

INFORMATION AND COMMUNICATION TECHNOLOGY

**Paper 0417/02
Practical Test A**

Key messages

Text to be entered by the candidate as part of a task is displayed in bold on the examination paper. To achieve the accurate data entry marks this text must be keyed exactly as shown, including punctuation and capitalisation. Candidates are advised to check and recheck this data entry as common errors on this paper included incorrect capitalisation, incorrect or missing characters, omission of spaces, truncated headings and additional punctuation.

Candidates are required to produce screenshots to evidence the ICT skills that cannot be assessed through the printed product alone. Candidates should check each printed screenshot to ensure it is clear and large enough to be read. Where Examiners are unable to read the materials presented, they cannot award the marks. Similarly, some candidates did not achieve marks as a result of presenting screenshots with important elements cropped.

A small number of candidates did not print their name, centre number and candidate number on some of the documents 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 annotate their printouts by hand with their name as there is no real evidence that they are the originators of the work.

Candidates should be able to distinguish between the typeface categories of serif and sans-serif font types. These are categories of font type with specific attributes and not the actual names of font styles. Candidates must be able to select an appropriate font style for the font type specified. Some centres have reported on the Supervisor's Report Folder that there is no font called 'serif' installed on the computers so students used Times New Roman instead. The font style names 'serif' and 'sans-serif' are unlikely to appear as an installed font.

Candidates will be required to create and apply paragraph styles to ensure consistency of presentation. When selecting a font for a paragraph style this should be a font that contains no other formatting. Additional formatting that has not been specified in the House style specification will be penalised so, for example, the font style *Algerian* is a serif font style that displays all capital letters and this additional formatting would be penalised unless all capital letters was specifically requested on the House style specification.

A number of candidates did not print all of the required tasks, even though they had indicated on the question paper that they had completed them. Candidates should be encouraged to print evidence as it is completed rather than waiting until the end of the examination time. They should print all pages of a document or report and not just the first page.

It is essential that candidates print their Evidence Document towards the end of the examination time, regardless of whether they have finished the examination. The document will contain supporting evidence which can substantially improve the candidate's mark and they should be drilled to print this before the examination ends.

General comments

Most candidates appeared well prepared for this examination. The paper gave a good spread of marks and candidate errors were spread evenly over the sections of the paper. Most candidates completed or attempted all elements of the paper and the majority who submitted work showed sound knowledge, skills and understanding. It was apparent that candidates are now more familiar and confident with the skills assessed in the new syllabus. The mail merge task was particularly well done with many candidates achieving full marks for this section.

In this session too many candidates printed evidence that was too small to read even using magnification devices. Candidates MUST ensure that all screenshots can be easily read with the naked eye.

Documents that extend to more than one page but have identification details on one page only, such as a database report with name at top or bottom, will be treated as the same document and the second page marked without identification details providing the layout is consistent and it is obviously a continuation of the same report/document.

Candidates should submit all printouts and cross through any draft versions which are not to be marked. If multiple printouts are submitted without draft versions being crossed through, only the first occurrence of each page will be marked.

Comments on specific questions

Task 1 – Evidence Document 1

Most candidates opened the correct document and saved it in their work area. A small number did not include their identification details in the header or footer and, without clear printed evidence of the author of the work, marks could not be awarded. Occasionally the screenshots were too small or faint to be read. A small number did not present the evidence document for marking.

Task 2 – Document

Question 1

Most candidates recalled the correct file and saved this with the specified filename in the format of the word processing software being used. Amendments to the paper size, orientation and margin settings were not tested in this paper. The file name occasionally contained typographical errors, or did not follow the capitalisation shown on the exam paper. Some candidates resaved the file in RTF format rather than the format of the software they are using. Screenshot evidence of the save was often inconclusive as it showed the save process rather than capturing the outcome after the file had been saved. A screenshot of the folder contents after saving with the file types visible provides the evidence required.

Question 2

Headers and footers were mostly well done. A few candidates failed to align these with the page margins or the file path detail wrapped to a second line which did not align to the right margin. Automated page numbers were not always used with the number 1 appearing on all pages. A few candidates did not remove superfluous text or placeholders in the header and/or footer area.

Question 3

The creation and application of styles are now carried out well by many candidates. The styles must be correctly named with the correct attributes applied to each according to the House style specification. Additional formatting which was not requested in the House style specification was penalised. Candidates who simply format the relevant text rather than creating styles did not gain these marks. Common errors in creating the styles continue to be errors in the style names including capitalisation not as given on the exam paper, serif or sans-serif font styles set incorrectly and incorrect spacing applied before and/or after the style. Screenshot evidence of the TC-subhead style was used to test the attributes set for this style. Care should be taken to ensure each new style created is based on the default or 'normal' style to avoid the new style inheriting additional formatting of the base style that has not been requested.

