CONTENTS

FOREWORD

This booklet contains reports written by Examiners on the work of candidates in certain papers. **Its contents are primarily for the information of the subject teachers concerned**.

UNIVERSITY *of* **CAMBRIDGE**
International Examinations

INFORMATION TECHNOLOGY

| Paper 0418/01 |
| Written Paper 1 |

General comments

Once again it was pleasing to see that so many candidates had done so well. Congratulations must go to the candidates and their teachers for all the hard work which must have been put in to achieve these results. There was a wide range of marks with many candidates gaining more than half marks. There were, however, areas of weakness shown by a number of candidates. Most candidates appeared to lack knowledge of safety issues and how to prevent them. Candidates appeared to be able to name different types of validation but showed a lack of understanding of their appropriate use. There was also a general lack of awareness of the processing which goes on in microprocessor-controlled systems.

Again, there was a tendency by a number of candidates to give 'brand names' when asked to name types of software. The use of brand names often gains no credit and should be discouraged.

Comments on specific questions

Question 1

This was generally well answered although some candidates confused MICR and Magnetic stripe reader. Some candidates gave OCR instead of OMR for part **(d)**.

Question 2

The vast majority of candidates achieved full marks.

Question 3

Most candidates did well, although a number gave database for the spreadsheet answer and vice versa.

Question 4

This question was also well answered.

Question 5

This question was generally well answered.

Question 6

Most candidates did well, the majority scoring full marks.

Question 7

(a) Many candidates gained a mark for the use of passwords but too many thought that encryption would prevent copying.

(b) Many candidates did well but several described what a modem is used for without saying why it is needed.

(c) A number of candidates used brand or commercial names for chatting which could not gain credit. Generally the question was fairly well answered by candidates giving chat rooms, video conferencing or electronic mail as answers.

(d) Many candidates did well but a sizeable minority used incorrect terms such as coding.

Question 8

Many candidates gained two or more marks but answers were often repeated such as animation, video and charts, as well as graphs.

Question 9

Most candidates did well on this question although a number used column D for part **(d)** rather than column C.

Question 10

(a) Very few candidates gained marks for this question. Many candidates wrote about health issues rather than safety issues, which is very surprising as the two issues are clearly separated in the syllabus. A number of candidates gave answers relating to viruses despite this being raised as a separate issue in the stem of the question and being examined in part **(b)**.

(b) The majority of candidates gained at least two marks although there was a tendency amongst many candidates to give scanning as an answer despite it being in the stem of the question and a request for three other methods.

(c) Most candidates did well on this, although some were only able to mention one method of misuse despite getting the illegal access part of the answer thereby limiting themselves to two marks.

(d) Most candidates achieved some marks on this question although only a few managed to get four or five marks. A number of candidates dwelt for much of their answer on the disadvantage of being sidetracked by games etc.

Question 11

(a) The great majority of candidates did well on this question. A small number, however, wrote down the erroneous data rather than the names of the pupils.

(b) Many candidates gained at least one mark although a number confused proofreading with visual verification. Visual verification is the comparison of the data, after it has been entered, with the original data source.

(c) This was surprisingly poorly answered by a number of candidates. Candidates were often able to quote the names of validation checks without really understanding what the checks did.
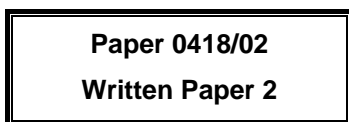
Question 12

(a) The great majority of candidates gained a mark on this question but few were able to gain the second mark as the descriptions lacked sufficient evidence of understanding.

(b) Most candidates produced answers which were vague. Popular correct answers related to safety/danger and the cost of re-building a real thing if there proved to be anything wrong with the original.

Question 13

(a) The majority of candidates answered this question well. A small number of candidates, however, seemed to be unsure of the correct terminology for sensors giving examples such as heat and weather sensors.

(b) Many gained marks for this question despite a significant minority giving answers such as cheaper or faster.

