INFORMATION TECHNOLOGY

Paper 0418/01

Written Paper 1

General comments

Considering that this was the first time that the previous theory papers 1 and 2 had been combined, candidates performed very creditably. The level of difficulty of the questions, overall, appeared to be more closely aligned with paper 2 rather than paper 1. The wider scope of applications employed in questions on this paper meant that candidates were unable to gain high marks unless they had revised thoroughly. In addition there were aspects of Systems Analysis, which a number of candidates appeared to be unfamiliar with. Many candidates understood methods of implementation but were unable to compare the methods. A surprising number of candidates were unable to define the three different types of test data.

Some candidates did not perform as well as they might have as they appeared to have 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 a plotter is an input device.

Question 3

Most candidates did well, though some got measuring and control mixed up.

Question 4

This question was well answered with many candidates gaining 3 or 4 marks. However, some centres got it completely the wrong way around.

Question 5

Most candidates got at least two marks.

Question 6

Some candidates were confused by the missing line but this was compensated for by the new mark scheme. However, many candidates failed to score well through lack of understanding of the commands, often trying to get the turtle to move through the wrong angles.

Question 7a

Many candidates managed to gain three marks but often failed to give the advantage of each method. They concentrated instead on giving a further description of the method.

Question 7b

Few candidates gained marks for identifying the three types of data and even fewer were able to give examples from the question.

Question 7c

This was poorly answered with many candidates unable to identify items of technical documentation.

Question 8

Most candidates answered this correctly although some confused ROM with CD ROM

Question 9

This was well answered.

Question 10a

Most candidates gained at least one mark.

Question 10b

Mainly well answered though some candidates confused random access with RAM.

Question 10c

This was well answered.

Question 10d

Well answered on the whole though candidates are still giving answers such as quicker without qualifying this type of answer.

Question 10e

It was disappointing to see a number of candidates confusing verification with validation. Many got one correct answer but few got both.

Question 10f

Well answered although there were some strange answers.

Question 10g

A surprising number of candidates thought that a phone number would be stored in numeric format.

Question 10h

Generally well answered.

Question 10i

Candidates tended to get few marks. Many were unable to explain what happens when a database is searched although they appear to understand the overview. A number failed to appreciate that the system would be automatic and gave answers relating to librarians sending out reminders.

Question 11

This was well answered.

Question 12a to 12e

All parts tended to be well answered.

Question 13a

This was generally well answered except that a number of candidates clearly produced a paper-based form rather than a screen form.

Question 13b

This was not well answered. Most candidates struggled and appeared to lack detailed knowledge.

Question 13c

This was well answered.

Question 13d

The majority of candidates gained at least two marks on this question.

Question 14

Candidates did well on this question except that a surprising number gave tape for part **c**

Question 15

This was generally very well answered.

Question 16

(a)   This was not as well answered as expected. Many candidates ignored the requirement for a word processed report and described instead how you would use DTP, some used presentation software, and some used database software whilst others described how it could be done using spreadsheet software. Candidates need to be reminded of the need to read the question thoroughly before beginning their answer.

(b)   The majority of candidates gave correct answers.

(c) and **(d)** were well answered although some candidates gave modem for part **(d)**.

(e)   Some good answers. Very few candidates confused this with a measurement equivalent.

(f)   This was better answered than equivalent questions in the past although still too many candidates think that the sensor does the controlling.

Question 17a

A number of candidates gave examples of models which had little to do with avoiding dangerous situations. Generally many candidates gained one mark with a minority gaining two.

Question 17b

Not very well answered with still too many answers of the type cheaper, faster etc. A few candidates put danger examples despite the question clearly asking for other reasons.

Question 18

This was not well answered. A number of candidates appeared to have learnt off by heart how to create an expert system and even though the question did not ask for this the candidate still gave it as an answer. Most candidates still do not understand what an expert system is.

Question 19

This was generally well answered. Many candidates achieved some marks with a number achieving high marks. Maximum marks were achieved by very few candidates. A number of candidates concentrated on hacking, viruses and fraud, which resulted in not many marks being achieved.

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General comments

The performance of candidates in this examination was generally good, with a large number of candidates performing well on the paper. Many of these candidates scored high marks. The majority scored 60+, although a full spread of marks was experienced, and the paper performed well. There were relatively few really poorly prepared candidates who tended to miss out whole sections (typically the data handling section). Quite a large number of marks were lost from lack of care and attention to detail, not necessarily lack of the required skill. (For example, not applying required style to whole document, rather just a couple of paragraphs, or making sure the data was fully visible, not just the labels).

There wasn't really any one question that proved more difficult than the others. The data handling section gave the most problems, while the document production section was the most consistently well done. Margins/paper sizes were a significant problem on both text documents.

As personal details had been built into the papers, there were very few printouts without names. However at least one Centre interpreted the instruction to print names in documents before sending to print as printing header details on blank sheets for candidate identification, and then using these "personal" sheets for printing the work, thereby giving an odd mix of orientations when print layout requested in landscape.