Question 4

The title text was provided in the recall document and the application of the title style to this text was generally well done. A few candidates made changes to this text and some had set the style to a sans-serif rather than a serif font style. Additional enhancements which were not requested in the House style specification such as italic, underline or a line across the width of the page were penalised.

Question 5 to 6

Most candidates entered the subtitle text accurately although this occasionally contained capitalisation and/or spelling errors, and a few candidates incorrectly inserted a space before the colon. The candidate's name follows this text but is not marked for accuracy. The subtitle style was generally applied correctly although the font style was occasionally set to a sans-serif rather than a serif font style. Additional formatting inherited from the title style and not listed in the House style specification such as bold enhancement and spacing applied after the subtitle were penalised.

Question 7

Most attempted to apply the body style to the rest of the text in the document. Some inconsistencies in the formatting of the body style were found with a mixture of serif and sans-serif font styles used, a variation in text sizes for one or more paragraphs, full justification not applied to all the body text and inconsistent spacing after body text paragraphs. Another common error was no spacing above the database extract and the itinerary table suggesting that a 12 point space after each paragraph had not been set as part of the body style. Candidates should check carefully that the style has been fully applied to all the text.

Question 8

Most candidates changed the page layout to two columns but the column break was occasionally positioned below rather than above the subheading. A few candidates displayed the entire document in two columns. The space between the columns was generally set correctly.

Question 9

Candidates were required to apply their TC-subhead style to all eight subheadings and this was generally performed well. Some candidates had formatting errors in their style creation but then applied this style correctly to all the subheadings. If the style of all subheadings matched the TC-subhead style definition evidenced in the Evidence Document this style application mark was awarded.

Question 10 to 14

Most candidates correctly copied the table from the CSV file into the document. This was occasionally inserted in the wrong position or did not fit within the column width. Some made changes to this data with the most common being changes to the times such as 08:00 to 8:00. Most sorted the data accurately but a few sorted only the *DAY* column therefore losing the integrity of the data. Data in the *LOCATION* column was often wrapped. The table style was not always applied correctly or did not match the House style specification as not all data within the table was left aligned and often there was space left after each row. Some candidates experienced difficulty inserting a new row as the first row of the table and the new row was occasionally inserted below the first row. The table title was entered but this often contained typographical errors, the most common of which was '*Caribbean*' entered as '*Carribbean*'. The formatting of first row was generally done well with bold and italic enhancement applied to the title, the row merged with the heading centred over the four columns. The grey background shading was occasionally too dark so the data entry of the title was not legible and could not be assessed. Some candidates applied the shading to the text rather than the paragraph and it therefore did not fill box. Few candidates applied a 12 point space below the table. Gridlines were usually displayed.

Question 15 to 17

Most candidates imported the correct image, cropped the dolphins from the top and positioned this below the correct subheading. Some candidates unnecessarily inserted extra space below the subheading to accommodate the imported image and this resulted in inconsistent spacing after this subheading. Resizing the image was well done and the aspect ratio maintained. Most applied text wrapping to the image but a few candidates failed to align the image to the right of the column and/or to the top of the text in the paragraph. Most candidates achieved full marks for manipulating the image.

Question 18

Indenting the paragraph proved problematical for some candidates. Several did not attempt this question and those that did often included the final paragraph as well, or failed to indent from both the left and right hand margins.

Task 3 – Database

Question 19

Almost all candidates correctly imported the CSV file and used the correct data types although a few changed the capitalisation on the imported field headings. Despite the instruction not to create a primary key several candidates incorrectly included an ID field and set this as a primary key. The formatting of the *Sail_Date* field was not changed from the default format to display as dd-mmm-yy. Importing the data for the date field was not always accurate with the dates being incorrectly displayed in American date format which was penalised as one error. The *Adult_Only* field was occasionally set as a text field rather than Boolean displaying in the form as True/False or a Checkbox rather than Yes/No.

Question 20

The second table was imported without difficulty. The primary key was correctly set and the tables successfully linked through a relationship. There was no instruction to enforce referential integrity and this is not tested at this level.

Question 21

The creation of a data entry form using all the fields from the cruises table was well done by most. The drop down list to select the *Liner_Code* data proved more challenging. Some did not use the *Liner_Code* field but inserted a new, unattributed field without providing evidence that entries to this field would be stored in the original field. The screenshot evidence did not always capture the drop down list of some of the liner codes. Some candidates did not know how to create a drop down selection list and provided irrelevant screenshot evidence of general text filters or the automatic filtering facility available within a table or query.

Question 22

Most candidates used their data entry form to enter the new record and provided screenshot evidence of this. The new record sometimes contained data entry errors. Candidates were penalised if they overwrote the first record in the database (*Aidaaura*) instead of entering this data as a new record in the database.

