

INFORMATION AND COMMUNICATION TECHNOLOGY

Paper 0417/12
Written Paper

Key messages

To achieve high marks in the level of response question (last question) candidates must give more than a statement in their answer by expanding on the points made. Justification and discussion of the points is also essential.

The use of brand names rather than the generic names are still causing issues in the paper. 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'.

There is still a tendency to answer the question that the candidate thinks is being set rather than the one that is being set. In order to gain the marks, expansion is needed on the answers given rather than just statements.

General comments

All candidates appeared to have enough time to finish the paper.

Once again, although this is getting fewer, some candidates, who write on extra sheets and the blank pages at end of the question paper, are not noting that they have done this; as the papers are marked on computer screens, candidates must make it clear where they have written their answers if it is not to be found in the original answer space. Some candidates do not write on the first line of the answer space and then have to cram their writing at the bottom on the answer space.

Comments on specific questions

Question 1

- (a) The question was well answered but CPU and hardware were popular wrong answers. Some candidates confused applications and system.
- (b) The question was well answered.
- (c) The question was well answered. Incorrect answers tended to be scanner or hardware.
- (d) Bar code and CPU were popular incorrect answers. But apart from these, this question was fairly well answered but not as well answered as the other parts.

Question 2

Most candidates obtained full marks with very few recording wrong answers.

Question 3

- (a) Many candidates were able to gain at least a mark, usually for prosthetics. Drug creation and Tissue Engineering were also common answers. Some points did not gain credit, as they did not implying that the 3D printer created anything.

- (b) This was not as well answered as part (a) with many candidates unsure of holographic imagery. Most candidates gave vague answers about doctors helping patients see things or for the creation of security badges. References were made to X-rays.

Question 4

Most candidates gained at least two marks. Storage capacity produced the most frequent incorrect answers.

Question 5

- (a) Many candidates wrote cascading style sheet but few managed to achieve the second mark. The candidates that achieved more than one mark usually did it by mentioning the presentation layer. A number confused .css with .csv and gave answers about spreadsheets.
- (b) Many candidates wrote hypertext markup but few managed to gain the second mark. The candidates that achieved more than one mark usually did it by mentioning the content layer.

Question 6

- (a) Fairly well answered by most candidates although few gained full marks. Common errors were giving values of just above 1.5 and just below 2.5 as the extremes. 0 was often given as abnormal data. A surprising number of candidates who achieved four marks gave incorrect answers for Abnormal.
- (b) Some candidates are still using mathematical operators \leq rather than \leq . Most realised the need for a nested IF but failed to use comparison operators effectively. Some candidates had missing speech marks and missing IFs. A small number of candidates showed little understanding of what was required. Also, there were a lot of variations on $0 < C4 < 1.5$ in their formula.
- (c) Most candidates managed to get at least one mark. A significant number of candidates gave answers suggesting ways that errors could be corrected or gave methods of clearer labelling. The vast majority of candidates suggested validation rules, frequently with an example of a range check. Only one or two candidates suggested locking cells.
- (d) (i) The majority of candidates obtained this mark although there were a small number of incorrect answers, such as pie chart. A few candidates tried to name more than one chart type where only the first one written is marked.
- (ii) This was reasonably well answered with most candidates scoring at least two marks for their descriptions. Quite a few candidates described selecting a range of cells but did not mention the cell references for these.
- (e) Few candidates obtained four marks. More accurate readings and 24/7 were the most common answers with safety issues coming third. Answers could not be given credit when the candidate was writing 'accurate' rather than 'more accurate'.

Question 7

This question was generally well answered with most candidates gaining two marks. Although 'CPU means Computer Processing Unit' was probably the most common incorrect answer.

Question 8

- (a) Most candidates were able to attempt to answer this question. There were a lot of mark points available in this straightforward question and most candidates were able to gain at least half marks for this question. Some candidates found describing the changes quite challenging. A number of candidates missed the point of the question and wanted to make changes which were not relevant to usability or design, for example, to add extra fields such as gender. Some candidates were a little vague in their descriptions, in particular with regard to navigation buttons, changing font colour to contrasting colours and decreasing the white space with a better layout.

