INFORMATION & COMMUNICATION TECHNOLOGY

Paper 0417/12
Theory

Key messages

From this series the paper was out of 80 marks not the 100 marks of previous sessions. It is noted that most candidates attempted to answer all the questions with only a few not attempting to answer questions.

Candidates who performed well in this paper used specific and detailed language when replying to 'describe' and 'discuss' type questions. Once again there has been an increase in this series in the discussion/describe questions on splitting the answer into advantages and disadvantages but this does not allow for a true discussion.

As in previous sessions there has been an increase in the number of candidates using brand names to answer the question. It is clearly stated on the front page of the examination paper 'No marks will be awarded for using brand names of software packages or hardware systems'.

Occasionally candidates may need to expand their answers on to other parts of the examination paper or onto extra sheets. It is important that if this occurs the candidate clearly writes where the extra part is written and writes the question number on the extra work.

It is important that candidates spend time reading a question thoroughly so that they are quite sure what is required in the answer. In particular this issue was shown when candidates attempted the questions on expert systems and the ANPR system. Some candidates seemed to have missed the point of the question and answers did not clearly relate to the scenario set.

General comments

When a question indicates a specific number of answers, candidates should only write one answer in each allocated space as only one answer is marked for each space. The trend of missing out the top line of the answer grid and then adding extra lines below the answer is not as prevalent in this series.

Candidates need to be clear in the answers given rather than using basic statements like it is quicker, candidates give a valid reason to expand the answer. All answers on the paper should relate back to the question being set. As in previous series there is a confusion between a benefit and an advantage. A benefit does not make a comparison whereas an advantage does. For example, a benefit of a laser printer is that it gives a good quality printout whereas an advantage is that it gives a better quality printout than a dot-matrix.

Comments on specific questions

Question 1

(a) The ubiquitous 'intangible components' appeared quite often with a significant number of candidates using terms such as 'parts of the computer that are not tangible/can't be touched'. A few suggested that software runs the programs, rather than that software are programs.

(b) Almost all candidates were able to correctly state the two types of software. There were not many 1-mark answers as the candidates either knew the answer or not. Some candidates used brand names. CLI and GUI appeared sometimes, as did items of hardware.

Question 2

Almost every candidate knew that a laser printer produced hard copy so there were very few wrong answers. However, some candidates ticked more than one box and this meant that the mark could not be awarded.

Question 3

Another question where candidates seem to know the answer or not. Some candidates gave two correct answers in the same answer space, e.g. hardware and software requirements, or input and output formats, and then gave an incorrect answer in the 3rd answer space. In this instance only one mark is allowed per answer space.

Question 4

(a) Many candidates provided answers such as 'it's free to use', 'you can use it anywhere with an internet connection', 'a large amount of information is available' etc. The most likely correct answer related to the speed of finding the information. Many answers related to the information being accurate or reliable, which is not necessarily true, rather than relevant or related to their search. Some candidates misread the question and gave answers that were comparisons between using the internet and other ways for obtaining information.

(b) Almost all candidates were able to achieve at least one mark for this question. Quite a few achieved thee or four marks. Most candidates knew that personal data should not be shared and that they shouldn't post pictures of themselves in school uniform, but other answers were often too vague, such as not talking to strangers online, rather than not accepting friend requests from them. Some candidates gave answers that did not relate to using social media which was in the question. Some candidates related their answers to the use of a strong password.

Question 5

The question related to the use of scheduling the best route for a delivery driver using an expert system. Some candidates were able to explain that the inference engine searches the knowledge base using the rules base. However, a significant number of candidates described setting up an expert system or using SatNav or GPS to find the best route. Where candidates answered the question in terms of expert systems, then marks were achieved for the process. Some candidates still wrote that one result is produced rather than a number of possible results.

Question 6

This was a well answered question with many candidates able to give two suitable devices that could be connected by Bluetooth.

Question 7

(a) This question was fairly well answered, with many candidates able to write that the primary key was unique with some candidates stating that it was used to find a record. The terminology used by some of the candidates was not always correct with confusion between tables, databases, files and even documents.

(b) As with part **7(a)**, there was confusion between tables, databases, and files. Some candidates recognised that a foreign key is linked to a primary key in another table.

