INFORMATION TECHNOLOGY

Paper 0417/11
Written Paper

Key Messages

Candidates appeared to have sufficient time to record all their answers with very few candidates failing to answer all questions. Some candidates appeared to learn answers from previous Mark Schemes off by heart. This led to many unusual answers particularly on **Question 10(b)** where some candidates described how microprocessor control works rather than monitoring. This practice can cause candidates to lose much credit as they possibly 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 credit unless they had revised thoroughly.

Most candidates appeared not to understand the concept of authentication techniques.

Comments on specific questions

Question 1

Virtually all candidates gained full credit.

Question 2

The vast majority of candidates gained full credit. A few incorrectly named the plotter as a storage device perhaps highlighting a lack of knowledge of his device.

Question 3

The vast majority of candidates performed highly in this question. The question was generally well answered though some appeared not to understand what a command line interface is.

Question 4

The majority of candidates gained full credit on this question; however there were a small number of candidates who gained no credit for confusing abnormal and extreme data. For those candidates who lost credit, it tended to be because they thought text was acceptable as a number.

Question 5

Considering this topic is normally a difficult one for candidates to grasp, the question was relatively well answered with most candidates gaining credit. It was pleasing to see candidates being able to name network devices, however few were able to correctly describe what the devices do. Some candidates failed to see that the question asked for devices and gave cable as a response, this gained no credit.

Question 6

The majority of candidates did well gaining high credit with very few scoring badly. Those that did not gain full credit mainly did so for ticking WLANs have 'faster transmission of data'.

Question 7

Candidates scored very well on this question. Those that did not mainly failed to include END REPEATs or placed the incorrect number after the REPEATs.

Question 8

The vast majority of candidates gained high credit for this question. The main incorrect response was for part **(iv)** where candidates failed to see that a motor is an output device and often stated "input data from …".

Question 9

Most candidates gained minimal credit for this question for identifying the volatility of RAM compared to backing storage. However, many candidates missed this opportunity by not showing the comparison, for example, by just stating RAM is volatile.

Very few candidates were able to describe the characteristics of both. Very few gained full credit for this question.

Question 10

This question was not very well answered overall, although part **(a)** was much better answered than part **(b)**.

(a)   This question elicited some very ingenious responses; however credit could only be gained for those that are viable. Examples such as fish detector and water sensor, among others, gained no credit. Most candidates gained credit for correctly identifying sensors that relate to testing changes in the water.

(b)   Most candidates made an attempt at this question and many were able to describe the need for analogue to digital conversion. Most were able to describe the comparison of readings from point A and B. Few mentioned that this was a continuous process. This question was in the context of monitoring. Some candidates went beyond this and went into a feedback cycle of controlling the factory, this gained no extra credit.

Question 11

This question was not as well answered as expected, with part **(a)** not being answered as well as part **(b)**.

(a)   Considering that candidates did not have to provide a description but just name components, candidates produced some weak answers. Many candidates failed to name just one.

(b)   Many candidates missed the opportunity of gaining credit by giving imprecise answers such as 'fixing a car'. Others misunderstood what an expert system is and just described a task that a professional expert would do, for example, a surgeon doing an operation.

Question 12

The majority of candidates were able to name validation checks. However there were a significant number that named, incorrectly, presence check, despite the question stating 'when it is typed into the computer'. A number of candidates confused format check with data type check in their descriptions.

There were only a minority of candidates that could describe all the validation checks.

Question 13

Most candidates gained some credit for this question with many gaining at least half credit. The majority of responses failed to gain full credit due to not clearly showing that the health problem arises for prolonged misuse. For example, there was no credit for stating 'typing on the keyboard' as this would not lead to a health problem unless it was for a long period of time.

Question 14

This question was not well answered. Few candidates gained full credit mainly because they identified security techniques, for example, encryption, and did not identify authentication techniques. Those that did identify authentication techniques scored well.

Question 15

Candidates generally did well on the first two parts of the question but did not do so well on part **(c)**.

(a)   Candidates did very well on this question with the large majority identifying that there was only one make.

(b)   The majority of candidates gained partial credit for identifying the field names. Very few were able to describe the most appropriate validation check with many only giving one word answers.

(c)   Most candidates gained some credit for this question, mainly for describing verification techniques. There were a significant number who stated that both validation and verification makes sure that the data is correct, but this gained no credit.

Question 16

This question was fairly well answered with many candidates gaining credit on each part.

(a)   Candidates did not do as well as expected on this part with not many scoring full credit. Most candidates gained some credit for identifying the purpose of the function. More able candidates clearly broke down their response to explain the process that the VLOOKUP goes through.

(b)   The majority of candidates answered this correctly.

(c)   Most candidates were able gain minimal credit, but few gave a clear explanation how the number is derived by using the correct references.

(d)   Again, as with **(b)** most candidates answered this correctly.

(e)   Most candidates gained some credit though few gained full credit in this part. Often the responses were too imprecise, e.g. "saves time". Many seemed to understand what modelling is but were unable to give the benefits and drawbacks.