Question 23

The first report was completed well by a number of candidates. Most created a new calculated field with the correct calculation. The field heading *Total_Cost* occasionally contained capitalisation or data entry errors. The search was based on three criterion with the most common error being with the wildcard search which selected records ending with '*Caribbean*' rather than containing '*Caribbean*'. The *Duration* search was occasionally set to *greater than 8* rather than *greater than or equal to 8*. The correct fields were displayed but these were often in the wrong order as without manual intervention the software will default to placing the sort fields first in the report. This can be avoided by setting the sort order in the report after creating the structure of the report. Where *Duration* was the first field there was insufficient space to position the '*Average nights*' label to the left of the calculation. This label often contained capitalisation errors and occasionally included additional punctuation. Data in the *Vessel_Name* field was often truncated. The sort using multiple criteria was often completed on the *Duration* field only. The report title contained several common errors particularly in the word '*Caribbean*', '*Voyages*' was often presented as '*Voyage*' and '*Festive*' was frequently keyed as '*Festival*' or '*Festivals*'. The report usually fitted to one page wide and was presented with landscape orientation. The average calculation was done well by most but this was often not positioned under the *Duration* column or displayed in integer. A few candidates incorrectly used AVERAGE instead of AVG to produce the calculation.

Question 24

The database extract was not as well done. The search for records with a destination of the *Trans-Panama Canal* was usually correct but searching between the dates specified produced errors. The correct fields were displayed but these were often in the wrong order. The single criterion sort was usually well done.

Question 25

Very few candidates gained marks for this question. They were unable to give two clear advantages in their answer with the majority rewording the first answer to try and create a second. Candidates attempted to describe the differences between a relational and flat file database rather than identifying two advantages of using relational tables. Responses were too vague with statements such as 'quicker' and 'easier' without providing detail of what was quicker or easier.

Question 26

Responses were mostly descriptive of social networking in general, and at best made reference to 'the company' and 'their business'. Very few candidates attempted to contextualise their answers to how Tawara Cruises could use social networking as a means of communication to promote their business.

Task 4 – Document 2

Question 27

The number of candidates who managed to import the database extract into the document was relatively low. Where this was achieved there were often changes to the data such as the vessel names. Candidates were required to manipulate the data so it displayed on one line but many failed to do this accepting the default presentation. Other errors included a title on the extract, incorrect field order, additional fields displayed and the TC-table style not applied to the data. Rarely was a 12 point space applied below the table. In a few cases the extract was printed as a separate document or database report and some credit could be given for the searching and sorting where correct.

Question 28

The overall layout and presentation of the document was generally good. Care should be taken to ensure there is consistent spacing between paragraphs, particularly where text, images, tables or extracts have been inserted. Occasionally the columns were not aligned at the top of the page and there were several instances of subheadings left as widows in this document. Candidates should make appropriate use of the spell checker and proofing tools available and understand that automated suggestions given by spell check software may not always be appropriate. Changes to the vessel names in the database extract such as 'Seabourn' changed to 'Sea bourn' were not appropriate.

Question 29

Few candidates performed well in this evaluation question. Better responses made reference to the costs of both postage and printing, the time delay in receipt of the newsletter, and the lack of interaction in a printed letter but few went beyond this. Most responses were too vague with answers stating that it 'cost more' without specifying what cost more. Several candidates incorrectly related their answers to how Tawara Cruises might produce copies of the newsletter using Mail Merge. Many did not attempt this question.

Task 5 – Mail Merge

Question 30

On the whole candidates performed well in this task. Most used a field to display today's date although some incorrectly used the *CreateDate*, *SaveDate* or *PrintDate* field codes. The formatting of the date field was not assessed on this paper. Most correctly replaced the text and chevrons in the master document with the correct fields. The most common errors continue to be failure to retain space between the fields, deleting existing punctuation and chevrons left in the text. Most candidates replaced the required text with their name but some did not enter their details in the footer, or incorrectly placed these in the header instead.

Question 31 to 32

The merge selection was based on two search criterion and was completed well by most candidates. Candidates who used a filter to make the selection were able to fully evidence their selection method. Where the data source file was presented as a list with ticks next to the selected records the wrong selection was often made and the data was often truncated with the selection evidence incomplete. The most common error was using the selection criteria '*greater than or equal to*' which incorporated an incorrect record in the selection. A few candidates attempted to use '*find*' or '*find in field*' to select recipients at the printing stage which did not merge the letters.

Task 6 – Presentation

Question 33

Most candidates successfully imported the 6 slides and presented each as a title and bulleted list.

Question 34

Most candidates entered the master slide items in the correct position on the master slide so they displayed consistently on all slides in the presentation. A few candidates did not reposition the default placeholders on the master slide so the slide numbers appeared in the wrong position. Marks were lost where one or more of the master items moved or appeared in a different position on the second and subsequent slides. A few candidates did not resize the logo and the descenders of some letters in the slide titles overlapped the drawn horizontal line. This drawn line was often not a thick 3 to 4 point line and occasionally it did not fill the width of the slide. The text *Tawara Cruises* occasionally contained capitalisation and/or spelling errors and several candidates did not format this text as italic.