(c) The majority of candidates answered correctly although some candidates failed to gain this mark as they used brand names as their answer.

(d) This was disappointingly answered. Candidates often missed the point of the question, pertaining as it did to the production of a newsletter. The idea of using DTP or word processing software seemed to escape most. They then failed to gain marks for the transferring of data from the spreadsheet/database to the DTP/word processing package.

Question 14

(a) Few candidates described the process of setting these two variables.

(b) This question was very poorly answered. A minority of candidates referred to the microprocessor and even then a number of these only gave a vague overview of the process. Many candidates thought that the sensors were in control, and a surprising number thought that ovens were controlled via a PC and a modem.

Paper 0418/02

Written Paper 2

General comments

Once again, candidates found this paper a lot more difficult than Paper 1. The wider scope of applications employed in questions on this paper meant that candidates were unable to gain marks unless they had revised thoroughly. In addition there were aspects of Systems Analysis which a number of candidates appeared to be unfamiliar with, particularly evaluation. A lower percentage of candidates achieved half marks than on Paper 1.

Some candidates did not perform as well as they might as they appeared to have a knowledge of certain topics but appeared unable to apply this to the context of the question.

Expert systems, once again, proved to be a stumbling block for many candidates.

Comments on specific questions

Question 1

The vast majority of candidates achieved full marks.

Question 2

Most candidates achieved full marks, although a small number thought that bar code readers would be used at a cash machine.

Question 3

Most candidates did well, though some gave MIDI as an answer.

Question 4

This question was well answered with many candidates gaining 3 or 4 marks. Those that achieved 3 marks invariably answered the first part incorrectly.

Question 5

Most candidates got at least one mark though a surprising number thought that mistakes are never made.

Question 6

(a)   Most candidates gained at least 1 mark, although a number of candidates thought that one way of researching the existing system would be to evaluate the new system.

(b)   A number of candidates confused a book shop with a library and consequently wrote about borrowing of books, checking if books still out, etc. thereby ignoring the point of the question. Although many candidates did well on this question, some were too vague in their answers referring to accuracy without being specific.

(c)   Most candidates did well on this question though a surprising number of candidates thought that no two books could have the same title.

Question 7

Many candidates gained full marks.

Question 8

(a)   Most candidates answered this correctly.

(b)   Most candidates answered this correctly but a small number answered RAM.

(c)   Candidates did not do very well on this question. The majority were unable to describe their validation checks apart from naming them. This was particularly the case with check digit validation. Some candidates still confuse validation with verification.

(d)   This was answered well.

(e)   Many candidates gained one mark but most failed to gain both marks.

Question 9

(a)   Candidates did well on this question with many gaining 2 or 3 marks.

(b)   This was not well answered. A number of candidates seemed to ignore the question and gave answers based on the theme of unemployment.

Question 10

Most candidates gained at least one mark.

Question 11

(a)   Many candidates answered this well but a small number of candidates thought it referred to expert systems and answered accordingly.

(b)   Many candidates answered this well, but a number of candidates appeared not to know the correct terminology.

(c)   A number of candidates were able to provide methods of implementation but some often went on to describe the method rather than give a reason for it.

(d)   Most candidates were able to name at least one type of documentation but many were unable to name items which would constitute this documentation.

Question 12

The majority of candidates gained at least one mark on this question but rarely both marks. Candidates appreciated that the storage capacity was a key feature but too many failed to provide an additional acceptable answer.

Question 13

Candidates often failed to show an understanding of expert systems.

(a)   A number of candidates were able to name an example without being able to provide any detail.

(b)   Candidates did not answer this well with too many candidates seeming to lack knowledge of inference engines, knowledge bases etc.

Question 14

This was generally reasonably well answered although a number of candidates answered keypad despite it being in the question.

Question 15

(a)   This question was generally well answered although a small number of candidates confused banking with shopping.

(b)   The majority of candidates gave a correct answer.