INFORMATION TECHNOLOGY

| Paper 0417/12 |
| Written Paper |

Key Messages

Candidates appeared to have sufficient time to record all their answers with very few candidates failing to answer all questions. Some candidates may have learned answers from previous Mark Schemes off by heart. This led to unusual answers particularly on **Question 10** where these candidates described how to create an expert system and listed the constituent parts or described the processing rather than how each component is used. In **Question 14**, candidates seemed to be comparing the use of a mobile phone with a PC rather than a laptop. This practice can cause candidates to lose much credit as they may 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 credit unless they had revised thoroughly.

Most candidates seemed not to understand the role of microprocessors in burglar alarm systems.

Comments on specific questions

Question 1

The great majority of candidates gained full credit. A tiny minority could not identify the plotter.

Question 2

The vast majority of candidates gained full credit. The incorrect answers produced by the tiny minority that did not were evenly distributed amongst the distractors.

Question 3

The vast majority of candidates gained full credit. A small number of candidates did not understand the use of measuring software and a smaller number appeared not to understand the use of a graph plotter.

Question 4

Candidates did very well on this question with many gaining full credit. For those that did not, some thought that the word 'thirty' was an example of normal data and a smaller number thought that 99 was an example of abnormal data.

Question 5

Again, a large majority of candidates scored well. A small number, however, thought Wikis were usually in chronological order or that Wiki postings tended to be short in length.

Question 6

A large majority of candidates scored well but a minority did not seem to understand the use of magnetic tape or disc.

Question 7

Although candidates scored quite highly, some candidates struggled at times to give an adequate meaning. Most were able to name the instructions but descriptions of the instructions were sometimes not very good. This was most often the case with the instructions left, right and repeat.

Question 8

The vast majority of candidates gained full credit. A small number, however, seemed to think that a monitor is an input device and wrote this at some point in their answer.

Question 9

The vast majority of candidates gained full credit. A very tiny number of candidates chose all three incorrect options.

Question 10

On the whole this question was not very well answered. A number of candidates ignored the requirements of the question to describe how the components are used and wrote in general terms about an expert system. A minority of candidates may have rote learned the Mark Scheme for a past paper question which asked about the creation of an expert system and reproduced that. Several candidates appeared not to know what an expert system is.

Question 11

On the whole, this question was answered reasonably well. Most candidates gained some credit. The question asked about the computer processing involved but several candidates concentrated on what the customer did.

Question 12

Candidates did very well on the first part of this question but not so well on part **(b)**.

(a)   The majority of candidates were able to provide correct answers.

(b)   Many candidates appeared to think that sensors control the system instead of the microprocessor. Several did not understand the question and did not write about how the microprocessor uses the devices attached to it. They concentrated on the role of each sensor.

Question 13

Candidates did very well on this question except for part **(b)**.

(a)   Candidates did well on this question with the majority scoring more than half credit. Where candidates failed to do well it was because they did not use the information from the questions provided or did not choose the most appropriate data type.

(b)   Candidates did less well on this part. Many were imprecise when answering about storage space.

(c)   Many did quite well with this question but a number gave answers about test data or methods of implementation.

Question 14

This question was not well answered by candidates. Many did not provide a comparison and several may have repeated answers from a previous Mark Scheme where the comparison was with a PC, not a laptop as in this question.

Question 15

Candidates did very well on this question though to a lesser extent in part **(f)**.

(a)   Candidates did well on this question with many scoring partial credit. A number of candidates gave an overall description rather than describing the function.

(b)   The majority of candidates answered this correctly.

(c)   Although similar in nature to part **(a)**, the majority of candidates did not do as well. Many failed to mention the SUM part of the function.

(d)   Despite not doing well in part **(c)**, candidates did very well on this part.

(e)   Many responses were well thought out. This question required candidates to think carefully about their solution and most responded admirably.

(f)   This was not as well answered as previous parts but most candidates gained credit. A number of candidates provided a basic definition without describing the use of the symbol.

Question 16

Most candidates performed well on this question. Many could describe the effect on data but could not describe the virus itself.

Question 17

This question enabled the majority of candidates to gain credit. Many were able to give basic drawbacks such as inappropriate sites and data not always being accurate, but few specific benefits were given as candidates appeared to want to give mainly generalised responses to the question.

INFORMATION TECHNOLOGY

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Paper 0417/13
Written Paper
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Key Messages

Candidates appeared to have sufficient time to record all their answers with very few candidates failing to answer all questions. Some candidates may have learned answers from previous Mark Schemes off by heart. This led to some unusual answers particularly on **Question 9** where some candidates described how to use an expert system rather than how to create one. This practice can cause candidates to lose much credit as they may 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 credit unless they had revised thoroughly.

Most candidates seemed not to understand the concept of online processing and the role of the computer therein.

Comments on specific questions

Question 1

Virtually all candidates gained full credit.

Question 2

The vast majority of candidates gained full credit. DVD ROM was very occasionally given instead of plotter and magnetic tape or number pad instead of CRT monitor.

Question 3

The vast majority of candidates gained high credit. The question was generally well answered though many answered incorrectly that the Internet browser uses an inference engine.

Question 4

Candidates did very well on this question with most gaining full credit. A popular wrong answer was laser printer instead of dot matrix printer.

Question 5

Again, a large majority of candidates scored well, although some imprecise answers were offered concerning wind sensors and weather sensors.

Question 6

The majority of candidates gained full credit with very few scoring badly.

