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INFORMATION AND COMMUNICATION TECHNOLOGY

Paper 0417/11
Theory

Key messages

Candidates who performed well in this paper used specific and detailed language when answering 'describe' and 'discuss' type questions. There has been a decrease this series of candidates splitting their answers to this type of question into advantages and disadvantages using a line down the answer section. This practice is to be discouraged as it does not allow for a true discussion.

Some candidates are still using brand names to answer the questions. 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 onto other parts of the examination paper or onto extra sheets. It is important that the candidate clearly writes where the extra part is written and writes the question number on the extra work.

Candidates should spend time reading a question thoroughly so that they are quite sure what is required in the answer.

General comments

This paper gave candidates the opportunity to give clear, concise answers. There was a good spread of marks for the paper. Most candidates attempted to answer all the questions, with only a few not attempting to answer some questions. The paper gave all candidates an opportunity to demonstrate their knowledge and understanding of ICT using a wide variety of topics. The paper covered many aspects of the syllabus from more straightforward questions on pen drives to the more challenging questions on applications of ICT such as the measurement and control systems, moral implications, and drones. The vast majority of candidates were able to complete the paper in the allotted time.

When a question indicates a specific number of answers, candidates should only write one answer in each allocated space as only one is marked for each numbered space.

Candidates need to be specific in the answers they give, rather than using general statements such as 'it is quicker'. Answers should be supported by a valid reason. All answers on the paper should relate back to the question being asked. As in previous series, there was 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

Most candidates performed reasonably well on this question.

(a) Many candidates could identify 'gutter' as being the correct answer.

(b) Nearly all candidates were able to give the correct answer as 'header'.

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(c) This part of the question was well answered with most candidates giving the correct answer.

(d) Many candidates were able to give the correct answer here; some mixed the answer up with 'centre'.

Question 2

(a) This part was generally well answered. There were a wide range of answers that candidates could have given for this question. Some candidates misread the question and gave answers relating to accessing the internet, for example emails and streaming music.

(b) This part was quite well answered with most candidates gaining some credit. The question related to advantages and therefore candidates needed to make a comparison with the smartphone.

(c) This part was quite challenging, with many candidates giving answers that were not comparisons. The question asked for disadvantages therefore answers must make a comparison with the smartphone. Battery life, cost and storage were too subjective to gain credit.

Question 3

This question was well answered by many candidates. As with answers in previous series, some candidates did not give enough detail in their answers. This was a 'describe' question and therefore required some expansion to the answer given. Good answers related to the ease of guessing the password and that weak passwords included personal data. In order to gain full credit in this question candidates needed to give an example of a strong password and a weak password. Some candidates copied the examples given in the question, which could not gain credit.

Question 4

This question was quite well answered by many of the candidates.

(a)(i) Test data is a technical part of ICT and some candidates struggled with the question. For this part, either 0 or 100 was acceptable. Some candidates gave a range rather than one item.

(ii) This part was answered better than part **(i)**.

(b) This was answered well by most candidates. As the question asks candidates to write down the field names from the data given, then it is expected that the field names are correct including the underscores.

Question 5

This was a challenging question for most candidates.

(a) This part asked for advantages and therefore candidates needed to compare their answer with the human taking the reading. Some answers lacked this detail.

(b) This part proved quite challenging, with many candidates misreading the question. The question related to how the data could be used to produce a graph, whereas some candidates wrote about the process of taking the readings and its comparison to a pre-set value. As **Question 5(a)** asked about the advantages and disadvantages of taking the readings, some candidates followed on from this for their answer for part **(b)**, rather than following the question.

(c) This proved to be a challenging question for candidates. Candidates needed to comment about physical quantities and that control systems took action.

Question 6

Overall, this proved to be a challenging question.

(a) Candidates found this part challenging, as it was a discussion question that asked candidates to discuss the positives and negatives of using biometric systems against a video system. In order to

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do well in this type of question candidates must give detailed answers that compare the two systems.

Candidates understood that faces were unique and that biometric systems may not work if a person wore glasses, but few could expand on the point to compare it with manual systems. It is important in this type of question that candidates read the question carefully. Biometrics systems of this type can be very similar to video systems; the main difference is the speed at which they can identify individuals and their accuracy compared to manual checking.

(b) This part of the question was well answered. Where candidates did not succeed it was because they repeated facial recognition from part **(a)**. Some references to face were allowed, but not facial recognition.

Question 7

This was a challenging question for some candidates. Some wrote about the need for password, firewalls, and up-to-date anti-virus. In order to score highly in this type of question, candidates need to read the question thoroughly and write detailed answers explaining the positives and negatives of using eSafety strategies.

Question 8

This was a challenging question for many candidates. Good answers included not causing offence in the ICT solution and using appropriate content.

Question 9

In order for candidates to do well on this type of question, candidates need to read the question carefully and understand it is a comparison question about accessing the internet. The answer should relate to the similarities and differences between the two types of systems, and statements should be expanded.

Question 10

Overall, this question was quite well answered.

(a) Many candidates were fully successful on this part. The main issue was the use of brand names rather than generic names.

(b) This question was challenging for most candidates. In order to do well in this question, candidates needed to read the question carefully and then give the advantages and disadvantages in detail. An advantage and a disadvantage needed to compare multimedia presentation with a website. Some candidates did not refer back to the original stem which stated that the website was set up by a company and that the multimedia presentation was set up by the school.

Some candidates gave answers related to the content of the presentation and stated that web pages could not include video, sound, and other multimedia elements. Most candidates also stated that it would be easier to create a multimedia presentation than a web page because you did not need to know any coding. However, the stem of the question stated that the web page was sent to a company to be produced. Some candidates recognised that the presentation would be at a specific time and to a specific audience, whereas the web page would be available all the time and to a wider audience. Also, many candidates stated that the web page needed an internet connection.