Question 35 to 37

Candidates produced a chart but this was not always a pie chart and most incorrectly included the total in their data selection. The chart title was usually attempted although this often contained capitalisation and/or data entry errors with '*Passengers*' often entered as '*Passangers*' and '*By*' as '*by*'. The legend was awarded if correct on the candidate's data so if a total was plotted a corresponding legend label was required. The sectors should display percentage values only with additional items penalised.

Question 38

The pie chart was usually inserted on the correct slide but was frequently positioned below or to the right of the bullets rather than to the left of the bullet points.

Question 39

Most candidates provided evidence of looping the slide show continuously on screen. Some confused looping a presentation with slide transitions providing evidence of transitions and/or animation evidence instead.

Question 40

A significant number of candidates printed all slides as full-page slides instead of as handouts with 6 slides to the page. Most printed the 6 slides individually and then reprinted slide 5 for evidence of the chart.

Task 7 – Printing the Evidence Document

Question 41

Some candidates did not submit a printout of the Evidence Document. It is essential that candidates print their Evidence Document towards the end of the examination time, regardless of whether they have finished the examination.

INFORMATION AND COMMUNICATION TECHNOLOGY

**Paper 0417/03
Practical Test B**

Key messages

For this examination, the main issues to note are as follows:

- Candidates need to be more familiar with applying their theoretical knowledge to practical tasks.
- Candidates must ensure that the work they present to examiners is in a format that can be easily read without the use of magnification devices.
- Candidates need to ensure that their name, centre number and candidate number are present on all documents submitted
- Candidates must ensure that they do not excessively crop their screen shots.
- Candidates must ensure that they present all the required evidence for examiners, including formulae printouts of their spreadsheets and html markup.
- Candidates need to demonstrate a better understanding of the concepts of testing and test planning.

General comments

A small number of candidates failed to print their name, centre number and candidate number on some documents 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 annotate their printouts by hand.

Some candidates omitted one or more of the pages from the required printouts. A small number of candidates submitted multiple printouts for some of the tasks and failed to cross out those printouts that were draft copies. Where multiple printouts are submitted, Examiners will only mark the first occurrence of each page. Candidates must be aware of the dangers of cutting and pasting cropped versions of evidence in order to save space on a sheet. It often looks impressive but this invariably leads to the loss of crucial data which could attain marks.

In this session too many candidates printed work that was too small to read even using magnification devices. Candidates **MUST** ensure that all text can be easily read with the naked eye.

Comments on specific questions

Question 1

Most candidates created the document and entered the header as specified. Fewer entered the text correctly in the footer and a number of candidates omitted either the automated time or automated date. A few candidates placed the date and time in the header.

Question 2

This question was attempted with mixed success. Although most candidates merged the cells, a number of candidate did not centre align both cells. Not all candidates set the font as sans-serif and several did not increase the font size to 16 points high.

Question 3

Most candidates completed this question as specified but some did not set this as a 20 point sans-serif font. In some cases where monochrome printers were used dark background shading made the text illegible.

Question 4

Most candidates successfully looked up the name of the cruise destination although a number did not set the false parameter. As the data was not sorted into order this omission led to errors in the returned lookup values, similar errors were seen from candidates who opted to use LOOKUP functions rather than VLOOKUP.

Question 5

Few candidates entered correct formulae into the 'Average number of visitors' column, many used the AVERAGE function which was not required. A significant number incorrectly used the ROUND function rather than ROUNDDOWN or INT.

Question 6

This question caused a number of issues too many candidates. Not all candidates identified the correct cells to be referenced and those who did, frequently introduced errors into their formulae.

Question 7

Most candidates replicated their formulae for all destinations.

Question 8

Many candidates formatted the cells appropriately, although some did not appear to reduce the number of decimal places visible for the average number of visitors or for the percentage change columns. Few candidates enhanced the column headings in row 3 to make them more visible.

Question 9

Many candidates completed this step as instructed, but some did not ensure that the contents of all cells were fully visible. Row and column headings were often omitted.

Question 10

Most candidates completed this step as instructed, but some did not ensure that the contents of all cells were fully visible and fit onto a single portrait page.

Question 11

Many candidates did not change all 6 data items for this question and some incorrectly inserted the new data at the end of the spreadsheet. This question required the candidates to look at the data given and adapt the spreadsheet appropriately. The vast majority did print the modelled spreadsheet as specified, although a few candidates did not use a single portrait page.

Question 12

Most candidates who provided the second formulae printout had successfully used a SUM function for this question with the correct range.

Question 13

Most candidates who provided the second formulae printout had successfully used an AVERAGE function for this question although not all used the correct range of cells.

Question 14

Most candidates who provided the second formulae printout had successfully used the MAX function for this question although not all used the correct range of cells.

Question 15

Many candidates used a simple = operator followed by the cell reference in cell B4 to complete this question successfully, replicating this as instructed, but fewer candidates were successful in entering a function to return the name of the most popular destination.