(c)   A number of candidates seemed preoccupied with viruses and hacking. Most candidates gained marks although very few gained full marks.

Question 16

A number of candidates are still giving unqualified answers such as 'email is faster'. Many candidates gained one mark though few gained both marks.

Question 17

This was well answered with most candidates being able to list at least two valid features.

Question 18

This was not well answered. The majority of candidates appeared not to know what evaluation of a system actually consists of.

Paper 0418/03

Practical Test

General comments

The performance of candidates in this examination was generally good, with a large number of candidates performing well upon the paper. Many of these candidates scored high marks, although a full spread of marks was experienced, and the paper performed well.

The text files were written and checked in UK English. If candidates have machines with default windows settings to US English (or other similar settings) then some of the words would be identified as spelling errors. In these cases the spelling should not be corrected (although candidates have not been penalised if they did so). One or two candidates downloaded Spanish source documents and attempted to work on those.

The vast majority of candidates completed the paper. Those candidates who did not, tended to be the weakest candidates who may not have had the practical skills and underlying knowledge to attempt the questions rather than a lack of time.

A number of candidates did not print their name on their work prior to assessment. This should be printed at the same time as the work. Work should not have the candidates' names hand written on the pages.

There were a number of issues with capitalisation. Candidates must ensure that capitalisation matches that prescribed in the question paper.

Comments on specific questions

Communication

This section was well completed by the majority of candidates. The candidates generally provided good evidence of the required skills, but some problems were due to the candidates/Centres choice of software. In these cases the name of the attached file was not visible. Candidates were instructed to attach the file they had downloaded from the website. The attached file was only accepted with original name and .txt format. Some candidates attached the .csv file. A very small number of candidates attached a file from a different question paper from previous years. The e-mail address was generally accurate.

Document Production

The general standard of work in this section was very good. The most common errors were in setting the page size and/or the margin settings. A significant number of candidates failed to set these correctly. One candidate set the page margins to 4 inches resulting in over one hundred pages of text. Some candidates failed to set up the page header correctly, or set the header details into the footer.

Several candidates failed to indent the bulleted list as specified in the question paper. Errors concerning text alignment, font size, line spacing were sometimes seen. On occasion candidates failed to apply fonts, styles or spacing to all of the paragraphs.

Candidates who had used the spell check facility with US settings which had changed the spelling of the title Phoney to Phony were not penalised by the Examiners if it was also changed in body text.

Data Manipulation

This section of the paper proved the most taxing for the candidates. There were errors found in all of the extracts, although the second and third extracts seemed to cause more problems than the first one. Errors included the failure to show field labels in full, and also occasionally the data itself.

Sometimes field labels and the related field data were mismatched, especially from those candidates using Access by making adjustments to the report structure.

Some candidates (the majority of whom appeared to be using Excel) sorted on a single field, but did not apply the sort to all the data, which meant that the integrity of the data was lost for that (and sometimes subsequent questions).

Several candidates using spreadsheet software appeared to find the triple criteria search in step 27 quite difficult. Some candidates appear to have resorted to copying and pasting records that met the criteria, or typing in the records they thought should appear, with the consequent risk of errors. Those candidates using a database package did not seem to encounter these problems.

Some candidates imported the field headings into the database table, and then either left the default field headings as Field1, etc., or entered their own field headings.

All candidates were instructed to "make sure that your name, Centre number and candidate number are printed on each printout that you are asked to produce". A significant number of candidates did not follow this instruction and if the names on reports were omitted, lost all marks for the skills seen in the report. Names were sometimes incorrectly aligned below the body of the report.

The average calculation was generally well done although there were a significant number of candidates who failed to place this correctly. If the selection was incorrect, allowance was made for an average figure based on the records selected.

Integration

The page orientation was usually correctly amended, yet the tab positions in the header often remained unchanged. Margin settings provided a significant problem to candidates, with a number failing to correctly amend the page size and/or margin settings.