(c) Many candidates answered this question well and could at least name the devices. Some candidates misread the question which was about the testing of the system rather than just viewing the presentation.

Question 11

Both parts of this question proved challenging.

(a) The stem of the question stated that one of the disadvantages was that the receptionist would have access to personal data; some candidates missed this and gave this as an answer. Others wrote

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all four answers about personal data. Most answers related to the security of the data or the cost/expertise/difficulty of using mail merge. Some candidates recognised that emails could be sent to the wrong person or that the wrong data could be sent. The need for an internet connection often related to sending the emails, rather the person receiving them.

(b) Many candidates recognised that it was to prevent identity theft, fraud and blackmail but did not link these to a particular type of information. Some candidates recognised that some data was sensitive and/or that the data could be used to identify the individual.

Question 12

The question required the candidates to compare the use of the pen drive with the portable hard disk drive. Cost and storage capacity were not permitted as valid answers.

Question 13

(a) Most candidates knew that a hyperlink would take you to another web page but not all candidates mentioned the need to click on it.

(b) Few candidates understood the term bookmark. Some related it to books and others stated that it stored the web page. In the stem of the question, it was stated that bookmarks were part of web pages.

(c) A few candidates recognised that an anchor could move you to the top/bottom of a webpage or to somewhere else in the web page, but others confused it with an anchor in a word-processed document; in the stem of the question, it stated that an anchor was part of a web page.

Question 14

Most candidates were able to gain some credit for this question. The advantages mostly related to increased safety for the research student, covering a wider area in a given time and going to inaccessible areas. The disadvantages mostly related to damage caused by weather, collisions with animals/birds/trees, noise disturbing animals and potential danger to animals.

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INFORMATION AND COMMUNICATION TECHNOLOGY

Paper 0417/12
Theory

Key messages

Candidates who performed well in this paper used specific and detailed language when replying to 'describe' and 'discuss' type questions.

There has been an increase in the number of candidates using brand names to answer the questions. 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 onto other parts of the examination paper or onto extra sheets. It is important that the candidate clearly writes where the extra part is written and writes the question number on the extra work.

Candidates should spend time reading a question thoroughly so that they are quite sure what is required in the answer.

General comments

This paper gave candidates the opportunity to give clear, concise answers. There was a good spread of marks for the paper. The paper covered a great deal of the syllabus. The paper gave all candidates an opportunity to demonstrate their knowledge and understanding of ICT using a wide variety of topics. The examination paper included a question on internet banking. In recent examinations we have set questions about using this at home; in this paper, the question related to using it in the bank, and this had an effect on the way candidates answered the question. It is very important that candidates read a question thoroughly before answering it. The vast majority of candidates were able to complete the paper in the allotted time, and most were able to make an attempt at all the questions. There has been some increase in the number of blank answers.

When a question indicates a specific number of answers, candidates should only write one answer in each allocated space as only one is marked for each space.

Candidates need to be specific in the answers they give, rather than using general statements such as 'it is quicker'. Answers should be supported by a valid reason. All answers on the paper should relate back to the question being asked. As in previous series, there was 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

This was a well answered question for most candidates.

(a) This part of the question was well answered with nearly all candidates getting it correct.

(b) This part of the question was well answered with nearly all the candidates getting it correct.

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(c) This proved to be the most challenging part of the question, with few candidates giving the right answer of 'hanging'.

(d) This part was quite challenging for many candidates.

Question 2

This proved to be a straightforward question with many candidates ticking the correct boxes.

Question 3

Most candidates achieved some success with this question.

(a) This proved quite a challenging part, where candidates were asked about the benefits of using a GUI. Some candidates wrote about the features of a GUI or gave answers that were not detailed enough.

(b) This was less challenging than part **(a)** with many candidates providing good answers. Some candidates described a smartphone rather than giving characteristics. Some candidates did not read the question carefully and answered by comparing with tablets and laptops. Battery life and cost are not allowed as valid answers as they are too subjective.

Question 4

(a) Most candidates answered this question well by pointing out that the password was easy to guess or that it was too short. Quite a few candidates detailed that using this as a password would mean that Aaron's account would be compromised by hackers rather than telling us why the password itself was not appropriate.

(b) This was more challenging than part **(a)**. It asked how passwords could be entered without using a keyboard. This required candidates to know how key-logging software operated. Key-logging software will still operate even if a touchscreen is used. The most common correct answer was the use of biometrics. Some candidates misread the question giving answers relating to firewalls, encryption or making weak passwords strong.

Question 5

Both parts of this question were challenging for candidates.

(a) This part required candidates to describe how they would set up a new database and then how they would test it. In order to gain full credit candidates needed to describe both parts. Setting up a database was answered better than testing it. The question was misread by some candidates who explained the system life cycle.

(b) In the use of parallel running, both systems are run together until the new one takes over. Some candidates produced vague answers that did not state the new system took over, by writing that a system took over. Some candidates were able to give good benefits and drawbacks, for example the old system was a backup and that the costs would rise due to two sets of staff. Candidates must give valid reasons for their answers.

Question 6

Those candidates that produced good answers in this question wrote about 'what if' scenarios, and the impracticalities of building lots of different bridges rather than using models. Some answers included references to the fact that models were safer or cheaper but did not give sufficient detail in order to gain credit.

Question 7

(a) Many of the answers lacked sufficient detail**.** There were many references to hacking without any explanation as to its relevance. Most answers that gained credit referred to the ease of searching

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for data or editing data. The drawbacks of using a database were less well addressed with many answers referring to hacking.