Question 16

Few candidates put sufficient detail into the labels entered. The details could have been extracted from the question stems in questions 12 to 15 inclusive.

Question 17

Most candidates produced printouts showing all the relevant details for the examiner but not all candidates printed only the specified ranges of cells or included the row and column headings.

Question 18

Almost all candidates completed this step as instructed.

Question 19

The majority of candidates who submitted printouts for this question successfully extracted the destinations where the data had been collected over a 3-month period. Of these, most candidates sorted this data as expected although some did not maintain the integrity of the data within the sort.

Question 20

Few candidates gained both marks for this question. Many identified elements of testing but not factors for designing a test plan.

Question 21

This question was not well answered by many candidates; few identified the testing types as functional testing and user testing although a number of candidates described functional testing. Very few candidate answers included any mention of user testing.

Question 22

Although most candidates created the folder and placed the files within it as specified in the question paper, few included the image dimensions in the screen shot.

Question 23

A large number of candidates placed the correct image in the cell. The majority of candidates applied appropriate alternate text to the image that they had placed.

Question 24

Despite the fact that many candidates placed the correct image in the cell in step 23, few gave sound reasoning for their choice in their evaluation.

Question 25

The text was frequently replaced correctly by the candidates but few placed a non-breaking space between the colon and their candidate details.

Question 26

Few candidates added the text as an html title for the page, often placing it as text at the top of the page.

Question 27

Few candidates placed the bookmark in the body section of the html before the table. Many placed it in the head section or in a different place within the body text. There were mixed results with the hyperlinks, many candidates introduced typographical errors into the paths for the links.

Question 28

Most candidates attached the stylesheet to the web page, although some candidates placed either inline styles or redefined the styles to overwrite those imported from the attached stylesheet. A number of candidates included an additional stylesheet after the named stylesheet with no evidence of the styles included in the stylesheet. Some candidates erroneously used an absolute address to the file, while a few others placed the link outside the <head> section.

Question 29

Not all candidates added their name and candidate details as a comment to the top of their stylesheet. There were a variety of responses to this question. The most common errors were the inclusion of html markup in place of the required css or errors in the style selectors; for example: the use of 'paragraph style' in place of the selector 'p'. Most candidates produced screen shots of the css, although in many cases the screen shots were so small that examiners could not read the markup and therefore not award marks. A number of candidates printed their webpage in a web authoring package rather than a web browser. Many candidates did insert the html source but again this was too small for examiners to read, or they included screen shots of only part of the webpage. A number of candidates submitted a file name and path for the web page, or a hyperlink to the html on their local server, instead of the text of the html source and therefore did not attain any marks for the html.

Question 30

Almost all candidates produced their Evidence Document as required.

INFORMATION AND COMMUNICATION TECHNOLOGY

Paper 0417/11
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 not permitted in candidate answers. 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 from some candidates to answer the question that the candidate thinks is being asked rather than the one that is actually being asked. Candidates must read the question carefully to ensure that their answer is appropriate.

General comments

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

Some candidates gave extra answers that were not asked for. Some candidates, who write on extra sheets and the blank pages of the answer booklet, 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

Candidates on the whole answered this question well, although as noted above some candidates are using brand names and therefore their answers are not creditworthy

Question 2

This question was well answered; however some candidates mixed up the technical terms.

Question 3

This question was reasonably well answered but many candidates thought the chip on the credit card was read by PIN reader.

Question 5

Question **5(a)** was answered better than **5(b)**. Comparisons need to be clear in order to achieve the mark; therefore, one-word answers are not acceptable.

- (a) Some candidates could not understand the differences between each of the drives. Many candidates failed to answer the question as a comparison therefore they did not achieve marks.
- (b) Many candidates answered this question without making a comparison. Some however made reference but then got the answer wrong, i.e. when answering that laptops had problems with battery life there was an implication that desktops were powered by batteries rather than direct mains power.

Question 6

Some candidates mixed up an intranet with a LAN. Apart from this, the question was well answered.

Question 7

Candidates answered part **(a)** of the question better than part **(b)** but both elements were not well answered.

- (a) This related to the advantages and disadvantages to the hospital using the robots rather than using humans. Similar questions had been set in the past with different scenarios therefore it was expected that the answers provided by candidates would be better than those seen. One of the vague answers related to the paying of staff, with many candidates writing that the hospital would not need to pay staff rather than stating that the overall cost of wages would be reduced. Some candidates gave answers relating to robots giving the medicines to patients. It is important that the question asked is answered by candidates, rather than candidates providing answers to a question they would like to be asked.
- (b) As with many other comparison questions candidates tend not to give comparisons, answers such as can be read at distance, is not a comparison but can be read at a greater distance than bar codes is. The use of one-word comparisons was still evident but less so than in previous years. Some candidates answered with reference to retail rather than the scenario and therefore did not achieve marks.

Question 8

This question was fairly well answered with candidates being able to explain the effect it could have on a computer. Only a few candidates went to sufficient detail explaining hacking to achieve both marks.