- (b) The majority of candidates obtained some marks but often the order was a little awry. Although a great many candidates used correct terms such as 'merge fields' and 'recipient list' the answers showed little understanding of the process involved. A few candidates wrote about producing a master document or filtering the recipients but little else. Some candidates mentioned, implicitly or explicitly, merge fields and the need for a source file. Too many proprietary names were used.

Question 9

This question was generally well answered though often there appeared to be little understanding of the actual process. Many confused 'cannot be read' with 'cannot be understood'. Most candidates managed to gain a mark for the scrambling of data or the use of a key. A small number of candidates explained that plain text would be changed to cypher text as an alternative to scrambling the data.

Question 10

- (a) This question was a compare and contrast question but many candidates failed to gain marks for the contrast, only the comparison. Whilst quite a few candidates clearly understood the difference between a moderated and unmoderated forum a few candidates had no idea what was meant by a forum therefore this question was not particularly well answered. Some candidates seemed confused and described the internet as a form of unmoderated forum. The majority of candidates knew that comments were checked before being posted on a moderated forum and gave examples of postings that wouldn't be allowed. Most candidates stated that you can post whatever you like on an unmoderated forum. Very few candidates gave any other answers. Quite a few candidates put their answers into a table which was not helpful to the examiners.
- (b) This question was generally well answered with many candidates gaining full marks. Incorrect answers, where they occurred, were equally dispersed among 'An online journal...', 'Club members...' and 'Interactive cricket club...'. The vast majority found no trouble with 'Transmission of messages...'.
- (c) Some candidates gained two or three marks. A significant number of candidates believed that the aspect ratio should be maintained. Those that gained one mark usually did so for selecting the image or rephrasing the question viz. 'Change size to 1.3 cm width'.
- (d) There was a poor understanding of copyright therefore the question was not well answered. Many assumed that it would prevent copying though clearly it cannot do that. Some stated that 'It prevents others from using the image' but very few added 'without permission'.

Question 11

Generally well answered with most candidates gaining at least two marks.

Question 12

- (a) Not very well answered with very few candidates getting more than two marks. A significant number of candidates answered the question assuming the SSD was external to the laptop. Answers tended to be a little generalised and vague. Some candidates assumed that SSD would be a memory stick. The most common correct answers were the need for an internet connection for cloud and a comparison of data transfer rates. The majority of candidates stated that the storage of a SSD was limited rather than fixed. A common answer was that the cloud can be used anywhere rather than on any device.
- (b) This question was not answered well. A large number of candidates compared email to text, phone or post. The majority of candidates believed that you had to rewrite the whole email for each individual if a group was not used. Marks that were gained tended to be for not having to remember email addresses and not missing someone out.

Question 13

This was a fairly straightforward question with some good answers. However, a number of candidates did not do very well. A large number of candidates gave answers for health or computer security and therefore obtained no marks. The candidates who did give safety concerns answered the question quite well, a few candidates lacked of precision in their answers, e.g. 'trailing wires', 'heavy objects falling', 'fire extinguisher'. It is still disappointing to see many candidates giving health issues instead of safety.

Question 14

This question is the level of response question. Very few candidates gained more than four marks although very few candidates failed to gain a mark. There were few candidates who gave a conclusion and most candidates failed to expand or justify the points sufficiently. As in recent series, many candidates forgot about the scenario and answered in general terms. Working 24/7, not needing to be paid, expensive to install and expensive to maintain were by far the most common answers. A significant number of candidates seemed to believe that if it were not for robots the containers would be manhandled.

INFORMATION AND COMMUNICATION TECHNOLOGY

Paper 0417/21
Practical Test A

Key messages

The paper consisted of several tasks. These were all approachable by candidates who had well developed practical skills. Many worked well over all the tasks. The theory questions gave ample scope for individual responses based on the candidates' own knowledge and judgement.

General comments

Work was generally well organised and presented with few prints so small as to be illegible. Very few candidates attempted to produce database reports using a spreadsheet package instead of a relational database, but the odd example was seen. Otherwise, appropriate software was chosen for the tasks. Some work was stapled; we ask that centre staff do not use this method.

Comments on specific tasks

Task 1 – Evidence Document

An evidence document was created and used by candidates to store screenshot evidence as required by the paper. This was usually well documented and presented.

Task 2 - Document

A document was set up, edited, and integrated with external materials.