The table was generally inserted in the right place although there were a number of accuracy errors in the text added to the table. 100% accuracy was expected for text entry and several candidates failed to attain this.

For whatever reasons, some candidates did not insert the database extract into the document, losing all the marks associated with this activity. Credit was given for skills demonstrated if a named printout of this extract was included independently of the document.

There were a number of errors introduced in line spacing between paragraphs. The majority of candidates correctly inserted the page breaks to ensure that there were no split lists or tables.

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│   **Paper 0418/04**   │
│   **Practical Test**   │
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General comments

The majority of candidates completed all elements of the paper. There were vast differences in the range of results from Centre to Centre. The Data Analysis and Presentation Authoring sections were attempted by the majority of candidates and were generally well done. For a significant number of candidates the website authoring section of the paper was their strongest element, which is in direct contrast to all previous results on this paper. In other Centres the website authoring section caused the most significant problems, with some candidates omitting this section completely. A significant number of those candidates who attained the vast majority of marks on the paper introduced errors in the Presentation Authoring section which in some cases could have been avoided by carefully reading the question paper and carefully checking their answers.

Some candidates did not print their name, Centre number and candidate number on every document submitted for assessment. Without clear printed evidence of the author of the work, Examiners were unable to award any marks 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, as opposed to inadvertently collecting the work of another candidate from the printer, and annotating this with their name. Printing candidate names by hand on every sheet does not fulfil this requirement.

A small number of candidates failed to printout the html code for the website authoring, or the formulae for the data handling. In both cases it was impossible to award many marks to the candidates without the evidence of their structure and syntax.

Comments on specific questions

Data analysis

Question 1

Some candidates failed to set up the data model as specified in the question paper.

Question 3

Some candidates attempted to do this without using named cells *five* and *seven*. A significant number of candidates experienced problems with the IF statement. The most frequent error was entering greater than 300 rather than greater than or equal to 300. The IF function did cause problems for some candidates, a number of candidates used <300 as an alternative but then failed to multiply by the correct cell name, therefore achieving an incorrect result.

Question 6

A number of candidates introduced errors in the COUNTIF formulae, some with the range of cells selected, some with the value (or cell reference) to compare with, and others with the syntax of the COUNTIF function.

Question 7

This question was generally done well, although a significant number of candidates had incorrect data entry which ensured that the spreadsheet did not accept the values in date format.

Question 8

Several candidates did not format all the specified columns. Some formatted only two of the three columns. A small number of candidates set the cells to currency but with 0 decimal places.

Question 10

This was well done by the vast majority of candidates.

Question 11

This question presented problems for a number of candidates. A significant number of candidates did not demonstrate the ability to switch between the value setting and formulae setting within the spreadsheet. On some scripts candidates failed to resize the columns, resulting in the formulae being partially hidden. Almost all of the candidates managed to get the sheet onto a single page.

Question 12

There were a number of data entry errors, particularly related to the insertion of spaces and commas in the date values. The most common spelling error was *February*. The numeric data entry was usually correct.

Question 14

A number of candidates could not filter the data from the given criterion. Some candidates attempted to delete the rows rather than searching/filtering for the correct data.

Question 15

A more significant number of candidates could not filter the data using the two given criteria. Again, some candidates attempted to delete the rows rather than searching/filtering for the correct data.

Website authoring

Question 2

A number of candidates did not create an external stylesheet. There were a number of small web pages saved in html format with the styles included, which should have been saved as cascading stylesheets (in.css format). Stylesheets in .css format do not contain html tags, or body tags, but define the overriding styles to be applied to the page, whether it is fonts, table borders or other features. There was a wide diversity of "font-size" settings in the stylesheet, many that had no units attached to them so would not work in many web browsers. The most common mistakes were using the incorrect syntax on the "font-family", and missing the units from "font-size". Whilst some of the latest browsers will accept font sizes without a specified pt (for points) or px (for pixels), this will not work on all browsers across the world. Candidates are expected to generate web pages (and hence stylesheets) which would appear as expected on any available web browser. A significant number of candidates used the following syntax:

font-family: Arial (sans-serif); or

font-family: "Times New Roman" (serif);

This does not work due to the brackets, correct alternatives might be:

font-family: Arial, sans-serif; or

font-family: "Times New Roman", serif;

Each of these options means that if the first font (e.g. Arial) is not available, the browser defaults to any available sans-serif font.