Question 9

Most candidates gained a two of marks on this question although some related their answers to what a virus was rather than to why the technician would think there was a virus. The question produced a full range of marks.

Question 10

This question was fairly well answered with many students answering **10(a)** better than either **10(b)** or **10(c)**.

- (a) Some candidates mixed part **(a)** and **(b)** answering part **(b)** instead of part **(a)**. However, many candidates were able to give three rules, although some candidates split numbers, letters, capital letters and symbols as different rules and so were only able to achieve one mark point. Some students gave answers relating to biometrics which did not answer the question.
- (b) In this question candidates struggled to give reasons as to why the password was chosen, some answering by copying the rules they had written for part **(a)**. Most candidates gained a mark for looking at the password and stating it had a mixture of upper and lower-case characters etc.
- (c) Many candidates gave the correct answer, some candidates answered this question by stating validation was needed, others explained how it was carried out.

Question 11

This question answered quite well, however candidates struggled on part **(a)** and **(b)(ii)**.

- (a)** Candidates did not do well on this part missing out brackets, speech marks and using mathematical operators rather than ICT ones, i.e. \geq rather than $>=$. The answer sometimes had a mixture of operators rather than using the AND function. Some candidates crossed out their initial answer and squashed a replacement answer in to the remaining space, which made it harder to determine their answer.
- (b)(i)** Many candidates were able to give the first two pieces of test data; the second two pieces were less well answered. Showing that some candidates do not understand what is meant by extreme data. Some candidates gave ranges of numbers when the question asked for an item of test data.
- (ii)** This was not as well answered as part **(i)** with many candidates not understanding why testing was needed. Some candidates wrote answers about testing the data rather than testing the system.
- (c)** Candidates are answering this type of question much better than in the past as they get used to the way to set out the answer. Some candidates appeared not to read the question and attempted to answer it based on using test data.

Question 12

- (a)** This was the first time this topic has been tested in the theory examination and candidates found this question challenging.
- (b)** This was a topic that had been covered previously; candidates struggled to achieve the higher marks on it. Most marks were awarded for explaining the acronyms. However, a large number of candidates still think that HTTPS means Hypertext Transfer Protocols and that URL stands for Universal Resource Locator.

Question 13

This was well answered with many candidates achieving at least three marks. However, there are still candidates who gave vague answers, for example a comfortable chair rather than an ergonomic chair.

Question 14

Overall this question was well answered although part **(d)** was the element where candidates had the most challenge.

- (a)** Many candidates achieved the mark. The biggest proportion of candidates that did not achieve the mark was down to candidates missing out the underscore in the field name. It is very important that the field name is written down exactly as shown in the table.
- (b)** As with the previous answer the question was well answered but not as well as part **(a)**; again some candidates missed the underscore. Some candidates confused primary key and foreign key and therefore did not achieve the marks.
- (c)** This part was not as well answered as expected with many candidates writing one to one.
- (d)** This part was not well answered with candidates struggling to find the advantages of using a relational database. There were also a large number of vague answers in this question.
- (e)** Most candidates achieved good marks for this question.

Question 15

This question was not well answered with many candidates failing to expand on their answers. Candidates talked about biased and unbiased data and getting mixed up with why we should or shouldn't use the internet rather than referring to the question which was about policing the internet. Many candidates wrote about their freedom of speech being restricted but when talking about information not being available they were not able to explain a situation where this might be the case.

Question 16

Candidates achieved better marks in this question than has been seen in previous sessions. Some candidates did manage to give some good points and showed understanding of the topic. Others however stuck to one topic at the expense of others and therefore gained less marks. The main concern is that candidates do not expand on their answers or only give one side of the argument. If candidates expanded on their answers and gave both sides of the argument, then higher marks could be achieved.

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 not permitted in candidate answers. 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 from some candidates to answer the question that the candidate thinks is being asked rather than the one that is actually being asked. Candidates must read the question carefully to ensure that their answer is appropriate.

General comments

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

Some candidates gave extra answers that were not asked for. Some candidates, who write on extra sheets and the blank pages of the answer booklet, 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 few candidates are either missing ticks or putting too many ticks on a single line as part of their answer. Apart from this the question was well answered.

Question 2

Most elements were answered correctly.

Question 3

- (a) Generally answered well. Candidates tended to correctly identify the sound sensor but for some candidates the other two sensors showed areas of misunderstanding in their learning.

- (b) This question was answered better than part (a) with few wrong answers. Many candidates gained the marks for the digital camera photograph rather than the printed photograph. Some candidates write USB without expanding the point such as whether they are referring to cable or device and therefore are not achieving a mark.

Question 4

- (a) This was a new question for the examination but on the whole, was well answered.
- (b) This part produced less correct answers overall than the first part, even though candidates had written the folders in part (a).

Question 5

- (a) This part was not well answered with candidates not understanding what the role of a web browser is. Some candidates mixed up web browser with a search engine whilst others answered the question as though they were creating a website.
- (b) This part of the question was also not well answered. Intranets and the Internet as topics had been set previously.