Question 7

Candidates scored very well on this question though the movement from drawing the pentagon to drawing the square proved difficult for some candidates. Even this, however, did not prevent candidates scoring high credit.

Question 8

The majority of candidates did very well on this question. A small number, however, thought that encryption prevents unauthorised access to computer systems. Some did not realise that encryption is the scrambling of data.

Question 9

This question was not very well answered. A number of candidates did not read the question carefully and did not score well. These candidates lost credit by answering as if the expert system was being used rather than being created.

Question 10

This question was not very well answered. A number of candidates ignored the requirements of the question to describe online data processing. Candidates scored poorly here by not mentioning the function of the computer in the booking of an airline ticket. Most answers described the actions of the customer rather than the computer.

Question 11

This question discriminated quite well with better candidates scoring highly. Many candidates, however, were only able to name the devices without describing them. Despite this being a LAN many candidates answered router or modem.

Question 12

Candidates did quite well on this question although most candidates gained more credit in part **(a)** than in part **(b)**.

(a)   The majority of candidates gained half credit or more. Most candidates were able to give sensible field names though some suggested fields which would not provide answers to the questions. Data types were generally given appropriately.

(b)   Most candidates knew the meaning of parallel running, though fewer could accurately define direct changeover as a method of implementation. However many were not able to contrast the differences, merely listing characteristics of each.

Question 13

Candidates did not do as well as expected on this question. Most candidates could identify the type of test data but not as many as expected were able to give a description including an example. A number of candidates gave a description or gave an example instead of giving both. A number of candidates did not attempt the question.

Question 14

This question was not well answered. Some candidates did not name a method and found it difficult to therefore to gain further credit. Proxy server and firewall were often correctly given as answers, but the descriptions of these measures often lacked detail.

Question 15

Candidates generally did very well on this question though not very well in part **(e)**.

(a)   Candidates did well on this question with many scoring high credit. A small number of candidates gave an overall description rather than describing the function.

(b)   The majority of candidates answered this correctly.

(c)   Candidates seemed to find this question rather difficult with few gaining more than minimal credit. Many appeared to know the process but were unable to explain it in sufficient detail.

(d)   Again, as with part **(b)** most candidates answered this correctly.

(e)   A number of candidates did not attempt this question. Good answers were rarely seen with many failing to provide reasons why financial models were used, just making general observations about them.

Question 16

Many candidates correctly named the features but were unable to describe them to gain credit. A sizeable minority did not answer the question.

Question 17

This question enabled the majority of candidates to gain credit. Many were able to give disadvantages of a website such as not everyone having an Internet connection and computer and a disadvantage of the DTP method such as speed or cost of delivery or printing costs, but few were able to provide a response with more than one or two of these arguments.

Question 18

This question enabled the majority of candidates to gain credit. Generally candidates were able to identify unemployment as a major factor due to the introduction of robots, but many used their answer to describe the advantages of robots rather than their effect on employment.

INFORMATION TECHNOLOGY

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 credit, while at the same time being accessible to the full range of skills. Both papers covered communication skills, document editing and integration, database skills and a presentation. Charts appeared in both papers in the presentation. Many candidates were able to complete most tasks, but in both papers there were challenges for all candidates. The second database report frequently seemed to challenge some candidates and was frequently absent. This report required two calculated fields and maybe this was the challenge. Frequently, particularly in the chart for paper 21, candidates selected the data incorrectly. Candidates whose selections for database reports include large numbers of records running to many pages can be sure that they have made some error in selection criteria. Text added must always follow the given text precisely to gain full credit.

Step 1

An evidence document was created by the candidate in order for them to place various screenshots captured during the examination. The intention of this was to reduce the number of files to print. It also reduced the repetitive instructions to place candidate details on items of evidence as these details can be placed just once in the header of the page. This document contained evidence of the contact added to the address book, the database structure, evidence of transitions and animations applied and evidence of the outgoing email message. There was no issue if these pieces of evidence were not placed in the evidence file and were printed directly as long as personal identification information was included with the printouts.

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.

Step 3

The candidate needed to find a set of files on the RockICT website, download them and save them to their work area, providing evidence by means of a screenshot that this process had been accomplished. If candidates were not able to access the website, a set of files as backup was available to Centres to provide directly to their candidates if in need.

Document editing

Steps 4 to 18

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 three 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 fonts incorrectly, incorrect setting of margins, occasional incorrect page orientation and the exact alignment of header and footer items to the text margins.

Steps 19 to 21

A file in .csv format was used to provide text to insert and format a table at the end of the document. Formatting included the application of alignment and emphasis to specified text, and merging and shading specified cells. Having found the file and placed it in the document, the most common errors were not to match the font of the body text, not to shade the top two rows and centre aligning all text instead of just that specified. Occasionally grid lines were not printed.

Steps 22 and 23

An image was provided and this was to be inserted at a specified point in the text, replacing some words. This image had to be placed accurately with respect to the left margin, and resized to fill the column without distortion of the image. Text wrap was to be set round the image.

Steps 24 to 27

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. There were two deliberately misspelled words for the spelling checker to pick up. The replacements were most likely to be the first in the list of suggestions offered. Some candidates did overlook the spelling corrections. Few candidates did not provide a printout of this document.