Once styles have been applied to the page, they should not be over-ridden by other style commands in the html code. Should any proprietary packages do this, candidates should edit the html code in order to remove these elements.

Question 4

Many candidates created the homepage correctly, with all of the items in the correct position and the heading styles (h1 h2 and h3) applied to the correct text. The table was usually created with the correct number of rows and columns, and with the border set to 3 point. The text excerpts and image were usually correctly positioned in the table, but in some candidates printouts the image was not fully visible.

Question 7

A significant number of candidates did not open the file in a new target window called EXTERNAL, many used the default settings of their web authoring package and had not edited this in the html code. Some candidates set the title of the page to EXTERNAL. One or two candidates set the default window setting to open in the EXTERNAL window.

Question 10

A small number of candidates failed to set the table border to 3 points.

Question 11

A small number of candidates found the placing of all the elements in the correct table cells difficult, of those who did, several forgot to apply the styles from the stylesheet.

Question 13

A small number of candidates created frames, but when printing out the web page only printed out the main frame, forgetting to print the sections for the menu choices and the title. Some candidates failed to produce the html printout as well as the copy from the browser view. Most of the candidates had no trouble attaching the stylesheet, however, sometimes the styles would be overridden by inline styles on the page.

Question 14

A number of candidates failed to convert the SWAA5ICO.jpg into a smaller size and then into a more compressed format as a gif file. There is an expectation that when candidates change SWAA5ICO.jpg into gif format that it will retain its original name so should appear as SWAA5ICO.gif. Some candidates had unconventional naming like SWAA5ICO.JPG.GIF which was not given credit.

Question 15

A number of candidates failed to resize the image SWAA5ELE.jpg to 500 pixels wide, some resized the width of the image but failed to maintain the aspect ratio, therefore distorting the image.

Presentation authoring

Question 1

The use of the master slide was poorly completed. A significant number of candidates placed their name at the top of each page rather than placing it as specified in the master slide. Similarly the page numbering and placed graphic were not always present on the master slide, some were present yet placed in the default positions of the individual software package, rather than as specified in the question paper.

Questions 1 and 2

The colour schemes chosen for this paper allowed for good distinction when printed in black and white. Candidates must ensure that if the Centre is using a black and white printer the colours selected give suitable contrast. Some candidates ignored the instructions in **Question 2** and did not change from the default settings of their software package. Failure to left align subheadings and not setting the correct point sizes were common errors amongst a large number of candidates.

Question 4

This question was poorly attempted by a large number of candidates. The subheading was often correctly inserted, but few candidates applied the styles as specified in **Question 2**, particularly relating to left aligning the subheading.

Question 5

A significant number of candidates placed the notes directly onto the slide rather than in the notes section of the package. Some candidates did not use them at all.

Question 8

A very large number of candidates included a legend for the chart, despite the instruction 'Do not display a legend'. A number of candidates also failed to place the chart to the left of the bulleted list. A small number of candidates copied the table from the question paper and included this on the slide.

Question 9

A number of candidates used a variety of different lines including vertical, diagonal, arrows and boxes around the heading. Some candidates omitted this instruction completely.

Question 13

Some candidates were inconsistent in the formatting of the bulleted list between slides 2 and 3 with different styles of bullets being used. A few failed to align the bulleted text to the left, aligning the text to the right or to the centre.

Question 14

Some candidates failed to insert the additional image on slide 3. A small number of those who had inserted this image, made it overlap the logo on the master slide.

Question 18

A significant number of candidates were unable to print the presentation in a format that shows the presenter notes.