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

Some Centres commented that their candidates are now very comfortable with demonstrating the skills tested in this paper and find it predictable and very easy.

Comments on specific sections and tasks

Communication

Assessment Record Folder.

This is the mark derived from local observation of candidate skills in accessing the web site and downloading and saving files. This does not generally reveal a problem, although quite a number of candidates were not recorded as saving their files. The mark cannot be awarded if the local observer has not recorded the skills on the cover of the assessment record folder. There was some confusion over whether an X or a blank as opposed to a tick meant non-completion of the skill.

The e-mail task 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. Very few problems here but a number of candidates used ucles.org.uk and were not penalised if they did so. Some Centres used an intranet address in place of the CIE address. They would be well advised to note this to the Examiner with the scripts. Candidates were instructed to attach the file they had searched for and downloaded from the website. The downloaded file was the txt file. A small proportion of candidates erroneously attached the csv file. This was the file delivered to them as an attachment to an e-mail message. Candidates should be able to distinguish between these two files if they have received one via e-mail and downloaded the other from a website. A few candidates made errors in the subject line e.g. ICTOREX.

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. Many candidates didn't, or couldn't, set the margins correctly, but in general this question was done very well. Most candidates made very few errors and many scored full marks.

Errors concerning text alignment (the most common being fully justified text for the document), font size and line spacing (with single line spacing being the most common error) were sometimes seen. On occasion candidates failed to apply fonts, styles or spacing to all of the paragraphs.

Header and footer – most candidates got both right, some confused right/left, and a small number were borderline out of position (mostly date too far from right margin).

Heading – Mostly skills were achieved, and most got the size correct. A few used the same font as the body text, and a few failed to underline. There were one or two instances of left aligned headings. Capitalisation was to be as the text given in the paper, but candidates were not penalised if they chose a capitalised font as for instance Algerian.

Page Size, margins, etc. – these were a common problem. There were a few who ended up with extreme margin errors (line length of about 15 cm or less). There were a few examples of wrong orientation.

Bullets – OK, for almost all. A small number did not set the indent to at least 2 cm.

Page break – inserted correctly by almost all.

Data Manipulation

This section of the paper proved the most taxing for the candidates. Weaker candidates often missed out this section and the related extract for the integration; or got confused with the first part and didn't go on.

There were errors found in all of the extracts which included the failure to show field labels in full, and also in the entry of the data. Omission of a field in the first extract meant that data entry could not be checked, losing one mark for each record to be added. The majority of candidates correctly selected the records and sorted the database.

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 (who appeared to be using Microsoft Excel) had sorted the data on a single field, but did not apply the sort to all the columns, which meant that the integrity of the data was lost. For some candidates this also had an effect on subsequent data manipulation questions.

Some candidates imported the field headings into the database table, and they either left the default field headings as Field1, etc, or entered their own field headings, again with risk of spelling error e.g. Inports.

Data manipulation (Low density)

Many were not precise with the heading. Making sure all headings and data were fully visible was a problem. Whole Centres displayed "Central African" in the data. Search generally OK, while Sort was often missed, or in the wrong direction.

The calculated minimum value was generally well done and placed correctly. If the selection was incorrect, follow through was allowed. Sometimes the calculated field was not placed below the Imports column in the report. Occasionally values other than minimum or not based on Imports were calculated.

Candidates who produced grouped reports were credited with sort and calculation evidence when it could be seen.

Name sometimes incorrectly placed left/right on both reports.

Integration

Full marks were less common here, though many scored very highly. Minor errors in relation to the whole document let many down and the margins were often incorrect. The image insertion often gained full marks, but a significant number did not enlarge the image or sited it incorrectly in relationship to the top of the text or to the left margin. Some used tight text wrap and were not penalised for this.

Header/Footer – most showed the date top right, only a few left it wrapped round to the left.

Almost all removed the page break, but often left in an extra blank line. Several candidates failed to remove the page break inserted in the first printout and a significant number of candidates had errors in consistent line spacing or text alignment.

Some were unable to cope with the insertion of the database extract and omitted it altogether; others dealt with the search incorrectly. Credit was given for skills demonstrated if a named printout of this extract was included independently of the document. Just occasionally a candidate inserted an entirely unrelated extract and this leads to a reminder to Centres that candidates should not have access to past examination materials at the time of assessment.

The table was generally inserted in the right place although there were a number of accuracy errors in the names added to the table. 100% accuracy was expected for text entry, and several candidates failed to attain this. Widows, orphans and split lists/tables were rarely sighted.

There were a number of errors introduced in line spacing between paragraphs and a small number of candidates failed to insert page breaks to ensure that there were no split lists or tables. Some candidates interpreted the "Widows & Orphans" instruction poorly and thus lost marks for "paragraphs intact" by leaving too many lines at the bottom of a page.

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| Paper 0418/03 |
| Practical Test |

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, a follow on from the results found in the November entries. 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; the results in this section were not as high in this session as in previous sessions. In the vast majority of cases these errors could have been avoided by carefully reading the question paper and carefully checking their answers.

