INFORMATION AND COMMUNICATION TECHNOLOGY

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Key messages

This paper was in line with the difficulty of previous papers and was deemed as being very good to test the candidates. The distribution of the marks showed that the paper as a whole was a good discriminator although the mean mark in the 20's. The range of marks that candidates gained were from 0 to 62, a good spread with marks being awarded at every point within this range. The skew was towards the lower end of the mark range with a good bell shape i.e. distribution of marks.

The paper covered a large range of topics, some new ones and some that had been seen on previous examination papers, therefore giving a good coverage of the syllabus. The balance included technical questions as well as more general questions. This year's paper had less marks available than in previous papers, reducing the marks to 80 rather than 100.

As the scenarios of the paper change it is important that candidates read the question carefully before answering it as marks are awarded for answering the question that has been set rather than general marks. Candidates who performed well in this paper used specific and detailed language when answering the prose questions. To a lesser extent than in previous years some candidates answered the comparison questions using a split answer of advantages and disadvantages, with a line drawn down the answer lines. This type of layout does not give enough scope to gain high marks as the answers are simply statements without a comparison.

As with previous series I need to report back on the lack of use of generic names for hardware and software. 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.

As with previous reports I need to report again on candidates who write extra parts of answers elsewhere in the paper. Occasionally candidates may need to expand their answers on to other parts of the examination paper or onto extra sheets. It is important that if this occurs the candidate clearly writes where the extra part is written and writes the question number on the extra work. Some candidates are using extra sheets rather than just writing beneath the question where there may be space. On many occasions the extra work tends not to gain any extra marks. The paper is marked electronically and if the candidate writes on extra sheets or on the blank pages/spaces in the examination paper the extra elements or key points within it may be missed.

General comments

This year, there has been a decrease in the number of candidates missing out the answers to the questions, showing that the examination paper offered the chance for all candidates to answer the questions set. This paper gave all candidates an opportunity to demonstrate their knowledge and understanding of ICT using a wide variety of topics therefore candidates tended to attempt all questions.

When a question indicates a specific number of answers, candidates should only write one answer in each allocated space as the first answer is marked for that space. Any extra answers placed on the same line or below the numbered responses are ignored.

Candidates need to be clear in the answers given rather than using basic statements like it is quicker. A good rule of thumb it to add 'because' and then give a valid reason. All answers on the paper should relate back to the question being set.

In several cases, handwriting was quite difficult to decipher. Examiners spend time trying to decipher words where the writing is not clear but candidates do risk their answer not gaining marks where handwriting is undecipherable. One major issue that Examiners are experiencing is the use of ROM and RAM, there the O or the A are so undecipherable they cannot read which has been given.

Comments on specific questions

Question 1

Overall, this question was challenging for candidates although **part (a)** was well answered.

(a) This question was well answered by many of the candidates. The answer the Examiners were looking for was Product_number.

(b) This question was challenging for candidates who had issues linking between those books that did not have a barcode and the use of a presence check. Many candidates appeared to know what a presence check was and how it operated but possibly thought that all books had barcodes.

(c) Surprisingly this part of the question was challenging even though it spanned both the theory and the practical parts of the syllabus. When a question asks for advantages, as this one does, then a comparison needs to be made. Some candidates wrote that a relational database used multiple tables and therefore reports and queries would be complex. Many of the answers given seemed to lack depth. This question was a good differentiator.

(d)(i) This part of the question was well answered by the candidates. The Examiners allowed currency on its own rather than numeric: currency, this may not be the case in future series.

(ii) This question was well answered by candidates on. The answer the Examiners were looking for was text or alphanumeric.

Question 2

Overall this question was fairly well answered with **part (d)** answering better than the other elements.

(a) This part of the question was challenging for some of the candidates who gave the answer as digital. The answer the Examiners were expecting was analogue. Perhaps the way the question was phrased namely 'the output from a sensor' rather than the question set in the past which was the 'input into a sensor'. Some candidates gave an example of analogue data, which was too vague, rather than the generic title.