Question 8

Answers given by the candidates were too general and vague. Some candidates mixed up smart devices with smartphones and hence missed out the controlling elements that smart devices have. The question related to the benefits of using smart devices some candidates wrote an answer but missed out the benefit. Many answers were about increased leisure time for example. Many answers would have applied whether the devices were smart or not, such as a washing machine turning off when it's finished the wash cycle. The most common correct answer related to smart fridges being able to order food.

Question 9

(a) This question was well answered with about half of the candidates achieving a mark. Most candidates attempted the question. The most common answer was that it was to enter text/images etc. A number of candidates said it let you enter content hence achieved no credit as they repeated the stem of the question.

(b) Many candidates achieved credit for this question being able to correctly identify at least one of the two required layers but were less clear about their use.

Question 10

Many answers were quite vague. For example, a popular answer was that it was faster, easier, more portable or stated it was cheaper without expanding on the answer. Most candidates correctly identified that the touch screen had a smaller footprint although wrote the answer that it did not take up as much space as a keyboard, mouse, and screen.

Question 11

(a) This question was well answered by the candidates with many giving correct answers like files being deleted and the system crashing.

(b) This question was quite well answered although some candidates wrote rather vague answers like not opening emails, rather than not opening e-mail attachments from untrusted sources, and only visiting trusted websites, with no mention of downloading files. Candidates seemed less clear about how to prevent a virus attacking their computer. The most common correct answer was to use up to date anti-virus software and in this series the examiners gave a mark for stating the anti-virus software was up to date. Many candidates seemed to believe that a firewall would do the job, or anti-spyware.

(c) (i) Few candidates stating that it was system files that would have to be quarantined. Some candidates wrote more than one answer, but the first answer is the only one that achieves credit.

(ii) This question had two aspects, marks were awarded for detecting the file contained a virus and marks were awarded for quarantining the file. Many candidates did not mention detecting the file contained a virus.

Question 12

(a) This as a well answered question with many candidates achieving at least three or four marks in a topic they are familiar with. Some answers given were correct but were vague giving no reasons why they were important.

(b) Many candidates appeared unsure about this topic. Many candidates still believe that copyright prevents the copying of data.

Question 13

Many candidates did not understand what a Blu-ray disc was. Many candidates felt that these were downloaded and then displayed rather than played by placing the disc is a reader.

Some candidates realised that additional hardware was needed or a Blu-ray player, but some candidates referred to this as a CD or DVD player. Some candidates just wrote ‘no additional device needed’ which was too vague. Many thought that streaming was free.

Question 14

This question was well answered with many candidates able to achieve good marks. A few candidates misread the question and only gave differences and therefore could not achieve full marks. Some candidates slipped up on volatility by stating that ROM was volatile, some of these gave a correct explanation but then a wrong name.

Question 15

This was a well answered question. The question concerned the advantages and disadvantages of direct changeover rather than parallel, but many answers just described the two methods. Most common answers were that benefits were immediate most knew about the two systems and stated that the old one could take over if the new one failed. A few candidates did just state that direct would be cheaper without explaining why. As with previous questions of this type there were some candidates who knew the answer but were rather vague in the way they answered it. For example, direct changeover was cheaper without explaining why.

Question 16

(a) This question was well answered with many candidates achieving full marks. Some candidates however repeated keypad which was in the question or gave output devices like the speaker.

(b) Some candidates appear to have misread the question and gave answers related to speeding and stolen vehicles. Many candidates were able to achieve a couple of marks for the answer, however as with similar questions of this type candidates were vague in their answers in that they did not expand upon the answer and give a reason.

Question 17

(a) This question was quite well answered with many candidates achieving at least two marks for naming the verification checks. The descriptions needed to relate to a comparison. Some candidates appear to have misread the question and gave answers relating to biometrics, authentication, and passwords.

(b) (i) This question was well answered with many candidates achieving the mark.

(ii) This question had a mixed success rate with many candidates just repeating the question is their answer. Some candidates appeared to know the answer but gave examples without explaining.

