a file that contained a table and place 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 not to match the font of the body text, and not to shade the top two rows. Data in the table was later to serve as the source for the construction of the chart in the presentation.

### Step 30

An image had to be found and placed in the text, formatted with size and text wrap. 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 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 self contained and did not depend on the database for integration material. It was now ready to be checked, saved and printed. Few candidates did not provide 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 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 edited by moving specified material 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 handouts.

### 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.

#### 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. This is especially true for the first field in the report, as this is used as evidence of the sort, and also loses marks for added records if all data is not visible. Candidates should also be aware that a very long report is probably due to a selection error as the correct selection produces a short report. 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 they were the result of a selection or added records error.



#### 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 should also have 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 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. This document was then printed as the final step of the examination.

# INFORMATION TECHNOLOGY

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<p><b>Paper 0417/22</b> <b>Practical Test A</b></p>
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## Key Messages

Two practical papers were set for this summer examination series. While different in the detail of the skills tested, both papers gave candidates opportunities to demonstrate their skills to get maximum marks, while being accessible to the full range of skills. Both papers covered communication skills, document editing and integration, with database skills. Paper 21 contained presentation skills (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). Paper 22 explored skills of file management and exporting data to a new file format. Charts appeared in both papers; in the presentation in paper 21 and in the document in paper 22.

## Paper 22

### Step 1

This paper provided an evidence document into which various screenshots could be placed during the examination to provide a single file to print at an appropriate stage of the examination. Printouts not placed in the evidence document were marked and not penalised.

### Steps 2 to 22

A document was set up from a source file made available in .rtf format. The candidates formatted and edited the document in terms of page orientation, setting margins, applying a font style and size and controlling the linespacing. Header and footer items were inserted and a title and subtitle entered and formatted. Following these, the remainder of the document was formatted into two columns with a set space between these columns. While well executed by most candidates, there was confusion of the font types, alignment of header and footer items to the text margins, and errors in setting margins. An added complication was the indent of the first line of the paragraphs. This was sometimes interpreted as meaning setting an indent for the whole paragraph.

### Steps 23 to 26

Editing the document continued with the insertion of a new subheading and identification and formatting of the existing subheadings in the document. Specified text was moved and further text was deleted. The new subheading was generally inserted correctly, but the formatting of the remaining subheadings was not always carried out consistently. Moving and deleting specified text was generally accurately done.

### Steps 27 to 33

A table was created in the document. Text had to be entered into the table and this was then formatted by centre aligning text, applying emphasis and merging cells. The table was formatted by applying shading to specific rows and ensuring gridlines would be printed. Text had to be entered carefully and with 100% accuracy. One skill that was, perhaps, newly tested was the vertical alignment of text within the cells of a table. This was only occasionally seen to be applied.

#### Steps 34 to 40

Data from this table was used to create a chart. This involves taking the table into another software package, possibly adjusting the data and identifying the correct text for category series labels. The chart was labelled and then placed into the document. Selecting the correct numerical data was usually achieved, however, the negative numbers were not always identified. When the correct data was identified for the category series labels, this was usually displayed in full, despite being quite long. The chart was usually labelled correctly and legend switched off. With an image found to meet the specified criteria (a harbour, port or boat) and placed in the document, work on this section of the paper was completed.

Database.

#### Steps 41 to 44

Drawing the data from a provided .csv file, a database table was created. Three new records were added to the table before two reports were generated.

#### Steps 45 and 46

In the first report a new field calculated a delivered price. Records were selected on two criteria and specified fields were chosen for printing. The contents of these fields and their headings had to be displayed in full. With the records sorted on one field, and personal identification built into the report, the report was ready to print.

#### Steps 47 and 48

The second report was based on a selection of records by four criteria including wildcards. The report was presented sorted on two criteria with only specified fields and these in a specific order. A runtime calculation produced a count of the number of cars in the report. With a report title, personal details and all data and labels fully visible, the report was ready to print. Many candidates found the sorting on two criteria and getting the field in order quite challenging.

#### Steps 48 to 55

The paper ended with some familiar and some new tasks. Familiar tasks included the addition of a contact to an electronic address book, and the creation of an email message with attached file. One new task was to export a database report to a different format (as an HTML file). A large number of candidates were able to do this, even if an unexpected task. Two final file management tasks completed the paper. While newly tested, these are basic skills that should be within the skills of these candidates and was frequently done well.

With all items saved into the evidence document, this could now be printed.

# INFORMATION TECHNOLOGY

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**Paper 0417/31**  
**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 the 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**

The majority of the candidates created the evidence document successfully.

### **Question 2**

The majority 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.

#### Question 5

Almost all candidates showed evidence that they had searched for records for the men's and women's shot putt event. 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 'm' or 'metres' 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 functioning formulae to look up the country name in full. Many candidates did not use the specified file J1COUNTRY.CSV for the lookup array. Some 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 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 inefficient lists of cells were not penalised for this session.