Question 6

Many candidates achieved at least four marks. Some candidates mixed up the 'safety issue' with the 'minimise the risk'.

Question 7

This question was set in a context that candidates could relate to. Most good answers related to personal data. However, some candidates found this question a challenge. A few candidates repeated the question writing down that fictional names could be used. Some candidates wrote about security issues being solved by software but did not expand upon this into using up to date software.

Question 8

This was the first time this topic has been tested in the theory examination and candidates found this question challenging. Some candidates looked at the two pictures and made reasoned answers. Other candidates linked the answer to stylesheets and even though they realised that there were common elements did not state not always give sufficient detail to achieve the marks.

Question 9

- (a) (i) This was well answered with most candidates achieving at least one mark.
- (ii) This was less well answered with many candidates stating that a wiki allowed anyone to edit; this only applies if it is setup to allow this to happen, some wikis use accounts to monitor the editing of the pages and some wikis limit these types of accounts to certain individuals.
- (iii) This part was well answered with many candidates able to expand the acronym but rarely then giving sufficiently detailed answers to achieve the second mark.
- (b) (i) Most candidates attempted this question. A few candidates were either missing ticks or putting too many ticks on a single line as part of their answer.

Question 10

- (a) This question was fairly well answered with candidates explaining what the formula did but some not giving sufficient detail to achieve some of the marks.
- (b) This question was fairly well answered by candidates. Some candidates did not attempt the question.
- (c) This question was fairly well answered by candidates.

- (d) This part was not well answered even though absolute referencing as a topic has been set in the past. Most candidates understood absolute referencing but did not produce enough detail when explaining it. Some candidates mixed up the \$ for the absolute referencing with currency.
- (e) This part of the question was not well answered; even though the topic had been set previously. Although a lot of candidates were able to describe what happens in the bottom right hand side of a cell, their descriptions were not sufficient to answer the question fully and were not in sufficient detail. These need to be detailed enough so that someone could follow the candidates steps and achieve the result required.

Question 11

- (a) This was the first time this topic has been tested in the theory examination and candidates found this question challenging. Many candidates did not understand why the ideas need to be discussed. The popular correct answer was to understand the requirements of the system.
- (b) This was a straightforward question but was not well answered by candidates. Some candidates appear to have misread the question answering referring to banks or shops rather than online booking systems with others not relating it to the customer.

Question 12

This was a familiar question about the disadvantages about the use of contactless cards. Some candidates thought that contactless cards referred to contact with the customer, others thought that the card had no name on it but was used in the same way as a standard debit card and hence did not achieve as many marks as they could have on the question. Some candidates wrote that the card could be stolen but then failed to expand upon this by relating it to the card could be used without a PIN.

Question 13

- (a) This part was well answered with candidates relating their answers to the research of the system, achieving at least two marks. There are still some candidates who answer the question with the term survey which is not appropriate.
- (b) As with part (a), this section was well answered with most candidates achieving at least two marks. Images and video were the better answers with candidates struggling to write down text or sound.

Question 14

- (a) This topic has been set previously, was not well answered by candidates. For many candidates half of the answer related to what the sensor did and explaining about the analogue to digital conversion, which was not required by the question, they then did not explain about the role of the microprocessor or the pre-set value. Responses showed that candidates struggled to apply their knowledge of this subject to a new scenario. However, when candidates understood what they were being asked to do, they achieved very good marks.
- (b) This part was not well answered. Many candidates managed to explain the advantages of using robots but fewer could explain the disadvantages. Some candidates appear to have misread the question and gave answers like hazardous environments when the scenario referred to delivering post in offices.

Question 15

Many candidates could answer the question but could not give an example of where it could be used in a word-processing program, therefore not achieving the mark. Some candidates answered with comparisons with command line interface.

Question 16

Many candidates gave only one side of the argument or did not expand on the points they made.

INFORMATION AND COMMUNICATION TECHNOLOGY

Paper 0417/13
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The use of brand names rather than the generic names are not permitted in candidate answers. 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 from some candidates to answer the question that the candidate thinks is being asked rather than the one that is actually being asked. For example, the question on the benefits to the bank of using an ATM; most candidates answered relating it to the customer. Candidates must read the question carefully to ensure that their answer is appropriate.

General comments

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

Some candidates gave extra answers that were not asked for. Some candidates, who write on extra sheets and the blank pages of the answer booklet, 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

The question was fairly well answered but some candidates mixed up ROM and RAM.

- (a) This question was well answered.
- (b) Some candidates thought that Hard Disk or memory card were acceptable answers; others mixed up RAM and ROM.
- (c) Magnetic tape seemed to be the popular correct answer.
- (d) Some candidates mixed up RAM and ROM.

Question 2

This was a standard type of question with many candidates achieving at least one mark. Linkers and Database management systems were frequently answered incorrectly. However, there is a tendency to place two ticks on one line when only one is asked for.