(b) This question challenged many candidates. Those candidates that gave the correct answer for **part (a)** managed to give the correct answer for this part. Those candidates that got **part (a)** wrong tended to get this part wrong, namely by mixing up analogue and digital. The Examiners allowed binary as an alternative answer to this part, but this may not be the same in future series.

(c) This question, as with the other two parts was quite challenging for candidates. The Examiners were looking for an Analogue to digital convertor therefore candidates that did not write the correct answers for **parts (a)** and **(b)** tended not gain this mark.

(d) About half the candidates managed to gain the mark on this question. The answer the Examiners were looking for was temperature sensor. Some candidates wrote thermometer or motion sensor or even light sensor.

Question 3

This question was very challenging for candidates who tended to gain between 1 and 4 marks. This question shows how fast technology is progressing as some of the answer the Examiners allowed were not on the original mark scheme written two years ago.

(a) This question was very challenging for the candidates even though the differences between a smartphone and a laptop computer are well known. Most candidates gained 1 or 2 marks for the question. As with previous questions of this type advantages and disadvantages require a comparison to be made. Therefore 'the laptop has a larger screen' would gain a mark but 'the laptop has a large screen' is not a comparison. The Examiners allowed wider screen as it implied it was larger, but this may not be the case in future series.

(b) Candidates either gained full marks on this question or no marks with few gaining one mark. Some candidates correct identified sensor or touchscreen or camera, for example while others simply copied laptop and smartphone.

Question 4

This question was quite challenging for all the candidates although credit was gained by some candidates. It involved the comparison between a magnetic card reader and a chip and PIN reader. Comparison questions must include both similarities and differences. Some candidates answered the question by writing about the cards only rather than the readers. As a result of this misreading of the question some candidates struggled to achieve marks. As with other questions of this type come answers lacked depth, for example a chip and PIN card is more secure but to gain the mark an explanation is needed to state why this is the case.

Question 5

This question was very challenging for candidates. The question was a technical question relating to network devices and OP addresses. Technical questions tend to be more challenging for candidates. Technical questions remain an issue for many candidates.

(a) This question asked for the differences between a bridge and a router and was challenging for the candidates. Those candidates that did well on the question answered that a 'bridge connects 2 LANs together' and 'a router connects a LAN to a WAN'. The Examiners allowed the internet as an alternative to WAN and even though it was not totally correct device as al alternative for LAN in the router, although this may not be accepted in future series.

(b) As with **part (a)** this question was challenging for many of the candidates. Many candidates were able to state that IP addresses were internet Protocol addresses and that they were unique identifiers. Those candidates that understood IP addresses were able to gain high marks for the question. However some candidates went beyond the question and described how IP addresses are used in data packets, or stated it is used to find where users where situated, rather than devices, which gained no credit.

(c) Again, this question was a technical question and therefore was quite challenging for many of the candidates. This topic had been examined in previous series of the examination therefore it is surprising that it continues to cause issues with candidates. This part of the question required more technical knowledge than the other two parts. Some candidates gained marks for stating that it stored IP addresses or is a database of addresses which are used to determine where data packets will be directed. As with other technical questions those candidates that understood the process gained high marks.

Question 6

This question was a straightforward question about PDFs and ePublications. The question was quite challenging for the candidates to answer. Perhaps in the parts that related to ePublications candidates could not link this scenario to the topic of audience and layout.

(a)   PDFs as a topic had been set previously but candidates seem to still write that a PDF cannot be edited when in reality it is only difficult to edit it. Those candidates that understood the use of PDF were able to gain at least a mark. Some candidates correctly stated that a PDF needed a PDF reader to be loaded to open the file in some software.

(b)   This question was quite well answered with many candidates either gaining both marks or not gaining a mark, fewer candidates gained one mark. The kind of answers the Examiners were looking for included audio or video. Some candidates gave two answers for the numbered answers and therefore the first answer was marked then the second part was ignored.