Database manipulation

Steps 28 to 29

The database involved the import of a .csv format file to specified field types in a new table. Evidence of the field names and data types was recorded in the evidence document. There was one field that did not appear in any report, so it was important to provide evidence of this field in particular in the evidence document (field *Discount_applied*; numeric with two decimal places). Relatively few candidates provided this detail.

Steps 30 to 36

Two reports were generated from the database records after adding three new records. Reports involved activities of applying selection criteria, selecting fields to print, sorting records and presenting information with calculated fields to be executed at runtime. Some candidates found the whole process of generating and structuring these reports in their entirety somewhat difficult, but gained credit for some of the skills demonstrated, for example, by presenting evidence of record or field selection in a printout of a query on which the report would be based. This is a suggestion for candidates who cannot complete the full report, but may wish to gain some credit for the skills they have completed.

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 in ascending order. Candidates needed to make sure that all required fields and headings are displayed in full. This was especially true for the first field in this report, as this was used as evidence of the sort order, and also lost credit for adding records if all data was 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 fewer than fifty records out of the total of several hundred. A runtime calculation of the number of records in the report was generated. Candidates were credited for count results which matched the actual number of records in their report.

A second report was based on cars that had been sold, so included a discount applied at the time of sale and a date sold field. It also included two calculated fields; one based on the discount applied. This perhaps made it a little more challenging than previous reports. This report was the one most commonly absent. The report also required a summary calculation of the values in the *Sold* field. The report needed a heading and candidate details and was presented with specified fields only and these fully visible, with records sorted on the *Model* field.

Presentation authoring

Steps 37 to 41

A short presentation was constructed using a source file to create four slides each containing a heading and bullet points. The slides could 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 to be found from clip art, several lines, 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. The existing first slide was reformatted as a title and subtitle slide layout using the specified fonts and alignments. This often produced some errors, for example a title and bullet layout or incorrect font / alignment for the text.

Steps 42 to 44

A chart was created from a supplied file and presented as a pie chart. Many candidates selected the data incorrectly for a coherent chart, including an extra irrelevant segment in their chart. Presenter notes had to be added to this slide and shown in one of the slide printouts. This task was challenging for some candidates.

Steps 45 and 46

Transitions between slides and animation of specified text on slides were required and evidence of these actions was recorded in the evidence file.

Steps 47 and 48

Slides were printed individually with the presenter notes and as audience handouts.

Steps 49 to 52

An email message was created with two recipients; one the contact added earlier in the paper to be added as a blind carbon copy. With the document file attached and a short text, the message was ready to send and was printed as evidence in the evidence document. The evidence document was not accepted as the attached document file as it did not match the subject and text of the message.

Steps 53 to 54

The evidence document was then printed as the final step of the examination.

INFORMATION TECHNOLOGY

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 credit, while at the same time being accessible to the full range of skills. Both papers covered communication skills, document editing and integration, database skills and a presentation. Charts appeared in both papers in the presentation. Many candidates were able to complete most tasks, but in both papers there were challenges for all candidates. The second database report frequently seemed to challenge some candidates. This report required two calculated fields and maybe this was the challenge. Candidates whose selections for database reports include large numbers of records running to many pages can be sure that they have made some error in selection criteria. Text added must always follow the given text precisely to gain full credit.

Step 1

An evidence document was created by the candidate in order for them to place various screenshots captured during the examination. The intention of this was to reduce the number of files to print. It also reduced the repetitive instructions to place candidate details on items of evidence as these details can be placed just once in the header of the page. This document contained evidence of the contact added to the address book, the database structure, evidence of transitions and animations applied and evidence of the outgoing email message. There was no issue if these pieces of evidence were not placed in the evidence file and were printed directly as long as personal identification data was included with the printouts.

Step 2

The candidate needed to find a set of files on the RockICT website, download them and save them to their work area, providing evidence by means of a screenshot that this process had been accomplished. If candidates were not able to access the website, a set of files as backup was available to Centres to provide directly to their candidates if in need.

Presentation authoring

Steps 3 to 14

A short presentation was constructed using a source file to create four slides each containing a heading and bullet points. The slides could 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 to be found from clipart, several lines, 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. The existing first slide was reformatted as a title and subtitle slide layout using the specified fonts and alignments. This often produced some errors, for example a title and bullet layout or incorrect font/alignment for the text.

A chart was created from a supplied file and presented as a comparative vertical bar chart. The chart was well constructed and presented by many candidates.

Transitions between slides and animation of specified text on slides were required and evidence of these actions was recorded in the evidence file.

Slides were printed as audience notes, two per page layout. The presentation was saved with a specified name to be used later as an attachment to the outgoing message.

Document editing

Steps 15 to 29

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 fonts incorrectly, incorrect setting of margins, occasional incorrect page orientation and the exact alignment of header and footer items to the text margins.

Steps 30 to 32

A file in .csv format was used to provide text to insert and format a table at the end of the document. Formatting included the application of alignment and emphasis to specified text and merging specified cells. 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 centre aligning all text instead of just that specified. Occasionally grid lines were not printed, but more frequently text was not aligned to the top of the cells in the table.

Steps 33 and 34

An image was provided and this was to be inserted at a specified point in the text, replacing some words. This image had to be placed accurately with respect to the left margin, and resized to fill the column without distortion of the image. Text wrap was to be set round the image.