#### Question 9

Many of the candidates used functioning 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 themselves, leading to a number of ranges showing cell in columns E to K rather than cells in columns E to J.

### Question 10

The majority of candidates used functioning 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

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 of candidates right-aligned all cells in the spreadsheet.

### Question 14

The majority of the candidates completed this step successfully.

### Question 15

The majority 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 of candidates 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. 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**

The majority of 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 step as specified. There were a number of candidates who 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 J1ATHLETIC2.JPG.

#### 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 J1STYLE3.CSS which should have been attached to the webpage in place of J1STYLE1.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 small 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 90 pixels wide, some candidates set the image height to 156 or 157 pixels in error 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 3 but omitted the units. Some candidates omitted this step.

#### Question 41

The majority of candidates set the cell spacing to 3 but omitted the units. 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 Archery) and used this to guide their image selection.

#### Question 43

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

#### **Question 44**

A number of candidates did not set the target window as specified to “\_webteam” 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 did not correctly print one of the required printouts. A number of candidates omitted the html printout completely.

#### **Question 47**

The majority of candidates completed this step successfully.

# INFORMATION TECHNOLOGY

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**Paper 0417/32**  
**Practical Test B**

## **Key Messages**

The majority of candidates completed all elements of the paper. There were differences in the range of results from Centre to Centre. Fewer candidates omitted sections of the paper than in previous sessions. Candidates should be able to extract the correct data from an Internet search. 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.

For a number of candidates the website authoring section of the paper was their strongest element, a follow on from the results found in recent sessions. Many typographical errors in the work 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. It is important that candidates do this as without clear printed evidence of the author of the work, marks are unable to 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 better 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. A small number did not do this, as seen in previous sessions. If multiple printouts are submitted, only the first occurrence of that page will be marked.

Candidates should not staple together the scripts; scripts 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 in addition to the date 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. It was very difficult to separate the stapled sheets in order to view and mark all of the work.

## **Comments on specific questions**

### **Question 1**

The majority of the candidates created the evidence document successfully.

### **Question 2**

The majority of the candidates included their candidate details as specified in the header of this document.

## **Website Authoring**

### **Question 3**

The majority of candidates completed this step successfully.

### **Question 4**

The majority of candidates opened the stylesheet and attempted to edit the background image, a significant number of candidates did not set the correct image. There were a variety of errors including the use of single quotes, which work in some browsers but not others. Most of the candidates successfully saved the edited file with the filename 2012.CSS.

### **Question 5**

The majority of candidates completed this step successfully.

### **Question 6**

Many of the candidates completed this step successfully, although a small number used a number of tables rather than a single table, or created a table with too many columns. There was some confusion over which cells to merge in a small number of cases. Some candidates took the diagram as literal, and rather than creating a structure that matched the given diagram also included the labels A to O in the cells, even when they contained other text or images placed later in the paper. In this instance the candidates were not penalised, in future sessions if a question requires 'a structure which will look like this', the reference labels should be removed when other objects are placed in the cells.

### **Question 7**

The majority of candidates completed this step successfully, although a few candidates used the stylesheet J1-2012.CSS instead of the specified stylesheet.

### **Question 8**

Most of the candidates set the table width to 95% of the width of the window.

### **Question 9**

The majority of candidates set the cell spacing to 5 but omitted the units. Some candidates omitted this step.

### **Question 10**

The majority of candidates set the cell padding to 3 but omitted the units. Some candidates omitted this step.

### **Question 11**

A variety of attempts were made with different results. Some candidates attempted to set the horizontal and vertical alignments at table level rather than for the specified range of cells. This was consequently incorrect. The majority of candidates set the individual cells to be horizontally aligned. The most efficient method was to set the table rows with align="center". Very few candidates attempted and completed the vertical alignment using the markup valign="middle".

### Question 12

The anchor TOP was not entered accurately by a number of candidates, either through spelling or case errors. There were a small number of candidates who set the anchor but did not close the anchor with the `</a>` tag. A small number of candidates placed the anchor in the table rather than at the top of the page, a small number also attempted to create the anchor within the HEAD section of the markup rather than the BODY section.

### Question 13

This question was completed well by most candidates.

### Question 14

This question was completed well by many candidates, although a significant number introduced case errors into the text entry and therefore did not attain a mark. Some candidates placed their name, but omitted either the Centre or candidate number.

### Question 15

This question was completed well by many candidates. A small number of candidates cropped the top off the image and left only the sponsor's name. Other erroneous answers included candidates who had masked out the sponsor's name (either using fill of a similar method), but did not crop the image. There were a number of candidates who ignored the specified filename and saved the new image with its original name.

### Question 16

The correct image was generally placed in this cell, sometimes it had an incorrect filename (as described in step 15) and almost all candidates set this to the correct width.

### Question 17

This question was completed well by most candidates; a small number of candidates distorted the image so that its aspect ratio was not maintained.

### Question 18

This question was completed well by most candidates.

### Question 19

This question was completed well by most candidates.