(b) Some candidates gave examples of the fields in the database, which related to content rather than features, and some answers were vague. Some candidates misread the question and answered as though the form was online, giving answers like 'help buttons'. Good answers included the need for adequate space for responses, instructions on how to complete the form and the use of tick boxes.

Question 8

This question was quite well answered by many candidates. The question is a 'discussion' question and therefore requires the candidates to give both advantages and disadvantages in detail. Many answers lacked the necessary level of detail. Many candidates were able to state that sensors could give a more accurate reading where humans could not. Many candidates related their answers to a loss of jobs, expensive to buy or maintain, and that sensors did not need a salary.

Question 9

(a) Most candidates were able to at least mention online data storage. Some candidates thought that the cloud was used primarily for back-up of their smartphone. Other candidates thought that the data was stored on the internet, which is too vague an answer as the internet is only infrastructure. This question produced many references to branded software and cloud systems, which cannot be credited. Answers relating to cost and limited storage were not allowed as these are too subjective.

(b) Many candidates related this answer back to their own use of the cloud rather than the generic use of the cloud; as a result of this the answers were often vague and lacked detail. Many candidates were able to give good answers about the need for internet access and the monthly subscription charges. Some candidates mentioned the many copies being vulnerable to hacking and the difficulty in fully deleting all copies. Answers relating to hacking are correct, but more detail is needed as data is copied many times and stays on the cloud for long periods of time.

(c) This was a 'discussion' question and candidates needed to give answers in sufficient detail. Most candidates were able to give good answers. Good answers included the fact that it is more difficult to forge biometric systems and that the owner had to be present to enter the biometric password. Candidates also knew that biometrics were unique to the person. One candidate gave a very good answer on the issues of reading the biometric using a scanner, this was not on the mark scheme but was awarded marks as a very good concise answer.

Question 10

This question was very challenging as many candidates misread the question and answered as though the internet banking was at home. In previous series this would have been the type of question we had asked. This question stated that the internet banking was within a physical bank and the advantages and disadvantages were to the bank and not the customer. Those candidates that realised this did well. The most common correct answer related to saving staff wages as fewer tellers were needed.

Question 11

(a) Email groups are quite a challenging topic for many candidates, possibly as they are not used that much. As with previous questions, it appeared that candidates understood the question but did not give answers in enough detail to gain the marks. Some candidates misread the question and answered as though it was about emails and not email groups.

(b) This question was generally well answered. The question was related to analogue and digital data. Some candidates wrote that the microprocessor changed the analogue data to digital data.

(c) Most candidates did well on this question. Some struggled with the flow of data within the control system thinking that the microprocessor lowered and raised the flood barrier rather than a motor or an actuator.

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Question 12

This question was quite well answered, with many candidates giving the features. Some missed valid reasons for them. Some candidates did not understand the features of a GUI, namely Windows, Icons, Menus and Pointers. Some candidates gave benefits rather than features.

Question 13

Candidates often understood the question but sometimes did not give sufficient detail.

Most of the candidates could identify either a work pattern or a health issue. Many of the candidates gave answers relating to loss of jobs, making work easier as computers do all the work, or having more leisure time. Very few gave answers relating to training, productivity, de-skilling etc. Some did, however, give valid reasons for the different work patterns and understood what they were.

Question 14

Overall candidates did well on this question.

(a) Many candidates were able to write down that rtf means rich text format but struggled with pdf. Often those candidates that wrote a description did not explain it in enough detail.

(b) Candidates understood more what each of these formats were rather than their differences. Some candidates thought that pdfs could not be edited, probably as they had not experienced pdf writers only readers.

Question 15

This question was quite well answered by candidates. They understood that proofreading checked for spelling errors, but did not always appreciate that visual verification needed the original source document to cross check against. Some candidates stated that visual verification checked that the data was correct when in fact it checks that the data has been copied correctly.

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INFORMATION AND COMMUNICATION TECHNOLOGY

Paper 0417/13
Theory

Key messages

Candidates who performed well in this paper used specific and detailed language when answering 'describe' and 'discuss' type questions. When answering these types of questions candidates should not split the answer into advantages and disadvantages with a line down the answer space as this does not allow for a true discussion.

There has been an increase in the number of candidates using brand names to answer the questions. 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 onto other parts of the examination paper or onto extra sheets. It is important that the candidate clearly writes where the extra part is written and writes the question number on the extra work.

Candidates should spend time reading a question thoroughly so that they are quite sure what is required in the answer.

General comments

This paper gave candidates the opportunity to give clear, concise answers. There was a good spread of marks for the paper. The paper covered a great deal of the syllabus and gave all candidates an opportunity to demonstrate their knowledge and understanding of ICT using a wide variety of topics. The examination paper included a question on expert systems which is a topic that proved challenging for candidates. The vast majority of candidates were able to complete the paper in the allotted time, and most were able to make an attempt at all the questions. There has been some increase in the number of blank answers.

When a question indicates a specific number of answers, candidates should only write one answer in each allocated space as only one is marked for each space.

Candidates need to be specific in the answers they give, rather than using general statements such as 'it is quicker'. Answers should be supported by a valid reason. All answers on the paper should relate back to the question being asked. As in previous series, there was 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

This question was found to be straightforward, with most candidates performing well.

(a) This part was well answered, with most candidates producing the correct answer.

(b) This part of the question produced the most correct answers.

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(c) Even though this was the most challenging part of the question, many candidates were able to produce a correct answer.

(d) This part of the question was well answered by many candidates,

Question 2

This question was well answered by many candidates. Candidates seemed to be able to relate the answers to the glasshouse. Some candidates gave incorrect types of sensor, for example 'growth sensors'.

Question 3

This was a well answered question with most candidates circling the correct features.

Question 4

This topic of expert systems, as previously, was found to be challenging.