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Paper 0417/21

Document Production, Databases and Presentations

Key messages

Many candidates had developed and demonstrated the required practical skills for all the applications. As always, attention to exact requirements of the question paper is essential for success. A small number of candidates sent work to the printer with no personal details visible. This work will not be marked. Many questions require specifically that personal ID details be inserted and often this is used as part of the assessment. Candidates should check their work before sending to print and, on receiving their work back, to be sure that the work can be attributed to them.

General comments

Attention to detail in style creation and editing proved to be a challenge for almost all candidates. Marks varied widely across most of the range, with some candidates doing very well. The evidence document and the three applications produced evidence for almost all candidates. Occasionally any one of the expected documents might be missing; most often one or both of the database reports and occasionally the presentation or even the evidence document.

Comments on specific questions

The Document

The document was provided in landscape orientation with set borders. No changes were required for these or the body text style. Quite rarely these were seen to be changed. The majority of skills not demonstrated accurately lay in the details of the creation or editing of paragraph styles. The title style was to be edited but often the “all capitals” setting was left on. The subhead, table and bullet styles were to be created. Of these, the subhead style was usually correctly defined, but one should note that a style named sans-serif does not exist and a sans-serif style such as Arial would have worked. The bulleted text style often contained the errors of not aligning the bullet to the margin, applying capitals to all text, or not setting single linespacing. The table text was also often set to all capitals.

The table was well formatted, and the image was usually placed correctly, reflected, and resized as specified. Further formatting errors noted included widows/orphans left and the alignment of columns.

Overall, the document was well produced and almost always present.

The Database reports

Report 1

This report was generally well executed. Selection of records was usually accurate. Data and labels were usually fully visible. The incorrect order in which fields were presented probably resulted from the sorting of records. The edited record and range of marks were usually accurate. The calculated field summary, a count of records, if seen, was usually accurate as seen in the evidence document. The report title and the label for the count of records occasionally showed data entry errors. One further point to note was the editing of footer contents to show only personal ID details. Many forgot to remove other items such as page number or date from the footer area.

Report 2

This report was the one most likely to be omitted, but when presented, was frequently accurately completed. Some candidates did not sort record on both fields. The calculated field summary was seen accurately constructed in the evidence document of most candidates. Precision of placement, under the Maths field name, and presentation of the value with no decimal places were the challenges for this.

The Presentation

The presentation was generally well done. The required slides were imported and the first slide set to title and subtitle layout. One slide presented most of the marks and contained a table to be imported and a chart to be created from a source file. The table text was to be formatted following a visual representation of the specifications. While successfully formatted by most candidates, all possible errors in alignment, size, grid lines and shading were observed. The chart was widely successful in its creation, but some candidates selected the data for English or Overall values which were required to be excluded. A correct legend, values above the bars and an accurately entered chart title were frequently observed.

The Evidence document

The evidence document provided evidence for the styles created, the database table structures and the relationships. It was necessary to display the one-to-many relationships either by presenting the dialogue boxes or the enforcement of data integrity. The database formulae had to be seen in full. The exported report needed to provided evidence that it was exported as a pdf file by display of a file extension or pdf file type and had to be named correctly.

Presentation and printing of screenshots was usually large enough and clear enough to be read easily by the examiners. This was generally a good aspect of presentation of this work.

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Paper 0417/31
Spreadsheets and Website Authoring

Key messages

For this paper the main issues to note are as follows:

- Candidates need to understand the importance of following the instructions given in the question paper.
- Candidates need to ensure that all printouts can be clearly read by an examiner without the use of a magnification device.
- Candidates need to ensure that in a spreadsheet, the contents of all columns are fully visible.
- Candidates need to ensure that they include all their candidate details in the correct place on all printouts.
- Candidates need to take greater care with the accuracy of data entry.
- Candidates need to take greater care when formatting the spreadsheet particularly when setting column widths to match those shown in the question paper.
- Candidates need to take greater care when formatting the spreadsheet to ensure that column headings are wrapped as shown in the question paper.
- Candidates need a better understanding of the syntax of CSS in a stylesheet.

General comments

There were significant differences in the range of results from centre to centre and from candidate to candidate within centres.

Candidates must ensure that the text within the screenshots, html markup and all spreadsheet printouts is large enough to enable Examiners to read the work without the use of magnification devices.