(c)   This question was a good differentiator with candidates able to produce some good answers. The question related to the design features of an ePublication for a young audience; some candidates focused mainly on the scenario rather than the design features. As it is electronic, the design features for an ePublication would be media based i.e. audio, video, and animation together with static features. Some candidates produced answers that lacked depth, for example stating that fun colours were to be used was too vague but stating that the colours were bright added the depth that was needed.

Question 7

This question was well answered. This question was a very good differentiator with a good range of marks.

(a)   This question was quite well answered but there were a lot of repeated answers and stock answers including 'this password includes personal data' and 'easy to forget'. Some candidates correctly answered that the password was not strong and was easy to guess. Some candidates gave the alternative to the password being not strong by writing that it did not include symbols, although some candidates referred to special characters. However, some candidates include both on the same answer line which meant only the first answer could be given credit. Most candidates were able to gain at least a mark.

(b)(i)   This question was well answered by most of the candidates. The answer that the Examiners were expecting was encryption.

   (ii)   Most candidates were able to give the correct answer for this question, which was biometrics.

   (iii)   This part of the question was challenging for candidates.

   (iv)   This question was quite well answered by the candidates.

(c)   This question was quite well answered by the candidates. Some candidates, however, mixed up hacking with cracking. A password could be hacked even though it was not repeated, however if a password was cracked then the result could be used on other accounts using the same password.

Question 8

Many candidates found this question quite challenging, with some simply repeating the wording of the question namely health and fitness. Many of the answers lacked the depth to explain why certain devices would affect the health and fitness of the user. There were a lot of repeated answers like the use of smartphones to control other devices. For this session the Examiners allowed answers that related to the prolonged use of microprocessor-controlled devices, but this may not be allowed in future sessions.

For candidates who gave suitable examples of devices and then went on to describe the health or fitness issue relevant to the device, whether positive or negative, the maximum marks were achievable with many gaining good marks. It was more difficult to allocate marks where candidates made no connection to statements given or did not state a device, often just stating 'using microprocessor devices lead to ….'. This often led to effects not being clear, so it was difficult to gain any credit. Some of the answers related to microwaves not cooking food correctly or giving off radiation that caused cancer, but these types of questions were too vague to gain marks.

Question 9

This question which asked about computer memory was fairly well answered by candidates. Most candidates were able to gain at least 2 marks on the question.

(a) (i) This part of the question was very challenging. Some candidates misread the question and though it referred to portable SSD or even pen drives. The answers the Examiners were looking for where games or the OS where speed of loading was essential.

(ii) This was answered better than **part (i)** but some candidates again misread the question and thought it referred to portable devices. The answers the Examiners were looking for where files, data or programmes; this software could be large. Examiners allowed named types of media like videos and sound files.

(b) This question was very well answered by the candidates.

Question 10

This question that related to verification and validation challenged many candidates.

(a) This question was quite challenging for candidates, however there were some good answers. It highlighted a divide in responses, some confused verification with either validation or authentication techniques. It was pleasing to see responses referring to the original document when the data was checked. Some candidates still state that verification checks for data being correct rather than it being correctly copied. An explanation of double data entry was allowed but some candidates simply repeated the name by stating that data was entered twice without adding by two people. Some candidates then gained further marks by explaining that the computer then checked the data. Again there was confusion between visual verification and proof-reading with some candidates being vague in their answers. Visual verification compares with the source document whilst proof-reading does not need to do this.

(b) This question was answered better than **part (a)** although some candidates just gave answers without referring back to the example. Some candidates gave presence check, a presence check only works where the field cannot be empty, this field could be empty as it was not a key field.

Question 11

This question was challenging for candidates. It was pleasing to see responses following the process through and clearly identifying inputs and processes. Weaker responses often gave outputs, for example the ATM asks the user to input their PIN, also some responses went out of context and described the process of taking or depositing money into the bank. The processing of data was nt as well explained as the inputs.