Steps 35 to 38

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. There were two deliberately misspelled words for the spelling checker to pick up. The replacements were most likely to be the first in the list of suggestions offered. Some candidates did overlook the spelling corrections. Few candidates did not provide a printout of this document.

Database manipulation

Steps 39 and 40

The database involved the import of a .csv format file to specified field types. Evidence of the field names and data types was recorded in the evidence document. There was one field that did not appear in any report, so it was important to provide evidence of this field in particular in the evidence document (field *DiscountApplied*; numeric with two decimal places). Relatively few candidates provided this detail.

Steps 41 to 47

Two reports were generated from the database records after adding three new records. Reports involve activities of applying selection criteria, selecting fields to print, sorting records and presenting information with calculated fields to be executed at runtime. Some candidates may have found the whole process of generating and structuring these reports in their entirety somewhat difficult, but could gain credit for some of the skills demonstrated, for example, by presenting evidence of record or field selection in a printout of a query on which the report would be based. This is a suggestion for candidates who cannot complete the full report, but may wish to gain some credit for the skills they have completed.

The first report was based on two selection criteria. Specified fields had to be selected for display and the records sorted on two fields (*Location* then *VIN*). Some candidates did not maintain both sort orders. Candidates needed to make sure that all required fields and headings were displayed in full. 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 fewer than forty records out of the total of several hundred. A runtime calculation of the number of records in the report was generated. Candidates were credited for count results which matched the actual number of records in their report.

A second report was based on cars that had been sold, so included a discount applied at the time of sale and a date sold field. It also included two calculated fields, with one based on the discount applied. This perhaps made it a little more challenging than previous reports. This report was the one most commonly

absent. The report also required a summary calculation of the values in the Sold field. The report needed a heading and candidate details and was presented with specified fields only with these fully visible.

Steps 48

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

Steps 49 to 52

An email message was created with two recipients, with the contact added earlier in the paper to be added as a carbon copy. With the saved presentation file attached and a short text, the message was ready to send and was included as a screenshot in the evidence document.

Steps 53 to 54

The evidence document was then printed as the final step of the examination.

INFORMATION TECHNOLOGY

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Paper 0417/31

Practical Test B
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Key Messages

A significant number of candidates attained excellent results on this paper, the paper giving a good spread of marks, including a small number of candidates who attained full marks. For a significant number of candidates, the website authoring section of the paper was their strongest element, a continuation of the trend from previous sessions.

In general, candidates appeared well prepared for this examination and the vast majority who submitted their work showed sound knowledge, skills and understanding with the majority of candidates completing 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.

Centres should not staple together the work; work should be submitted in the ARF along with the question paper. Both the ARF and question paper should have hand written on it the candidate's name, Centre number and candidate number. The date that the candidate sat the examination should also be recorded on the question paper.

A small but significant 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 cannot be awarded by the Examiner 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 number of candidates omitted one or more of the pages from the required printouts. Some candidates submitted multiple printouts for some of the tasks and as instructed crossed out those printouts that were draft copies. If multiple printouts are submitted without draft versions being crossed through 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.

Questions 2 to 4

The majority of the candidates completed these steps successfully.

Website Authoring

Questions 5 to 7

Many candidates resized the image successfully, although there were a significant number of candidates who edited the image width but did not maintain the aspect ratio.

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Question 8

The majority of candidates reduced the image resolution to attain the desired file size of less than or equal to 100 kilobytes. However, not all candidates showed evidence that they had saved this image with the filename specified showing this file size. A significant number of candidates showed the file size reduction for a different file name, frequently for J12BACKGD1 or 2.

Question 9

The vast majority of candidates created a webpage called XAHC.HTM but not all candidates attached the stylesheet J12STYLE1.CSS. A number of candidates erroneously included an absolute file path when attaching the stylesheet.

Question 10

This step was designed to ensure that when candidates printed their webpage from their browser (particularly if they were using a wide screen monitor) all elements of the webpage would be visible. Most candidates, who needed to do so, completed it as specified.

Questions 11 to 12

This table layout was completed as specified by most candidates. A small number of candidates did not use the contents of J12TABLE1.HTM or edited the contents in such a way that the styles were not applied or banner not present.

Question 13

The majority of candidates completed this step successfully. A small number set this to other percentage values or to a finite number of pixels.

Question 14

A number of candidates did not replace the text, some used different anchor names and a number of candidates had the text 'top' visible in the browser view of their page.

Question 15

The majority of candidates completed this step successfully. A small number removed all of the text instead of just the text they were expected to replace.

Question 16

The majority of candidates completed this step successfully, although some candidates ignored the 'as shown' element of the question and omitted the merged cells in the right hand column of the table.
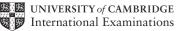
Question 17

Many candidates completed this step successfully, although a number set the table to the full width of the browser.

Question 18

This question caused difficulty to a significant number of candidates. Those who attained marks for this question frequently used the attribute `align="center"` within the table tag.

Question 19

The majority of candidates completed this step successfully, although some candidates did not maintain the aspect ratio of this image.

Question 20

Almost all of the candidates completed this step successfully.