Questions 1 and 2

In the evidence document was placed screenshot evidence of page size, orientation, and margins. Occasionally the paper size evidence was omitted and sometimes the margin measurements were in inches instead of centimetres. This could then lead on to a document with very large margins, giving difficulties in fitting things in.

Question 3

The document was to be saved with a new name in the format of the software being used. This involved both the document being saved with a new name and the file type being changed from the rich text format in which it was supplied. A significant number of candidates did not make these changes when saving their document.

Question 4

Header and footer items were usually well placed, but the file name with path was quite often not fully right aligned.

Questions 5 and 6

A number of paragraph styles had to be created to be applied, when specified, to the text of the document. These style names were to be prefixed with TU- in order to identify them to the paper. Evidence of the full definition of one paragraph style was required and a list of the new style names as displayed in a style manager or on the 'ribbon'. Without this evidence the application of the styles could not be accredited. Most candidates did, in fact, provide this evidence.

Questions 7 to 11

Text was added to the document and the relevant paragraph styles were applied. This was achieved accurately by most candidates, including the change of page layout which was generally applied at the specified place.

Question 12

A given image was placed in the document with text wrapped and resized to a specification. This was mostly achieved accurately, although occasionally placed in the wrong paragraph or not set with text wrapped.

Questions 13 to 15

The first of the theory questions was asked, requiring a demonstration of knowledge. The new text was to be entered as a new paragraph following on from the existing text. While the context was to suggest some rules for safe use of the internet within the university setting, a wide range of answers from the candidates' own knowledge and learning was seen. The text was to be set in the bullet style as previously created by the candidate.

Question 16

A table of text was to be placed in the document. The table was to fit within the column width and this was frequently not observed. If the table style was correctly applied the text should have been in a serif font and left aligned with no space after each line. It was only the first row that was to have two columns merged with the text in it centred. Sometimes all rows had the first two columns merged. The aligning of the text vertically within the row was least often demonstrated, although a good number of candidates did interpret the instruction as intended.

Question 17

With styles correctly defined and applied, the document should have had a consistency of layout. Sometimes widows or orphans were left and occasionally the list would be split across columns. Mostly the layout and overview of the document was consistent and well done.

Task 3 - Database

Questions 18 to 21

In general, the importing and setting up of the three tables and the relationships between them was well done. Many candidates recognised that a telephone number should be defined as text and not numeric.

Questions 22 and 23

Most candidates created a form into which they entered the new record.

Question 24

Most candidates produced this report. This was often carried out fully correctly, but:

- Some did not calculate the salary increase correctly by adding the fixed amount multiplied by the number of years' service.
- Some did not exclude the specified records.
- Sometimes the order of fields was incorrect; often with the number of years of service placed first.
- Occasionally the sort order was not applied.
- The average calculation was often performed accurately, but not presented as an integer, or in the correct place, especially if the years of service field was placed first.
- The report title was occasionally misspelt or had the final character truncated.

Question 25

This was generally successfully produced, although some candidates omitted it entirely. The main difficulty consisted in the concatenation of text and field contents to make a new telephone number.

Task 4 – Mail merge

Questions 26 and 27

The creation of the mail merge and selection of letters to print was usually well done. Errors included the exact date format and spacing between fields in the document.

Question 28

This was a further demonstration of theory in discussing some advantages and disadvantages of using mail merged letters to communicate with a large number of recipients. Many candidates seemed to confuse mail merge with email.

Task 5 - Presentation

Questions 29 to 33

The presentation was frequently accurately completed. The master slide setup allowed candidates to use their own judgement in designing items to include on this. Additional evidence for effects such as animations or transitions could be added to the evidence document. These needed to be evidence such as screenshots and not simply statements of claimed effects applied.

Task 6 – Printing the Evidence Document

The evidence document was presented and frequently displayed evidence clearly and fully legibly.

INFORMATION AND COMMUNICATION TECHNOLOGY

Paper 0417/31
Practical Test B

Key messages

Most candidates completed or attempted all elements of the paper. Some candidates appeared well prepared for this examination and the majority who completed the paper showed sound knowledge, skills and understanding. Some candidates found the spreadsheet section of the question paper challenging. There were fewer typographical errors in the website element of the paper than had been seen in the previous paper.