A small number of candidates from a limited number of Centres 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. Proportionally there were less occurrences of this error in this session than in previous sessions.

A significant number of candidates failed to printout the html code for the website authoring and a small number of candidates failed to print 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.

Please note that it is not necessary to staple together the work, work should be submitted in the ARF. Some Examiners experienced difficulty marking some pages from some Centres, as candidates had stapled all their work together in such a way that it was very difficult to separate the sheets in order to view and mark all of the work.

If candidates are using a WYSIWYG web authoring package, they must ensure that if this package adds in-line styles to the html code which over-ride the stylesheet, the candidate must remove these from the html code in order for the page to work as specified.

Comments on specific questions

Data Analysis

Question 1

Most candidates set up the data model as specified in the question paper.

Question 3

Most candidates used the cells named **five** and **seven** in their IF statement. A small number of candidates experienced problems with the mathematical operators for greater than or equal to. 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. The most common error was applying greater than rather than greater than or equal to, in the IF formula.

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. A number of candidates referenced the cells to be counted to column B rather than column C.

Question 7

This question was generally done very well, although some 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 more significant number formatted the three columns but omitted certain cells or rows. A small number of candidates set the cells to currency but with 0 decimal places.

Question 9

The replication was generally correct even if the formulae were wrong.

Question 10

A small number of candidates did not change the page orientation.

Question 11

This question was usually done well, but occasionally candidates would fail to resize the columns, resulting in the formulae or labels being partially hidden. A small number of candidates did not demonstrate the ability to switch between the value setting and formulae setting within the spreadsheet. Almost all of the candidates managed to get the sheet onto a single page.

Question 12

There were a significant number of data entry errors, particularly related to the spelling of **Elliptical**, **Punch bags** and **exercise**. Many candidates did not enter the data with the correct case, a whole range of variations was found, with inconsistent case (particularly initial capitalisation) in the Item and Size columns. The numeric data entry was usually correct. Many candidates failed to enter the dates correctly, a significant number of candidates had part of the column in correct date format and several cells as text entry. This was evident when observing the formulae printout as the date values (if correct) should appear as numeric values in many of the major spreadsheet packages.

Question 14

A small 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 larger 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 large number of small web pages saved in html format with the styles included, which should have been saved as cascading stylesheets (in.css format). Several candidates used words for colours which do not work, for example "**darkgreen"** is acceptable and will work but "**dark green**" is not. There was a wide diversity of "font-size" settings in the stylesheet, many which had no units attached to them so would not work in many web browsers. Other common mistakes were the use of incorrect syntax on the "font-family", and missing the units from "font-size". Some candidates did not appear to realise that fonts placed in brackets within the "font-family" settings of the style will not work and will negate the style when it is applied to the web pages.

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 6

Many candidates did not place the contents of the file, but opted to type the data. The contents of the file would have produced a small table which required an amendment to the border. If candidates had not placed the table there was no border to make invisible.

Question 7

The most common error was made by a significant number of candidates who 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 4 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 12

A small number of candidates placed the image in the wrong cell of the table, more candidates failed to center align the image within the cell.

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 SWAD6ICO.jpg into a smaller size and then into a more compressed format as a gif file.

Question 15

A number of candidates failed to resize the image SWAD6ROW.jpg to 300 pixels wide, some resized the width of the image but failed to maintain the aspect ratio, therefore distorting the image.

Question 16

A small number of candidates failed to replace the text, placing the image in a different place on the webpage.

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 placed graphic were not always present on the master slide.

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. Several candidates ignored the instructions for point sizes set in **Question 2**. Whilst some packages automatically readjust the point sizes to make them 'fit' as it sees appropriate, candidates are expected to check and manually over-ride the automation added by the package.

Question 3

A number of candidates omitted the initial capitalisation. The heading was often correctly inserted, but few candidates applied the styles as specified in **Question 2**, particularly relating to right aligning the heading.

Question 4

This question was well done by the majority of candidates.

Question 5

Sometimes candidates would put the notes directly onto the slide, or sometimes simply not use them at all, generally this question led to a large number of errors in data entry.

Question 6

This question was well done by the majority of candidates.

Question 7

This question was well done by the majority of candidates, although a number of candidates failed to left align the bulleted list. A number of candidates used bullet points the same size (or larger) than the subheading on slide 1.

Question 8

A number of candidates failed to include a legend for the chart. A small number of candidates failed to produce a vertical bar chart.

Question 9

A number of candidates used a variety of different lines, horizontal, vertical, diagonal and boxes. Some candidates omitted this instruction completely.

Question 11

There were a significant number of candidates who had errors in data entry.

Question 12

This question was well done by the majority of candidates, although there were some inconsistencies in initial capitalisation.

Question 13

This question was well done by the majority of candidates, although a number of candidates failed to left align the bulleted list. A number of candidates used bullet points the same size (or larger) than the subheading on slide 1.

Question 14

There were a significant number of candidates who had errors in data entry in the presenter notes. Almost all of the candidates correctly added the image.