Question 12

The candidates found **part (a)** more challenging than **part (b)**.

(a)   This was a very challenging question for many of the candidates. The Examiners were expecting answers that related to a hard break that reduced the number or orphans and widows. Some candidates did write about orphans and widows.

(b)   This part was answered better than **part (a)** with many candidates able to gain at least a mark. Those candidates that understood that the word was not in the dictionary were able to explain that they could either add it or ignore it.

INFORMATION AND COMMUNICATION TECHNOLOGY

Paper 0417/12
Theory 12

Key messages

This paper was in line with the difficulty of previous papers and was deemed as being very good to test the candidates. The paper showed a very good range of marks however the mode mark in the low 20s. The skew was towards the lower end of the mark range with a long tail. The range of marks was between 0 and 72 marks out of a possible 80 marks although candidates gained marks in every mark point to the maximum awarded mark of 72. The paper covered a large range of topics, some new ones and some that had been seen on previous examination papers, therefore giving a good coverage of the syllabus. The balance included technical questions as well as more general questions. This year's paper had less marks available than in previous papers, reducing the marks to 80 rather than 100.

As the scenarios of the paper change it is important that candidates read the question carefully before answering it as marks are awarded for answering the question that has been set. Candidates who performed well in this paper used specific and detailed language when answering the prose questions. To a lesser extent than in previous years some candidates answer the comparison questions using a split answer of advantages and disadvantages, with a line drawn down the answer lines. This type of layout does not give enough scope to gain high marks as the answers are simply statements without a comparison.

As with previous series I need to report back on the lack of use of generic names for hardware and software. 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.

As with previous reports I need to report again on candidates who write extra parts of answers elsewhere in the paper. Occasionally candidates may need to expand their answers on to other parts of the examination paper or onto extra sheets. It is important that if this occurs the candidate clearly writes where the extra part is written and writes the question number on the extra work. The paper is marked electronically and if the candidate writes on extra sheets or on the blank pages/spaces in the examination paper the extra elements or key points within it may be missed. There has been an increase this year on candidates using extra space but not clearly noting which question this refers to. There has also been an increase in the candidates who use extra sheets when there is space below the question to continue with the answer.

General comments

There is an increasing trend of candidates missing out answers to questions and therefore not attempting an answer. Sometimes attempting an answer may result in answers being correct. The paper gave all candidates an opportunity to demonstrate their knowledge and understanding of ICT using a wide variety of topics. 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 that space. Any extra answers placed on the same line or below the numbered responses are ignored.

Candidates need to be clear in the answers given rather than using basic statements like it is quicker. A good rule of thumb it to add 'because' and then give a valid reason. All answers on the paper should relate back to the question being set.

In several cases, handwriting was quite difficult to decipher. Examiners spend time trying to decipher words where the writing is not clear, but candidates do risk their answer not gaining marks where handwriting is undecipherable.

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Comments on specific questions

Question 1

Most of the candidates answered this question correctly, ticking pen drive. There were only a few candidates that ticked two choices.

Question 2

On paper this was a straightforward book-type question although candidates found it challenging. Only **part (c)** being answered well.

(a) (i)   This was a very challenging question for many of the candidates. We were looking for what was meant by analogue data, namely that it was continuous data or was data in a waveform. However some candidates were vague in their answers stating that 'it could not be read by a computer' or 'by a human' therefore not answering the question. The Examiners did, however, allow appropriate examples of analogue data, but this may not be the case in future examinations.

(ii)   This again was a challenging question for most candidates. On paper both these questions were deemed to be straightforward, but candidates stated very general answers rather than specialist answers that stated that digital data was discrete data or binary data. As with **part (i)** some candidates wrote that this was 'data that a computer could understand' or 'was stored digitally'. As with **part (i)** the Examiners allowed an example lik 0s and 1s, but this may not be the case in future series.