The website authoring section of the paper was the strongest element. Candidates found the tasks which required them to enter formulae challenging and some entered incomplete or incorrect formulae. Where candidates were required to explain the order in which mathematical operations were performed very few obtained full marks. Candidates who attempted the question to evaluate the image often only gained a single mark.

Most candidates formatted the spreadsheet to appear as shown in the question paper. Some candidates did not right align the text as shown and some did not use the correct style of font for the heading.

Where screenshot evidence is required, candidates must make sure that the screenshot is large enough to be read. Many candidates produced screenshots that were so small that the evidence was illegible. Where examiners are unable to read the evidence presented they cannot award candidates the marks.

Similarly, some candidates did not achieve full marks because of over cropping screenshots resulting in important elements not being visible. For example, in the screen print showing evidence of restricting data entry many candidates did not show evidence of the cell to which the rule had been applied.

Centres **should not** staple the work.

A small number of candidates did not print their name, centre number and candidate number on every document submitted for assessment. It is important that candidates do this, as without clear printed evidence of the author of the work, marks 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.

Some candidates submitted multiple printouts for some of the tasks without crossing through 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. It is important that candidates cross through the printouts they do not wish examiners to mark.

Comments on specific questions

Task 1 – Evidence Document

This task was completed well by most candidates.

Task 2 – Spreadsheet

Question 1

This question required candidates to explain the order in which mathematical operations are performed within a spreadsheet. Some candidates simply stated BODMAS or BIDMAS without providing an explanation. Where candidates had attempted an explanation often the exponents/indices were omitted.

Question 2

Most candidates completed this task. The size of the text in row one was increased but not all candidates used a scripting font. Almost all candidates formatted rows 2, 4, 11 and 18 as shown. Where this was not correct often row 4 had not been formatted. Often the unmerged cells in Column A were not right aligned and some candidates did not widen the column to display the data fully. Most candidates saved the file with the correct name and provided screen print evidence showing only the correct cells together with the row and column headings displayed. Some candidates included additional cells.

Question 3

This question was answered well by the majority of candidates. There were a small number of candidates who placed their candidate details in the header, and some who did not include all candidate details, i.e. name, centre number and candidate number. Some candidates confused left and right, placing their details on the left in the footer.

Question 4

Most candidates attempted this question. Most correctly entered a data validation rule to restrict the data entry. Often the screen print provided did not show evidence of the cell in which the rule had been applied. Some candidates copied the wording from the question paper when entering the source data, i.e. S or D or s or d.

Question 5

This question required candidates to restrict the data entry by entering the cell range of the list of soil codes contained in the soil type table. Most candidates were able to use the correct cell range for this. Some candidates incorrectly re-entered the soil code letters in the source box for the validation rule.

Question 6

Most candidates used a correct VLOOKUP for this formula. Some candidates incorrectly included the column title in the range of cells for the table array. A small number of candidates used an alternative nested IF formula to obtain the correct results.

Question 7

Most candidates used a correct VLOOKUP for this formula. Some candidates incorrectly included the column title in the range of cells for the table array. A small number of candidates used an alternative nested IF formula to obtain the correct results.

Question 8

For this formula most candidates included the correct cell references in the formula but did not convert the centimetre measurement to metres and used –10 instead of –0.1.

Question 9

Most candidates used the correct cell references and formula to calculate the volume of concrete needed. A small number of candidates used the correct formula but did not reference the correct cells.

Question 10

Most candidates used the correct formula and cell reference.

Question 11

Most candidates used the correct formula and cell references to look up the Brick name from a range in an external spreadsheet. Some candidates used an incorrect cell reference, looking up the code for the soil type in the external file. Some candidates included the column titles in the cell references for the table array.

Question 12

This question required candidates to display 'Yes' if the wall required piers and 'No' if no piers were required. Very few candidates used an AND function within the IF to test if the three arguments were true. Many candidates obtained the answer by using an alternative nested IF to check if the arguments were true.

Question 13

Candidates found this question to be problematic with few entering formula that would add a pier at each end of the wall. Many candidates were able to identify the correct cell (B7) to divide the length of the wall by 1.2 but did not apply rounding to the result as specified in the introduction to the spreadsheet task. A large number of candidates did not use formula to check if piers were needed (B20 = 'Yes').