Question 3

This was a standard True/False question with many candidates achieving at least one mark. CRT and dot matrix were often incorrectly ticked. As with the previous question a number of candidates placed two ticks on one line.

Question 4

This was a standard tick box question. However, some candidates placed more than the three ticks that were asked for therefore not gaining all the marks possible. Common errors were checking the data 100% correct and the range check.

Question 5

Generally well answered, some candidates provided vague answers.

Question 6

- (a) This type of question is testing the candidate's ability to explain to someone else how the image could be resized. Candidates are getting used to the type of question and are improving in their responses.
- (b) This question was well answered with many candidates answering crop.
- (c) Part (c) was not as well answered as the other two parts of this question. Some candidates wrote they needed to split into two files and send separately disregarding that the file was an image.

Question 7

- (a) This question was not well answered with many candidates writing about validation checks and proof reading.
- (b) Like part (a), this question was not well answered with few candidates able to give sufficient detail to the reasons why direct changeover should have been used. Candidates wrote answers like cheaper and faster but did not expand upon their answers.

Question 8

- (a) This topic had been set previously, candidates still found the topic challenging. Many candidates wrote that a password was needed rather than a key and therefore did not achieve the marks.
- (b) This was the first time this topic has been tested in the theory examination and candidates found this question challenging. Many candidates simply wrote it was an online certificate. Some candidates attempted to give a good answer but were not sufficiently detailed in their answer to achieve the mark.

Question 9

- (a) Many candidates were rather vague in their answers. Writing, for example, magnetic tape when magnetic strip was the correct answer. Other candidates wrote about bar codes and even MICR.
- (b) This question was also not well answered with many candidates only achieving one or two marks. The question asked for a comparison with other methods and some candidates failed to do this. The topic had been set previously.

Question 10

- (a) This was the first time this topic has been tested in the theory examination and candidates found this question challenging. Few candidates were able to describe what an anchor was and how it is used. Those that wrote about links managed to achieve one or two marks.
- (b) This question had mixed answers with some candidates achieving full marks whilst others achieved no marks. This was the first time this topic has been tested in the theory examination and candidates found this question challenging. Those candidates that understood the HTML code achieved good marks.
- (c) Many candidates wrote that it searched for the website therefore mixing it up with a search engine.

Question 11

- (a) As with previous tick box questions some candidates placed too many ticks in the boxes and therefore did not achieve full marks.
- (b) This question was not well answered with candidates lacking the understanding of how the computer processing could be used in a library. Some answers were good but lacked sufficient detail to gain the mark. For example, scan the fingerprint and the details would appear.

Question 12

- (a) This question was not well answered, even though it had been a topic that had been set previously. Candidates incorrectly answered primary key for ID_number; which was not a validation check. Many candidates simply gave data from the table rather than writing down a validation check.
- (b) The creation of a screen input has been set many times in previous examinations, but most candidates found it challenging, with many not attempting the question. For those candidates that answered the question many managed to achieve two marks for simply writing the field names and some candidates indicated drop down lists. However, navigation buttons were missed by many.
- (c) Many candidates appear not to have thoroughly read the question and wrote in sentences rather than in the form of search criteria therefore not achieving all the marks available. Those that did manage to answer the question, many missed out the AND statement.

Question 13

Some candidates named the input and output devices rather than the inputs and outputs of the system which meant they did not achieve the higher marks. Those candidates that did read the question thoroughly achieved very good marks. Some candidates did not read the question and wrote answers about paying for the tickets.

Question 14

This question was not well answered. Many candidates looked at the question then answered it as though it was the advantages and disadvantages to the customer, as has been set previously. This question related to the bank.

Question 15

- (a) This question was well answered with many candidates achieving over three marks. There were a few candidates, however that placed two ticks on each row.
- (b) This question was not well answered with many candidates only achieving one mark out of the two available. Some candidates named the device as an ADC but then did not expand on the answer to achieve the second mark. A few candidates mixed up the analogue with digital stating that the sensor was digital.

- (c) As in previous sessions the expert system question challenged candidates. Those candidates that understood expert systems achieved at least three marks however there are still a large number of candidates who do not understand the components that make up an expert system.

Question 16

Many candidates only achieved low marks in this question even though this topic had been covered previously in the examination. For those candidates that could write down the acronyms in full could also give good examples they achieved good marks, but there were a large number of candidates who guessed the acronyms and then could not give examples. Some candidates managed to get the MICR correct but then gave bank card as the example rather than cheque.

Question 17

Candidates either gave only giving one side of the argument or did not expanding on the points made. Some candidates answered the question using bullet points rather than the continuous prose that we are expecting for a 'Discuss' type of question.

Many candidates wrote that social media allowed communication over the world forgetting that you can do this with letters and telephone, not many comparisons were given at all. Many candidates went off on a tangent into why video-conferencing was good for businesses, rather than answering the question that had been set.