Question 21

Many candidates completed this step successfully, although a significant number failed to set both the <h3> and </h3> tags for all 4 cells of the table.

Question 22

The majority of candidates completed this instruction as required by the question paper but there were a number of candidates who erroneously removed elements (like the style settings) of the file J12TABLE3.HTM.

Question 23

Almost all of the candidates completed this step successfully.

Question 24

This step was not completed by a significant number of candidates. A significant number placed an anchor but did not replace the specified text with this anchor. There were a number of case errors in the anchor name, but the most frequent reason for candidates not attaining this mark was having the text 'combi' visible in the browser view of their page. A number of candidates included the text 'combi' but set the text as 'invisible' which was not required by this question, simply omitting the text from the markup outside the anchor tab would have been more efficient.

Question 25

The majority of candidates completed this step as specified; a number ignored the 'in Table 1' instruction and placed this hyperlink in table 3. A small number of candidates omitted the '#' symbol within the hyperlink reference.

Question 26

Most of the candidates completed this step as specified, although a small number set the anchor around the whole sentence or removed the other text from the sentence. Most candidates used the correct case for the anchor name 'top'.

Question 27

This step was well done by most candidates, the most common error was the retention of some (or all) of the original text 'Date and Time here'.

Question 28

The step instructed the candidates to replace the words 'Zip wire' with the most appropriate image from those provided. A number of candidates included both the word and image, ignoring the instruction to replace. Most candidates selected the correct image for the name.

Question 29

The step instructed the candidates to replace the words 'Scuba diving' with the most appropriate images from those provided. Although this was usually completed as instructed, a number of candidates included an absolute file path for the image and even more candidates did not set the target window to _undersea. A number of erroneous responses included setting the title or hyperlink reference using: title="_undersea" or href="_undersea".

Questions 30 to 31

These steps instructed the candidates to replace the words in each cell with the most appropriate image from those provided. Most candidates selected all of the correct images for each name.

Question 32

The step instructed the candidates to replace the words 'Contact us' with the most appropriate images from those provided. Most candidates correctly referenced this image as a hyperlink, although not all of them set it as a 'mailto' attribute. Of those candidates who did correctly set this attribute, a significant number correctly set the subject of the e-mail. A number of candidates attempted this but replaced the required question mark to link the attributes with a space which does not set the subject line in the e-mail editor.

Question 33

Most candidates set the image widths to 120 pixels; however some did not maintain the aspect ratio and therefore distorted the images from their original proportions.

Question 34

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 35

This step was completed as instructed by most candidates; a mark was not attained by a small number of candidates who used an absolute file path for the attached stylesheet.

Question 36

The majority of the candidates completed this step successfully.

Question 37

The majority of the candidates completed this step successfully. Style h2 was usually applied to the entered text.

Question 38

Many candidates completed this step as specified, although some candidates did not set each line of both lists in list style, leaving a single bullet point for each list rather than one per line.

Question 39

Setting the tag <ol> immediately before the initial <li> tag in the first list and a tag directly after the final tag of this list was required and this was checked in the html printout. A significant number of candidates placed the <ol> and tags but did not place them around only the list specified.

Question 40

Setting the tag <ul> immediately before the initial <li> tag in the second list and a tag directly after the final tag of this list was required.

Question 41

The majority of candidates successfully replaced the image, although a significant number resized the image, despite the instruction in this question not to do so.

Question 42

A small number of candidates from a range of Centres omitted either one of both of the required printouts.

Data Analysis

Question 43

The majority of candidates completed this step successfully.

Question 44

The majority of candidates completed this step successfully.

Question 45

Many candidates completed this step successfully, although there were a number of scripts which contained errors relating to case.

Question 46

This was completed as specified by the majority of candidates, although a small number omitted the formatting elements of this question. The most common error was where candidates had selected a sans-serif font rather than a serif font.

Question 47

A significant number of candidates formatted these cells to their local currency rather than selecting the currency given in the scenario which stated; 'All currency values are recorded in Euros with 2 decimal places'.

Question 48

Many candidates completed this step successfully, although in a small number of scripts not all the cell contents were fully visible.

Question 49

The majority of the candidates completed this step successfully and demonstrated evidence of this in their evidence document.

Question 50

Many candidates used a LOOKUP or VLOOKUP function to solve this question and correctly displayed the job description for each employee. A significant number did not use the named range JC for the lookup array and instead used an absolute range for this variable. Where candidates introduced an error in their use of this function, their results frequently included error messages or the names of other employees within this column. Candidates should be able to recognise this as an error and attempt remedial action.

Question 51

Many candidates completed this step successfully, although in a small number used the SUM function to add the total contract hours rather than the total hours worked.

Question 52

Many candidates multiplied the hours worked by a LOOKUP or VLOOKUP function using the 'Pay rates' table to solve this question and correctly displayed the weekly pay for each employee. Clear guidance was given in the question about the parameters that were acceptable but some candidates ignored this and still used named ranges or three absolute ranges within each formula. Some candidates used multiple nested IF statements for this question, which was an inefficient solution to the problem. The replication was generally performed well, but a number of candidates did not use the specified format for each of the cells in this column, sometimes omitting this step, and in other cases using local currency settings.

Question 53

Many candidates completed this step successfully, although a small number did not place this formula in cell G61 as specified.