(b)   This was a new question that had never been asked in previous sessions of the examination. The Examiners thought that candidates would be able to give some good answers, but it was very challenging to many candidates. The Examiners were looking for was 'to allow devices to be controlled' or 'to send to an actuator'. Candidates in the past found questions about measurement and control straightforward so we were surprised when candidates found this question challenging. Some candidates related the question back to **part (i)** and **part (ii)** answering that data was converted so that 'it could be read by humans'.

(c)   This question used a list of answers where the candidates had to choose the correct answer. Many candidates were able to copy down the correct answer. One of two candidates either did not give answers from the list or merged answers. With merged answers the first part is marked then the rest ignored.

(c) (i)   This was well answered by the candidates. The correct answer was to #open the windows in the greenhouse'. The Examiners allowed slight deviations from the copying down of the words.

(ii)   This was well answered by many of the candidates although some answered with digital.

(iii)   This was well answered by many of the candidates with the correct answer being 'measure acidity in the river'. Again as with **part (i)** the Examiners allowed slight deviations ion the copying down of the sentence.

Question 3

This was a challenging question for many of the candidates. This was a technical question that asked candidates to name three network communication devices. Some candidates misread network as mobile phone technology and therefore gave answers like smartphone, tablet and others gave WAN, LAN and WLAN. The answers we were looking for included switch, hub and router.

Of the candidates that produced marks in this question they were able to name the device but had issues describing its use either muddling up the descriptions or writing a vague answer.

Question 4

As with question 3 this also was a very challenging question for many candidates. This question asked candidates to name and describe appropriate validation checks for the named fields. The examination paper gave examples of the data contained in the fields to help point candidates in the right direction. Some candidates gave the correct validation check but then had issues with the description. Other candidates wrote down data from the field. The Examiners thought that this question would be straightforward as it contained elements from the practical paper. For those that gave the correct validation check many were vague with the description, for example Length check, the description was checking that up to 4 characters when the actual answer is exactly 4 characters or format check and then writing down dd/mm/yy rather than dd/mm/yyyy.

Question 5

This was a new topic for the examination even though phablet computers had been on the syllabus for quite some time. Some candidates understood the concept of the phablet computers but answered the question from their own knowledge meaning that answers were vague, and many found the question challenging.

(a)   A phablet computer is a smartphone and tablet computer hybrid. It is larger than a smartphone but smaller than a tablet computer but has the features of both devices. This is what the Examiners expected candidates to answer, however many found the question challenging. One of the main issues with technical topics like this one is that general names for devices of this type may be different from the technical name. For example the technical name is a smartphone, but candidates answer with phone which can be a mobile phone, a smartphone or other types of phones.

(b)   As with **part (a)** candidates found this question quite challenging. This question asked the candidates for advantages and disadvantages of a phablet rather than a smartphone and to relate it back to the project. An advantage and disadvantage must be a comparison answer, some candidates were simply answering as a statement and only giving one side of the answer. The candidates knew the difference but being vague in this way they could not gain all the mark available; the good answers included the facts that the screens were larger therefore the keyboards were larger. However if candidates had given an explanation why these were advantages, then other marks were available.

Question 6

This question was quite well answered especially **part (a)**. This topic has been set in different ways in the past and it was felt that linking it to a device would help the candidates.

(a)   This part of the question was fairly well answered. The Examiners allowed eye strain even though it was not technically correct, this may not be allowed in future series. The types of answers that the Examiners were looking for included eye problems and headaches as the projector uses a strong, bright light. Some candidates gave these answers. As in previous sessions kealth and safety was mixed up.

(b)   This question was quite well answered but not as well answered as **part (a)**. The Examiners allowed answers like 'the projector falling and hurting someone' or 'tripping over lose cables'.

Question 7

This again was a challenging question with many candidates writing stateents rather than advantages and disadvantages. An advantage or disadvantage is a comparison therefore both sides of the argument are needed. Some candidates thought the quality of the video would diminish using a drone, whilst others misread the question and carried out a comparison with a human, rather than a human in a helicopter. This type of question requires the candidate to give a reason why it is safer to use a drone for example.