Comments on specific questions

Question 1

The majority of candidates deleted and inserted rows as specified and entered the text in row A. The text in the footer was mainly entered accurately but a significant number of candidates added : (colon) after by. Some candidates did not right align the text.

Question 2

Most candidates made the necessary adjustment to the layout of the spreadsheet in order to make it look like the image in the question paper. Most candidates adjusted the width of column S but many did not adjust it to make it smaller than column T as sown in the question paper image. Some candidates did not align the cells as shown in the image i.e. cells A4:A31 right aligned and cells A1 and B1:R31 centre aligned. Vertical alignment was attempted by most candidates but text wrapping in cells T1:V1 was not always as shown in the question paper. The majority of candidates formatted the text in rows A and B as specified and centred the text across the merged cells.

Question 3

The question was answered well my most candidates using a COUNT function. A few candidates did not include the correct range, and some did not extend the formula to row 31 for each player.

Question 4

This question was answered well by most candidates using the MIN and MAX functions. Some candidates did not include the correct range, and some did not replicate the formula for all matches. A few candidates extended the replication beyond column R to include columns S – V.

Question 5

Some candidates incorrectly used the AVERAGE function rather than a function to perform the calculation given in the question paper. Fewer candidates rounded this calculation to one decimal place. Of those who did round the calculation wrong answers were frequently seen using the ROUNDUP or ROUNDDOWN function. Some candidates omitted the brackets around the contents of the denominator in the calculation. Some candidates did not include a function to ensure the contents of the cell were not displayed if the player had played fewer than 5 matches. Some candidates attempted the function by changing the criteria to >5 but did not achieve the mark as they omitted to include = (i.e. >=5). Some candidates displayed a 0 instead of a blank cell for players who played fewer than 5 matches. A few candidates did not replicate the formula to row 31 and some introduced gaps in the replication.

Question 6

Most candidates were able to print the spreadsheet showing the formulae and displaying gridlines and row and column headings. Some candidates did not ensure that the contents of all cells were fully visible, and some printouts were difficult to read by examiners even with the use of magnification devices.

Question 7

The question required candidates to perform two sorts to achieve the correct result. The first sort on A4:V31 in ascending order to place the blank entries at the bottom of column V and a second sort on cells A4:V25 in descending order. Some candidates did not attempt the sort, some candidates performed a single sort in either descending or ascending order. A small number were able to achieve full marks by displaying the players in the required order.

Question 8

Most candidates were able to produce a values printout without gridlines or row and column headings displayed. Some candidates displayed the gridlines and the row and column headings.

Question 9

Most candidates produced a screenshot of the contents of their folder correctly named. Some candidates did not display the dimensions of the image files. Some candidates cropped the screenshot, so the folder name was not displayed.

Question 10

Most candidates produced a stylesheet as specified in the question paper however some candidates included HTML or did not produce a separate stylesheet and included the styles within the web page head section. Few candidates placed the background elements using the body selector in their stylesheet often incorrectly giving it the selector name ‘background’. Many candidates used a single selector to define styles h1, h2, h3, p but some candidates included the word ‘and’ as in the question paper. Some candidates did not use a single selector thereby increasing the chance of making a mistake when repeating the contents of the styles. Some candidates added the text colour as yellow rather than using the hexadecimal code #ffff00 required by the question paper. A significant number of candidates omitted the speech marks around "Domino Regular" and some candidates did not use the correct capitalisation for the name of the font styles. Most candidates correctly centred the table within the browser window by setting margin-left and margin-right to auto. It was acceptable to use a single margin property to set all margins, i.e. margin: auto. Some candidates incorrectly centred the contents of the table rather than centring the table in the web browser. The CSS comment was not always set using /* */ and was sometimes seen at the end of the stylesheet

rather than the start. Some screen shots produced text so small it was impossible to read even using a magnification device.

Question 11

This question was answered well by most candidates who were able to place the required content in the specified cells and apply style h2 to the text.

Question 12

This question was answered well by most candidates.

Question 13

Most candidates were able to correctly attach the stylesheet to the web page. Most candidates provided a screenshot of the page displayed in the web browser with the address bar visible. A small number of candidates displayed the web page in the editing package. Some candidates cropped the screenshot, so the address bar was not visible. Most candidates provided a copy of the HTML source in their evidence file.