(a) This question, which was in three parts, asked for three components of an expert system. Many candidates found the question challenging and some left the answer spaces blank. Candidates completed part **(iii)** better than the other two parts.

(b) As with part **(a)** this part of the question was quite challenging.

Question 5

This question was fairly well answered.

(a) This was a well answered part of the question, with most candidates ticking the correct boxes. Sometimes candidates swapped control and measurement.

(b) Some candidates made correct points such as 'questionnaire may not be completed' and 'they were anonymous therefore the staff could be more honest'. However, this was a 'discussion' question and therefore required candidates to carry out a comparison and give detailed answers.

Question 6

Overall, this proved quite a challenging question.

(a) Many candidates knew that gifs could be moving images whereas png were static images. Those candidates that explained the different types of format fared better than those that attempted to expand the acronym.

(b) Few candidates were able to give clear detailed differences.

Question 7

On the whole, candidates produced good answers for parts **(a)** and **(b)**.

(a) Most candidates understood which fields were needed for each of the validation rules. Some candidates missed the underscores when writing down the field names. There were fewer candidates in this series that wrote down the content of the table rather than the field name.

(b) Most candidates were able to identify ISBN for the answer.

(c) Most candidates could gain some credit here by explaining that using an electronic book reduced the amount of physical space that printed books would take up. Some candidates correctly identified that using electronic books could give the user eye strain. As with other 'describe' questions, candidates were more successful if they gave reasoned answers.

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Question 8

Most candidates did well on this question, especially part **(b)**.

(a) This question was a 'discussion' question and therefore required the candidates to give detailed answers for and against the use of handprints to enter a building. Most candidates seemed to understand the basics of biometric systems. Correct answers were often about the uniqueness of the handprint and the fact that you do not forget it. Candidates were not as clear on the drawbacks, but there were some good, detailed answers.

(b) Most candidates were successful on this part.

Question 9

A range of answers were allowed for this question, including 'abide by the laws within the country that affect the general use of emails'. Sometimes candidates tended to concentrate on what should be in an email, such as salutations and the message.

Question 10

This proved a challenging question.

(a) Many candidates did well on this part. Some mixed up magnetic and solid state. Other candidates referred to USB as backing storage when it is a port on the computer. Some misread the question and wrote down the common content of the different types of backing storage.

(b) This part proved challenging. As with other questions of this type, cost and storage capacity were not considered valid answers as they are too subjective.

Question 11

This question proved challenging.

(a) This question asked candidates to state two ways in which data could be searched for on the Web. Acceptable answers included 'using a search engine' or 'typing in details onto the search bar'. Some candidates wrote about clicking on links or asking a teacher.

(b) This was the more technical part of the question, which asked for the differences between the internet and the Web. Some candidates knew that the internet was a WAN and that the WWW was part of the internet.

Question 12

(a) This part of the question asked candidates to state and describe two development layers, having been given an example of the other layer. Some candidates were able to write down at least one development layer.

(b) This part asked why tables were used in web pages. Candidates were able to give answers relating to organising the elements on the web page, but some answers lacked detail.

Question 13

This question was quite well answered by candidates. Most candidates who answered the question related it to not giving out personal information.

Question 14

This proved a challenging question for candidates to answer. Many candidates could not clearly differentiate between the different types of break, tending to use the names as guides.

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Question 15

Candidates produced some good answers for this question, particularly for part **(c)**.

(a) Acceptable answers to this part were pen drives or the use of the Cloud. Some candidates stated USB, which is a port on the computer, or via email, but did not expand on this to state it was an attachment. Some candidates answered by stating the work would be printed out. Credit was generally given for stating the method rather than the advantage and disadvantage of its use. The question is a 'discussion' question and therefore candidates needed to compare the positives and negatives of using each method with others.

(b) Many candidates correctly stated that encryption was the scrambling of data in order to protect it. Some added that it would stop hacking, which it would not do. This is a 'describe' question and therefore candidates needed to expand on their answers.

(c) This part was well answered by most of the candidates.

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INFORMATION AND COMMUNICATION TECHNOLOGY

Paper 0417/02
Document Production, Data Manipulation and Presentations

Key messages

For this examination, candidates must:

- be able to distinguish between the typeface categories of serif and sans-serif font types and select a font style for the type specified
- enter accurately text in bold on the question paper and take greater care with the accuracy of data entry
- use proofing techniques to identify errors and ensure consistency of presentation
- be able to retain existing styles applied to recall text, therefore ensuring consistent spacing
- be able to distinguish between a database page header/footer area and a report header/footer area and understand which is appropriate to use
- be able to format and store numeric database fields to a set number of places without rounding
- be able to insert merge fields into a master document whilst maintaining the punctuation, layout and spacing of the original text
- be able to select data to produce a graph/chart using non-contiguous data
- be able to distinguish between portrait and landscape orientation
- produce printouts and control printing as instructed on the question paper
- include their identification details in tasks before printing, as instructed on the question paper - printouts will not be marked if there are no identification details or these are handwritten
- produce legible and uncropped screenshots which show the outcome of an action rather than the skill process;
- printout the Evidence Document as this contains supporting evidence.

General comments

The paper gave a good spread of performance and most candidates appeared well prepared for the examination. The majority of candidates completed or attempted all elements of the paper within the time allowed and most showed a good level of skill. The mail merge task was particularly well done with many candidates achieving full credit for this task. Some candidates performed less well, due to not following the instructions carefully, having insufficient software knowledge or making typographical errors which could have been avoided with careful checking and proofreading.

Candidates must be able to distinguish between the typeface categories of serif and sans-serif font types. These are not the names of font styles but categories of font type with specific attributes. Candidates must be able to select an appropriate font for the font type specified.