Question 54

Many candidates printed the formulae printout as specified with the printout on a single page wide. A small number of candidates did not submit a formula printout of any sort.

Question 55

The majority of the candidates completed this step successfully. Some candidates hid rows 1 to 21 in error.

Question 56

Many candidates printed the values printout as specified with the printout on a single page wide, although there were a significant number who did not display all the data by extending the column widths to fit.

Question 57

The majority of the candidates completed this step successfully.

Question 58

There were a significant number of different answers to this question. A number of candidates completed this successfully but many did not do a wildcard search (or use the search string 'contains') for the word 'Snowboard'. Others did not correctly extract those who had worked 25 hours or more. A range of candidate responses was seen, particularly greater than 25 hours or equal to 25 hours but not both.

Question 59

Many candidates printed the values printout as specified with the printout on a single page wide, although there were a small number who did not display all the data in full.

Questions 60 and 61

The majority of the candidates completed these steps successfully.

INFORMATION TECHNOLOGY

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

Key Messages

A significant number of candidates attained excellent results, the paper giving a good spread of marks, including a small number of candidates who attained full marks. For a significant number of candidates, the website authoring section of the paper was their strongest element, a continuation of the trend from previous sessions.

In general, candidates appeared well prepared for this examination and the vast majority who submitted their work showed sound knowledge, skills and understanding with the majority of candidates completing 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.

Centres should not staple together the work; work should be submitted in the ARF along with the question paper. Both the ARF and question paper should have hand written on it the candidate's name, Centre number and candidate number. The date that the candidate sat the examination should also be recorded on the question paper.

A small but significant 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 cannot be awarded by the Examiner 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 number of candidates omitted one or more of the pages from the required printouts. Some candidates submitted multiple printouts for some of the tasks and as instructed crossed out those printouts that were draft copies. If multiple printouts are submitted without draft versions being crossed through only the first occurrence of that page will be marked.

Comments on specific questions

Question 1

The majority of the candidates created the MAY2012 document successfully.

Questions 2 to 5

The majority of the candidates completed these steps successfully.

Data Analysis

Question 6

The majority of candidates completed this step successfully.

Question 7

Many candidates completed this step successfully, although a number of scripts overlooked the initial capitalisation. A small number of candidates did not align the elements of the header as specified in the question paper.

Question 8

The majority of candidates completed this step successfully, although a number added the correct details, centre aligned in the header rather than the footer.

Question 9

This was completed as specified by many candidates, although a significant number omitted the formatting elements of this question. The most significant errors were where candidates had selected a sans-serif font rather than a serif font, and/or not included a striped background to this single cell.

Question 10

A significant number of candidates formatted these cells to their local currency rather than selecting the currency given in the scenario which stated; 'All currency values are recorded in Euros with 2 decimal places'.

Question 11

Many candidates completed this step successfully, although in a small number of scripts not all the cell contents were fully visible.

Question 12

Many candidates used a LOOKUP or VLOOKUP function to solve this question and correctly displayed the job description for each employee. A significant number did not include both absolute and relative referencing. Where candidates introduced an error in their use of this function, their results frequently included error messages or data that was not a job description within this column. Candidates should be able to recognise this as an error and attempt remedial action.

Question 13

Many candidates completed this step successfully, using a single AVERAGE function. A number of candidates used formulae which included the SUM function divided by the COUNT of the cells within the specified range.

Question 14

The majority of the candidates completed this step successfully and demonstrated evidence of this in their evidence document.

Question 15

Many candidates multiplied the hours worked by a LOOKUP or VLOOKUP function using the named range RATE to solve this question and correctly displayed the weekly pay for each employee. Clear guidance was given in the question about the parameters that were acceptable but some candidates ignored this and used absolute cell referencing rather than the named range. These parameters restricted the candidates' use of nested IF statements, although many scripts had evidence of attempts using nested IF solutions. The replication was generally performed well, but a number of candidates did not use the specified format for each of the cells in this column, sometimes omitting this step, and in other cases using local currency settings.

Question 16

Many candidates completed this step successfully, although a small number did not place this formula in cell G60 as specified.

Question 17

Many candidates printed the formulae printout as specified with the printout on a single page wide. A small number of candidates did not submit a formulae printout of any sort.

Question 18

The majority of the candidates completed this step successfully. Some candidates hid rows 1 to 18 in error.

Question 19

Many candidates printed the values printout as specified with the printout on a single page wide, although there were a significant number who did not display all the data by extending the column widths to fit.

Question 20

The majority of the candidates completed this step successfully.

Question 21

There were a significant number of different answers to this question. A number of candidates completed this successfully but many did not do a wildcard search (or use the search string 'contains') for the word 'Ski' in the job description column. Others did not correctly extract those who had worked 25 hours or more. A range of candidate responses was seen, particularly greater than 25 hours or equal to 25 hours but not both.

Question 22

Many candidates printed the values printout as specified with the printout on a single page wide, although there were a number who did not display all the data in full.

Website Authoring

Questions 23 to 25

Many candidates resized the image successfully, although there were a significant number of candidates who edited the image width but did not maintain the aspect ratio. A number of candidates resized the image, maintaining its aspect ratio but did not apply the width specified in the question.