### Question 20

This image selection part of this question was completed superbly by the vast majority of candidates. The 'removal of the yellow colour so that it becomes black and white' was less successful. A number of candidates did not attempt the colour removal, and a more significant number attempted it and turned the image into a greyscale image.

### Question 21

This image selection was completed well by most candidates.

### Question 22

Some candidates omitted the apostrophe, and others failed to get the correct initial capitalisation. Most candidates correctly set these text elements into style h1.

### Question 23

The vast majority of candidates managed 100% accuracy in their data entry. Most candidates correctly set these text elements into style h2.

### Questions 24 to 26

These questions attained mixed results. Almost all candidates showed evidence that they had searched for records for the men's Olympic records, 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. In the vast number of cases, Usain Bolt was discovered correctly, as he is both the Olympic and World record holder. Other athlete's names were frequently seen for the long jump and javelin events. Most candidates correctly set these text elements into style h3.

### Question 27

There were a significant number of data entry errors discovered in the text entered in this step. Most candidates correctly set these text elements into style h1.

### Question 28

The vast majority of candidates managed 100% accuracy in their data entry. The most frequent data entry error was a lower case H in the word 'Here', which although it would be correct sentence case had been initially capitalised as the first two words would later form the text of a hyperlink. Most candidates correctly set these text elements into style h4.

### Question 29

This question was completed well by most candidates. There were a small number of candidates who opened the anchor but did not close it again and a number of candidates who omitted the # symbol to activate the reference to the anchor. A number of candidates placed the anchor around the whole sentence.

### Questions 30 and 31

A small number of candidates from a range of Centres did not correctly print one of the required printouts. A number omitted the html printout completely.

### Presentation Authoring

#### Question 32

This question was completed well by most candidates.

#### Question 33

A significant number of candidates did not set a consistent master slide for their presentation. Of those who did, some candidates did not use a serif font for the text containing the candidate details. The slide numbers were frequently seen in the bottom right corner of the slides (which was the default position for some software packages) rather than the top right and other errors related to the resizing of the supplied image.

#### Question 34

This question was very well done by the majority of candidates.

#### Question 35

The text entry was generally well completed for both the title and subtitle. It was important for candidates to retain the correct sizes for these elements with the title in a larger font than the subtitle. The most common error found in this question was the failure to move the title below the subtitle.



### Question 36

The splitting of the text into new bullet points was completed well by almost all candidates. A small number of candidates did not remove the punctuation. Most candidates did not format the bullets into the same style as slide 2, despite explicit instructions to do so.

### Question 37

This searching part of this question was well answered by the vast majority of candidates. A small number of candidates placed maps of other countries and continents, South America and South-East Asia for example. The instruction to edit the image to remove other countries was not as well completed, some candidates cropped the image and others used graphics software to complete this. A number of candidates found three maps, one for each of the required countries. Almost all candidates who attempted this question resized the image so that it filled more than 50% of the height of the slide.

### Question 38

This searching part of this question was well answered by the vast majority of candidates. A small number of candidates correctly identified the three countries, but several did not use an arrow to point from the name of the country (which was present in the bulleted list) to each country. A significant number of candidates used lines rather than arrows and other candidates included additional labels rather than using the existing text.

### Question 39

This question was very well done by the majority of candidates.

### Questions 40 and 41

These questions were completed well by the majority of candidates, although a number of candidates erroneously printed all 6 of the slides one to a page.

### Data Analysis

#### Question 42

The majority of candidates completed this step successfully.

#### Question 43

The majority of candidates completed this step successfully, although there were a number of incorrect spellings of ARR and a small number of candidates who set the range to include row 1.

#### Question 44

The majority of candidates completed this step successfully.

#### Question 45

The majority of candidates completed this step successfully.

#### Question 46

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



#### **Question 47**

The majority of candidates completed this question with little difficulty and gained most or all of the available marks. Most candidates used a LOOKUP or in some packages a VLOOKUP function with a single cell reference, the correct absolute range and return column. Despite an instruction to use the named range ARR in the file J1ARRIVE.CSV, a number of candidates used absolute referencing to the cells within this range, and others did not set this range within this external file. Replication of the formulae was completed in an exemplary manner by the majority of candidates.

#### **Question 48**

The majority of candidates completed this question very well and gained most of the available marks. Most candidates used a COUNTIF function with the correct absolute range and correct relative reference. The most frequent errors were in setting absolute and relative referencing for the correct cells. The replication was usually completed accurately. Replication of the formulae was completed in an exemplary manner by the majority of candidates.

#### **Question 49**

This question was not well completed by many candidates. The question required the return of the character Y or N, a significant number of candidates returned other values like Yes, y, TRUE etc. A large number of candidates set the formulae to return N if the value in the Minutes column was less than zero rather than less than or equal to zero. Replication of the formulae was completed in an exemplary manner by the majority of candidates.

#### **Question 50**

A number of candidates printed the formulae printout but did not set the print area as specified. Many more candidates failed to set the contents of the printout so that it fit on a single page wide. A small number did not submit a formula printout of any sort.