When creating or editing paragraph styles candidates must base the style on the ‘normal’ (Microsoft Office) or ‘default’ (Open Office) paragraph style.

Text to be entered by the candidate as part of a task is displayed in bold on the question paper. Credit is given for accurate data entry of this text, which must be keyed exactly as shown including punctuation and capitalisation. Candidates are advised to check carefully their data entry to ensure it matches the text on the question paper. Common errors on this paper included incorrect capitalisation, incorrect or missing characters, omission of spaces, truncated headings and superfluous punctuation.

Candidates are instructed to produce screenshots to evidence the ICT skills that cannot be assessed through the printed product alone. These screenshots must display the outcome of an action and not the

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process; so, for example, the saved word-processing document must be seen in the file list within the folder – the '*Save As*' dialogue box is insufficient as the save process is incomplete. Screenshot evidence is often too small and/or faint to be read even using magnification devices. Candidates must ensure that all screenshots can be easily read with the naked eye. Care should be taken when cropping and resizing these screenshots to ensure important elements are still shown such as primary keys in the table structure. Evidence in the style modification and database formula screenshots was often cropped or truncated so the evidence was inconclusive.

The question paper prompts candidates to include their name, centre number and candidate number on all tasks prior to printing. Without clear printed evidence of the author, the work cannot be marked. It is not acceptable for candidates to annotate their printouts by hand as there is no real evidence that they are the originators of the work.

Some centres are still submitting stapled work which is not permitted. Hole-punching work and securing it with treasury tags or string is permitted but care should be taken not to obscure or remove letters/text with the punch holes.

Centres should return the Supervisor's Report Folder with the candidates' work. This identifies the software used and can be helpful if issues were experienced during the practical test. The candidates' work must be submitted in the original hard-copy printed Assessment Record Folders that are provided to centres. Printed or photocopied Assessment Record Folders should not be used.

Comments on specific questions

Task 1 – Evidence Document

The evidence document was opened, and identification details entered by the majority of candidates. This document is used to store supporting screenshot evidence for skills which cannot be assessed by the printed tasks alone. Occasionally, the screenshots were too small or faint to be read, or essential evidence had been cropped from the image. Candidates must ensure that all text can be easily read with the naked eye. A small number of candidates did not present the evidence document, and others omitted identification details.

Task 2 – Document

Question 1

Candidates opened the correct file and most saved it with the file name given. Some candidates incorrectly saved in the original rtf format rather than the format of the word processing software being used and a few did not enter the file name in capitals as shown on the question paper. Screenshot evidence of the save was often inconclusive showing the save in process rather than capturing the outcome of the file saved. A screenshot of the folder contents after saving provides the evidence required. Most candidates retained the page setup settings as instructed. A few candidates changed the font style of the stored and applied body style even though the question paper instructed that no changes were to be made.

Question 2

The header text was occasionally inserted as a title so it did not appear in header area on every page. This text occasionally contained errors such as '**Sailings**' for '**Sailing**' and '**Instruction**' for '**Instructions**'. Most candidates entered their name, centre number and candidate number on a new line below the header text, but this was often not right aligned. A few candidates omitted their centre number and/or candidate number from the header details or incorrectly split their identification details in the header area so their name was right aligned, the centre number centred and the candidate number left aligned. Automated page numbers in the footer were generally inserted and aligned as instructed. A small number of candidates did not use an automated field for the page numbers with the keyed number 1 appearing on all pages. Occasionally, the header/footer items did not align with the page margins on all pages and candidates who used the built-in content control to align the items did not always remove superfluous text or placeholders in the header and/or footer areas.

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Question 3

The creation and storage of the subhead style was well done by the vast majority of candidates. Common errors included capitalisation or typographical errors in the style name, an underscore used instead of a dash, or the style containing additional formatting not listed. Candidates should make sure that the new style is based on the default (Open Office) or normal (Microsoft Office) paragraph style as this avoids the new style inheriting additional formatting. A few candidates continue to enter 'serif' in the font dialogue box as the font name. A font style with attributes of the serif typeface category must be selected and applied. Screenshot evidence of the *TSR-subhead* style provided details of the settings created for this style.

Question 4

Most candidates entered the text **Tawara Sailing Regatta** as a title at the start of the document and applied the saved *TSR-title* style to this text. The text occasionally contained typographical errors such as '**Tamara**' for '**Tawara**', '**Sailings**' for '**Sailing**' and '**Regetta**' for '**Regatta**'. A few candidates did not modify the *TSR-title* style as instructed with the style commonly being presented in a sans-serif font style with a 12-point space after. Credit was given for formatting only if there was evidence that the style settings had been modified.

Question 5

Most candidates applied two equally spaced columns to the correct text with the correct spacing between the columns. Some candidates incorrectly included the final paragraph in the column formatting or displayed the entire document in two columns, therefore not controlling the column display. Some candidates inserted the initial column break below rather than above the subheading and occasionally a page break was inserted instead of a section break. The space between the columns was occasionally set at the default measurement or was much larger than 1.5 centimetres.

Question 6

Formatting the specified text as bullets was usually done well. Any consistent bullet style was acceptable. The presentation of the bullets was often not as instructed with the bullets not indented 1 centimetre from the left margin, the text not in single line spacing and a 6-point space had not been left after the last item in the list.

Question 7

The formatting applied to all six subheadings needed to match the settings shown in the screenshot of the *TSR-subhead* style seen in the Evidence Document. Credit was awarded only if there was evidence that the style had been created and saved in **Question 3**. A few candidates inserted extra space after one or more of the subheadings, resulting in inconsistent spacing that did not match the spacing defined for the *TSR-subhead* style.