Question 26

The majority of candidates reduced the image resolution to attain the desired file size of less than or equal to 100 kilobytes. However, not all candidates showed evidence that they had saved this image with the filename specified showing this file size. A significant number of candidates showed the file size reduction for a different file name, frequently for J12BACKGD4 or J12BACKGD5.

Question 27

This step was designed to ensure that when candidates printed their webpage from their browser (particularly if they were using a wide screen monitor) all elements of the webpage would be visible. Most candidates, who needed to do so, completed it as specified.

Question 28

The vast majority of candidates created a webpage called XA.HTM but not all candidates attached the stylesheet J1232.CSS. A significant number of candidates attached the stylesheet but erroneously included an absolute file path.

Questions 29 to 30

This table layout was completed as specified by most candidates. A small number of candidates did not use the contents of J12TABLE4.HTM or edited the contents in such a way that the styles were not applied or the banner was not present.

Question 31

The majority of candidates completed this step successfully. A small number set this to other percentage values or to a finite number of pixels.

Question 32

A number of candidates did not replace the text, some used different anchor names and a number of candidates had the text 'start' visible in the browser view of their page.

Question 33

The majority of candidates completed this step successfully. A small number removed all of the text instead of just the text they were expected to replace.

Question 34

The majority of candidates completed this step successfully, although some candidates ignored the 'as shown' element of the question and omitted the merged cells in the left hand column of the table.

Question 35

Many candidates completed this step successfully, although a number set the table to the full width of the browser.

Question 36

This question caused difficulty to a significant number of candidates. Those who attained marks for this question frequently used the attribute `align="center"` within the table tag.

Question 37

The majority of candidates completed this step successfully, although some candidates did not maintain the aspect ratio of this image.

Question 38

Almost all of the candidates completed this step successfully.

Question 39

Many candidates completed this step successfully, although a significant number did not set both the <h3> and </h3> tags for all 4 cells of the table.

Question 40

The majority of candidates completed this instruction as required by the question paper but there were a number of candidates who erroneously removed elements (like the style settings) from the file J12TABLE6.HTM.

Question 41

Almost all of the candidates completed this step successfully.

Question 42

This step was not completed by a significant number of candidates. A significant number placed an anchor but did not replace the specified text with this anchor. There were a number of case errors in the anchor name, but the most frequent reason for candidates not attaining this mark was having the text 'combine' visible in the browser view of their page. A number of candidates included the text 'combine' but set the text as 'invisible' which was not required by this question, simply omitting the text from the markup outside the anchor tab would have been more efficient.

Question 43

The majority of candidates completed this step as specified; a number ignored the 'in Table A' instruction and placed this hyperlink in table C. A small number of candidates omitted the '#' symbol within the hyperlink reference.

Question 44

Most of the candidates completed this step as specified, although a small number set the anchor around the whole sentence or removed the other text from the sentence. Most candidates used the correct case for the anchor name 'start'.

Question 45

This step was well done by most candidates, the most common error was the retention of some (or all) of the original text 'Date and Time here'.

Question 46

The step instructed the candidates to replace the words 'Cave swim' with the most appropriate image from those provided. A number of candidates included both the word and image, ignoring the instruction to replace. Most candidates selected the correct image for the name.

Question 47

The step instructed the candidates to replace the words 'Scuba diving' with the most appropriate images from those provided. Although this was usually completed as instructed, a number of candidates included an absolute file path for the image and even more candidates did not set the target window to _ocean. A number of erroneous responses included setting the title or hyperlink reference using: `title="_ocean"` or `href="_ocean"`.

Questions 48 to 49

These steps instructed the candidates to replace the words in each cell with the most appropriate image from those provided. Most candidates selected appropriate images.

Question 50

The step instructed the candidates to replace the words 'Contact us' with the most appropriate images from those provided. Most candidates correctly referenced this image as a hyperlink, although not all of them set it as a 'mailto' attribute. Of those candidates who did correctly set this attribute, a significant number correctly set the subject of the e-mail. A number of candidates attempted this but replaced the required question mark to link the attributes with a space which does not set the subject line in the e-mail editor.

Question 51

Most candidates set the image widths to 120 pixels; however some did not maintain the aspect ratio and therefore distorted the images from their original proportions.

Question 52

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 53

This step was completed as instructed by most candidates; a mark was not attained by a small number of candidates who used an absolute file path for the attached stylesheet.

Question 54

The majority of the candidates completed this step successfully.

Question 55

The majority of the candidates completed this step successfully. Style h2 was usually applied to the entered text.

Question 56

Many candidates completed this step successfully, although some candidates did not set each line of both lists in list style, leaving a single bullet point for each list rather than one per line.

Question 57

Setting the tag <ol> immediately before the initial <li> tag in the first list and a tag directly after the final tag of this list was required and this was checked in the html printout. A significant number of candidates placed the <ol> and tags but did not place them around only the list specified.

Question 58

Setting the tag <ul> immediately before the initial <li> tag in the second list and a tag directly after the final tag of this list was required.

Question 59

The majority of candidates successfully replaced the image, although a significant number resized the image to 120 pixels wide, despite the instruction in this question not to do so.

Question 60

A small number of candidates from a range of Centres omitted either one or both of the required printouts.

Question 61

The majority of the candidates completed this step successfully.