Question 14

This question required candidates to enter a formula to calculate the number of bricks per course. Most candidates identified the correct cell reference to divide the length of the wall by the specified amount but did not include a function to round up the bricks as instructed in the introduction to the spreadsheet task.

Question 15

This question required candidates to enter a formula to calculate the number of courses. Most candidates identified the correct cell reference to divide the height of the wall by the specified amount.

Question 16

This question proved to be the most difficult for candidates with very few successfully adding an extra 10 per cent to the total number of bricks needed. There were many variations in the formula used by those candidates who attempted this question. Some candidates attempted to add 10 per cent to each part, some multiplied each component by 1.1 often missing one. Some candidates also added the bricks required for the piers to a double skin wall. Some candidates created a very long formula by testing if the wall was a single skin wall (B5 = 's') followed by the calculations and then repeating the same calculations after testing for if piers are required (B20 = 'Yes').

Question 17

This question required candidates to enter a formula to calculate the number of packs of bricks needed. Most candidates entered the correct formula but did not include a function to round up the number of packs.

Question 18

Almost all candidates who attempted this question completed it successfully. A few candidates included the column headings in the cell range for the table array. Some candidates erroneously multiplied the number of bricks, rather than the number of packs of bricks, by the cost.

Question 19

Most candidates completed this question successfully. A small number of candidates formatted the currency to dollars (\$) or Euros (€) rather than pounds sterling (£).

Question 20

Most candidates were able to complete this task successfully printing the correct cell range in landscape format. Some candidates did not include the row and column headings on the printout. A small number of candidates did not fully display the contents of all the cells.

Question 21

Most candidates completed this question successfully. Where candidates were not successful this was usually because values had been displayed as centimetres and not as metres or they had not included the data to indicate the thickness of the wall. Most candidates printed the correct cell range, on a single page with all cell contents fully visible.

Task 3 – Web Page

The majority of candidates downloaded the required images and stored them as instructed.

Question 22

Most candidates created a table structure as required, with the correct dimensions. Some candidates created a web page without adding the required cell dimensions. Many candidates did not include evidence in the markup or the stylesheet to show they had set the table borders not to be displayed on the final web page. A number of candidates set the table width to 100 per cent and not 900 pixels as specified.

Question 23

Most candidates who attempted this question completed it successfully inserting the correct image in the top cell.

Question 24

Almost all candidates who attempted this question completed it successfully. A small number of candidates incorrectly placed the logo image in the cell.

Question 25

In this question candidates were required to evaluate the image placed in **Question 24** and to amend the markup to improve the image. Many candidates referred to the narrowness of the image in relation to the cell size and the poor contrast between the text and the background of the image which gained two marks. Very few candidates gained more than two marks for this question. Many candidates described how they used image editing software to correct the size of the image which was not what was required.

Question 26

All candidates who attempted the web page task attempted this question. Some candidates were not 100 per cent accurate in the data entry particularly relating to the use of initial capitals. Candidates should proofread and carefully check their data entry. Most candidates set the text in style h1.

Question 27

Candidates who attempted this question often created an anchor, but it was rarely seen in the correct position at the top of the web page above the table. Some candidates did not follow the capitalisation for the name of the anchor as given in the question paper whilst other candidates were not able to create an anchor using the correct format. A few candidates did not include the anchor but did include the hyperlink to the anchor around the correct text so were able to gain a mark for creating the hyperlink. Some candidates only included the word 'Return' in the hyperlink.

Question 28

Most candidates successfully completed this question.

Question 29

Most candidates saved the file in the same folder as BBlocks.css and correctly attached the stylesheet. A few candidates incorrectly saved the file in a different folder and included a file path when attaching the stylesheet.

Most candidates who attempted the web page task correctly provided a screenshot of the web page being displayed in a browser. A small number of candidates produced a screenshot of the web page being displayed in the preview facility of an HTML editor.

Some candidates did not provide a copy of the HTML source in their Evidence Document but provided a link to the location of the HTML. In such cases, no marks could be awarded for attaching the stylesheet to the web page, the anchor, the table sizes or the hyperlink. Examiners must be able to see the contents of the HTML source to be able to award marks.

Most candidates included a copy of the stylesheet in the evidence document.

Most candidates provided a printed copy of the Evidence Document.