Question 8

Most candidates imported the correct image and positioned this in the correct paragraph. The image was occasionally aligned with the left margin instead of to the right of the column. Text wrap was mostly applied correctly, as was resizing the image with the aspect ratio maintained. Reflecting the image so the flag was on the right was not always done.

Question 9

Most candidates attempted to format the table in the document. A few candidates created a new table rather than applying the formatting to the table provided. In the first column most candidates merged the cells, rotated the text and applied grey shading to the cell. Most managed to centre align the text horizontally but very few vertically aligned the text in the middle. The four cells in the second column were usually merged but the text '4 August' was not centred vertically in the cell. The most common errors were not displaying the text on one line and making changes to the height of the rows. Some candidates changed 'August' to 'Aug', or incorrectly changed the font size of the *TSR-table* style to fit the text on one line. Most displayed black internal and external gridlines although occasionally the weight of these lines was inconsistent. The table did not always fit within the column width and a number of candidates did not leave a 6-point space below the table.

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Question 10

In most cases, there was evidence of good proofreading and document presentation skills. The table and/or list were rarely split. The columns and pages were not always aligned at the top of the page and spacing between items was not always consistent. A few candidates changed the body style spacing, resulting in large gaps after paragraphs for no apparent reason. Occasionally, the table style had been changed to a different font style and/or size in an attempt to fit the text on one line. Occasionally, there was a widow or orphan, most commonly where a subheading or single line of text had been left at the bottom of a column.

Task 3 – Database

Question 11

The importing of the csv files and creation of primary keys were well done. The field names and data types were mostly set correctly. The most common error was not storing and displaying the numeric values to the correct number of decimal places in both tables. Quite frequently, these fields were displayed in integer format and/or rounded. A few candidates incorrectly included ID fields in their table structures. A number of candidates did not provide screenshot evidence of both table structures in their Evidence Document.

Question 12

Most candidates had created a relationship between the tables, but the screenshot evidence supplied captured the process of creating the relationship rather than the outcome and this was insufficient to confirm a one-to-many relationship had been created. A screenshot of the relationship dialogue box will evidence the relationship type. The relationship diagram will only be credited if it shows the single and one-to-many infinity symbols confirming the relationship type. A few candidates cropped their screenshot, so the relationship type was not evident.

Question 13

Most candidates entered the new record once in the correct table. The new record occasionally contained data entry errors. Candidates were penalised if they overwrote the first record in the skippers table (Paloma Montalbano) instead of entering this data in the table as a new record.

Question 14

The first tabular report used fields from both tables and was done well by candidates who attempted this question. The report title was usually entered in a larger font size at the top of the report. Occasionally, this title contained data entry such as '**Multihall**' for '**Multihull**', or capitalisation errors or displayed additional text such as 'Query 1' in the title area. The '*p*' descender on the title was not always fully visible if the text box had not been adjusted to accommodate the larger font size. The search was based on three criteria, and this was generally done well. The majority of candidates had no difficulty finding the records where the *Hull_Type* was Multihull but locating *Points* of 30 or less was more challenging, with several candidates confusing the greater than (>) and less than (<) operators and some not including those records equal to (=) 30. The *Skip_Gender* field was needed in the query to search for Female, but this field was not to be displayed in the report. A number of candidates did not attempt to set this search criterion. Most candidates displayed the correct fields in the report although some incorrectly included the *Skip_Gender* field. The fields were not always displayed in the correct order as, without manual intervention, the software will place the sort fields first in the report. This can be avoided by setting the sort order in the report design rather than in the query or during the step-by-step creation of the report. The two-field sort was usually correct. Common errors included truncated data in the *Skipper_Name* field and values in the three fields not stored and presented with two decimal places.

Most candidates presented the report in portrait orientation with identification details in the header or footer. However, the report often displayed a page number and did not fit a single page. The calculation to find the lowest points value was not always correct with COUNT and AVG frequently used. This value was often not displayed below the *Points* column and a few candidates placed this calculation in the page footer, so it appeared on every page, instead of the report footer. The label was usually entered to the left of this value but often contained typographical and capitalisation errors and/or a superfluous colon. The screenshot to show the database formula used was frequently truncated, so it was not possible to assess which field the calculation was based on.

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Question 15

The second tabular report used fields from both tables and a search based on two criteria. The wildcard search on 'sun' and finding Blue or Red in the *Group* field were completed well. The new field heading was usually entered accurately with only a few incurring a fault for omitting the underscore, data entry or capitalisation errors. Most used the correct calculation for this new field although a number of candidates did not display the resulting value as an integer. The correct fields were usually displayed in the report although these were occasionally in the wrong order. Candidates who set the sort order during the creation of the report in a report wizard will find the sort field appears first in the report. This can be avoided by setting the sort order in the report structure after the report has been created rather than as a wizard step. Occasionally, data in one or more fields was truncated and required some manipulation to ensure all data was fully visible. A number of candidates did not fit the report to two pages as instructed, but most did present the report in landscape orientation. Identification details were often entered in the report header or footer, so they only appeared on the last page of the report, rather than in the page footer so they printed at the bottom of every page. A common error was not removing other fields from the page footer area, such as date and page number, so only the identification details were displayed.

Task 4 – Mail Merge

Question 16

The mail merge task was completed well with many candidates producing error-free work. The correct files were located, and most candidates attached the data source to the master document. The merge fields were usually inserted in the correct position. Errors included leaving single chevrons when replacing the text with a merge field and deleting punctuation and spacing as the merge fields were inserted. A small number of candidates attempted to key in the merge field names instead of using the fields in the attached data file.

Question 17

Most candidates inserted a date field in the correct position. A number of candidates did not show that a field had been used for the date and, of those who did, a few used a CREATEDATE field instead of today's date field. Screenshot evidence of the date field did not always show the full date field and format. A number of candidates selected the wrong format, omitting spaces or not showing the full day (dddd, dd MMMM yyyy).

Question 18

A small number of candidates did not replace the text *Candidate details here* when entering their identification details. A few did not print their master document with the field codes and therefore did not provide evidence that mail merge had been used to create the forms. A small number of candidates took a screenshot of their master document and printed this which does not provide evidence of printing the master document.

Question 19

The merge selection was based on two search criteria and was completed well by most candidates who evidenced an automated selection method. Any search criterion which produced the correct records was acceptable. A few candidates used an automated selection but tried to enter the criterion for USA or CAN in the same field using greater and less than operators that would not work. Criteria needed to be set on separate rows of the automated filter to obtain the correct result. A few candidates used AND instead of OR and some provided evidence of a tick box selection method which is not an automated filter. A few candidates continue to use 'find' or 'find in field' to select recipients at the printing stage which does not merge the forms.

Question 20

Almost all candidates merged and printed the forms as specified.

Task 5 – Printing the Evidence Document

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 question paper. Candidates should make sure that their screenshots are large enough for the evidence to be legible and that cropping/resizing has not removed essential evidence.

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Task 6 – Presentation

Question 21

Most candidates successfully imported the six slides and presented each as a title and bulleted list. Occasionally, the text and bullet presentation was inconsistent with bullets and text on the chart slide right aligned. Credit was not given where incorrect software had been used, such as when the rtf file was opened, manipulated and printed in word processing software.

Question 22

Most candidates entered their identification details on the master slide, so they displayed consistently on all slides in the presentation. Slide numbers were not always aligned at the top left. Most candidates drew a horizontal line, but this was not always a thick (3 to 4 point) black line and occasionally did not span the full width of the slide. A number of candidates omitted the text **2021 Event Statistics**, which should have been entered in a large black font above the horizontal line. Quite frequently, this text was not in a large font size and occasionally '**Event**' was entered as '**Events**'. Master slide items that overlapped the data on the slides or appeared in a different position on the second and subsequent slides were penalised. Built-in slide designs can be used but often apply a different layout to slide 1 so candidates must ensure any design chosen meets all the master slide requirements.

Question 23

Most candidates created a vertical bar chart, but the selection of data was not always accurate with some candidates incorrectly selecting all the countries or all the data for the top six countries. The category axis often displayed the *Rank* and *Country_Code* in addition to the country name and occasionally the values were not displayed on the value axis. A few candidates produced a horizontal instead of a vertical bar chart.

Question 24

The chart title was usually entered in the correct position but occasionally contained data entry or capitalisation errors. A few candidates changed the title text *Six* to a number 6, or omitted the text '**in 2021**'. The value and category axis titles occasionally contained errors with '**Average**' keyed as '**Avarage**' and '**Country**' as '**County**' or '**Countries**'.

Question 25

Displaying the data values as data labels at the top of each bar was completed well by most candidates. Occasionally, the labels were placed in the middle of each bar making the values difficult to read.

Question 26

Few candidates successfully controlled the value axis scale completely with a minimum value of 0, a maximum of 32 and increments of 4. Some did not attempt to change the value axis scale at all and those that set the correct minimum and maximum values did not always change the increments to 4.

Question 27

Most candidates placed the chart on the correct slide to the left of the bullets. Some did not adjust the position of the bulleted text to make room for the chart on the left and instead placed the chart above or below the text. Some candidates changed the bulleted list to right aligned and in so doing lost the consistent presentation of the bullets and text on every slide. Most printed the slide but often this was not in landscape orientation and/or all slides were printed so printing of a single slide had not been controlled.

Question 28

Most candidates changed the formatting of the bulleted lists to numbered lists. Any consistently displayed numbered list was acceptable. A small number of candidates only changed three of the four lists to a numbered list.

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Question 29

Most candidates printed the full presentation. Occasionally, this was printed as single slides and not in the layout of six slides to the page. Either portrait or landscape orientation was acceptable.

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INFORMATION AND COMMUNICATION TECHNOLOGY

Paper 0417/03
Data Analysis and Website Authoring

Key messages

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

- Candidates need to understand the importance of following the instructions on 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 should ensure that data sources are opened before the spreadsheet is opened.
- Candidates need to ensure that in a spreadsheet the contents of all columns are fully visible.
- Candidates need a better understanding of the use of a named range within a spreadsheet.
- Candidates need a better understanding of the use of video and source tags to place a video in a web page.
- Candidates need a better understanding of html syntax, particularly in the use of head and body tags.
- Candidates must ensure that they include 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 with the formatting of the spreadsheet, particularly the setting of row heights and column widths to match both the question and the data or labels contained within the cells.
- Candidates need to be able to identify which spreadsheet function is the most appropriate for a task.
- Candidates need to be aware that the linked csv file must be open when printing out formulae in spreadsheets to avoid the appearance of long file paths which can result in formulae not being fully visible.

General comments

The paper gave a good spread of marks and candidate errors were spread evenly over the sections of the paper.

Candidates must ensure that the text within the printouts that they submit is large enough to enable Examiners to read the work, without the use of magnification devices.

Comments on specific questions

Task 1 – Evidence Document

Almost all candidates created an Evidence Document.

Task 2 – Spreadsheet

Question 1

The correct file was saved with the correct file name by many candidates; there were some who saved this either with the original file name, or as the original .csv file, or who introduced typographical errors, including the lack of underscores into the file name. Almost all candidates placed their name, centre number and candidate number on the spreadsheet, but a significant number placed these in the header rather than the footer. Fewer placed an automated file name without the file path on the right in the footer.

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Question 2

This question was answered well by many candidates using a VLOOKUP function. Some candidates did not use the csv file (as specified in the question paper), often using a .xlsx spreadsheet, or incorrectly set the lookup range to include the header for the data. Other candidates incorrectly set the lookup to search from the data in another sheet in the same workbook and not the external comma separated values file.

Question 3

This question was answered well by many candidates using a VLOOKUP function. Some candidates did not use the csv file, often using a .xlsx spreadsheet, or incorrectly set the lookup range to include the header for the data. A significant number of candidates did not display the whole column.

Question 4

Almost all candidates who attempted this question did the calculation of dividing the Donation in local currency by the exchange rate as specified. Fewer candidates rounded this calculation. Of those who did round the calculation, wrong answers were frequently seen using the ROUND function and occasionally ROUNDUP. The correct ROUNDDOWN function was sometimes seen. Most candidates attempting to round this calculation applied the, 2 attribute as specified. A significant number of candidates did not display all the formulae and data within the column width.

Question 5

Many candidates replicated their formulae for all transactions. Some had truncated formulae because the column widths were too narrow.

Question 6

Many candidates did not show evidence of naming the two ranges of cells. Of those who attempted the evidence, some ranges were truncated so Examiners could not see the whole range and in others the names were not as specified. Some attempted to define the range by showing the cells highlighted but did not show these in full.

Question 7

This question proved challenging to many candidates, with many showing no attempt. Some candidates correctly used the SUMIF function to obtain the correct results. Not all candidates used the named ranges within their formulae. Some candidates attempted this using SUM functions and others using VLOOKUP functions. Most candidates successfully replicated their formulae.

Question 8

Most candidates successfully merged these cells, although sometimes one of the four was omitted.

Question 9

The formatting of the spreadsheet as shown in the question paper was not completed by many candidates. Most candidates correctly formatted the merged cells in rows 1 and 5 with a blue background and white text (some erroneously included row 3). Rows 2 and 4 were not always narrower that other rows in the spreadsheet. Most candidates formatted row 1 to have text 20 points high. Row 6 was often either centre aligned or bold but rarely both. Fewer candidates formatted the merge cell in row 27 to match the formatting of that in row 5.

Question 10

This was completed well by most candidates who attempted it, but a significant number of candidates omitted this step. A small number of candidates correctly formatted one of the two specified columns but not both.

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Question 11

This was completed well by many candidates. There were some printouts in portrait orientation and a number with no row and column headings visible. A significant number of candidates did not ensure that the contents of all cells, particularly those in columns E and F were fully visible. A number of candidates did not produce a formulae printout. A significant number of candidates did not display row and column headings.

Question 12

Most candidates set the page orientation to portrait. Centre aligning the contents of the cells in row 28 so that the text was aligned both vertically and horizontally was more problematic for some candidates. Fewer candidates wrapped the text within these cells so that the contents fit on a single page wide. Some attempted to make this fit to a single page but this did not allow Examiners to be able to read the contents of the spreadsheet.

Question 13

The majority of candidates produced the values printout, but a significant number did not ensure that all cell contents were fully visible. Some candidates had this printout over 2 pages wide rather than the specified single page wide.

Question 14

A number of candidates successfully extracted the required data. Some scripts were seen with greater than $15 000 rather than greater than or equal to this value. Some candidates produced printouts extracting less than the required value.

Question 15

This question was completed well by many candidates. Some sorted into ascending order of project name rather than descending order of project name. A common error seen on this question was sorting the single column for the project name without selecting the other data and retaining the integrity of the data.

Question 16

This was completed well by many candidates. There were a number of printouts where the contents of all cells were not fully visible. Some candidates did not print the row and column headings.

Task 3 – File management

Question 17

This was attempted by most candidates. A significant number did not display the video frame height and frame width. A number of candidates also created the new folder with the name N22 rather than n22. A few candidates did not display the folder name.

Task 4 – Web page

Question 18

Most candidates set the table width to 100% of the browser window. Many candidates created the table structure as shown using the correct rowspan and colspan attributes and values within the table data tags. Some dimensions were not set to the correct percentage values, with pixels used instead in some cases. Table borders were not always visible in the browser.

Question 19

Most candidates placed the four still images as specified. Fewer used the video tag to place the video clip in cell C. Many candidates allowed their WYSIWYG package to place a video using other tag types for example the object tag. Where the video tag was used, most candidates added an appropriate automated text-based error message.

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Question 20

Most candidates set the width of the image, so it fit the width of the table cell. Few used the style tag to set this as an in-line style attribute.

Question 21

Most candidates added alternate text to each of the still images, but often this was not a description of the image that could be read using a text reader by partially sighted users or users where the image was not displayed. Several candidates used file names for the images like n22home, which does not give a user a clear understanding of what they are supposed to be seeing.

Question 22

Many candidates successfully included the text from the source file in the correct place with the majority of these setting this text to style h2. There were some candidates who had only added part of the given text.

Question 23

Most candidates successfully included the text and set it into style h3.

Question 24

Many candidates created a hyperlink from the correct image to open the correct web page. A significant number of these candidates included file paths in both the source image and web page hyperlink reference, which meant that this would only work on a computer with an identical file/folder structure and would be unlikely to work if the web page was uploaded to the internet.

Question 25

This question proved more challenging to candidates, with many creating a hyperlink from the correct image to a web page rather than to open an email editor. Whilst most candidates got the email address correct, far fewer included the subject line with the correct syntax and 100% accuracy.

Question 26

Almost all candidates completed this question as specified. A small number erroneously placed the stylesheet attachment outside the head section.

Question 27

Most candidates included the HTML and browser view of the page. There were still some submissions in an editor rather than a browser and a small number only included a link to the HTML source. Some screen prints were cropped so that the address bar was not visible.

Task 5 – Printing the Evidence Document

This was printed as specified by almost all candidates.

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