Question 8

This question was fairly well answered by the majority of candidates. However in 8**(d)** candidates tended to be vague with the answer.

(a)   This was well answered by the majority of candidates. We were looking for cloud storage although the Examiners allowed the word cloud on its own. In this question some candidates tended to answer with brand names, which do not gain credit.

(b)   This question was quite well answered by the candidates. The answer the Examiners were looking for was RAM.

(c)   This question was well answered by the candidates. Some candidates, however copied the question by writing 'solid-state drive', which is correct but is in the question. Many candidates could use their own knowledge to answer this question.

(d)   Candidates tended to know the answer but gave blu-ray on its own therefore di not gain the mark. Blu-ray on its own is the technology rather than the medium.

Question 9

This again was a challenging question for many of the candidates. This question was a new variation on a topic that had been set many times. Candidates were asked to define both validation and verification and then explain why both were needed. Many candidates were able to pick up good marks by writing down examples of both validation and verification but there were a few instances where candidates wrote that verification checked for errors, but this is not the case it only checks that the data has been entered or copied correctly from the source document. Other candidates mixed up visual verification with proofreading which does not require a source document. Some candidates repeated the question when they answered it by writing validation checks to see if the data is valid or verification verifies the data. Less candidates could explain why both were needed. Some candidates thought that verification was related to checking the authenticity of a person and then validating who it was.

Question 10

This again was a challenging question for many of the candidates.

(a)   This was a standard book type question therefore should have been straightforward however many candidates found the question very challenging. The answers the Examiners were expecting included user requirements and hardware and software requirements. Some candidates knew the answer but missed out the type of system i.e. new or current.

(b)   This question allowed candidates to give some good answers although some candidates found the question quite hard. It involved an evaluation between parallel running and direct changeover. An evaluation involves positives and negatives of each type of implementation. Many candidates understood the concept of each type of implementation but did not give enough reasoning or descriptions to gain the higher marks. The Examiners allowed 2 marks for descriptions of both parallel running and direct changeover. In questions of this type it is important to expand on the answers given to ensure that higher marks can be awarded.

Some candidates gave a good description of the different implementation methods but missed out the changeover for example parallel running involves to systems running side by side but missing out that the new system would take over.

(c)   This question related to using an online booking system rather than setting one up or the company operating it. Some good answers were given by the candidates, but they did not answer the question, therefore answers about saving money as they did not have to travel to the hotel to book could not gain marks as this may have been inappropriate as the hotel could have been in a different country. With questions that relate to a scenario candidates need to read the scenario before answering the question. Some candidates mixed up this with online shopping.

(d)   There were a number of different answers as to what WAN and WLAN were. Again this was a straightforward question that some candidates found difficult. A WAN is a Wide Area Network and a WLAN is a Wireless Local Area Network. Many candidates were able to name the networks but

not expand upon this with good, detailed descriptions. For rxample a WAN covers a larger area than a WLAN is too vague, but it covers a larger geographical area makes it correct as it implies countrywide.

Question 11

Part (b) of this question was answered better than **part (a)**. the question was about internet shopping, which was not a new topic, but the style of the questions had not been set previously.

(a)   This question related to the benefits and drawbacks to the clothing retailer rather than the customer. In previous examinations the Examiners tended to ask question about the customer and this change of wording was missed by many candidates who answered the question with statements like 'it would save time than going to the shop etc'. Some candidates started to answer about the retailer but added comments about the customer. There were some good answers given, like cost savings as fewer staff were required or more customers as it was worldwide and this would lead to higher profits, but again as in previous prose questions some of these lacked depth.

(b)   This part was answered better than **part (a)** and as there were so many possible answers many candidates were able to gain full marks.

Question 12

This topic had been set many times before in different guises. Sometimes the Examiners ask that candidates draw a form and at other times ask what the features are of a form. Some candidates seemed to not understand what was meant by a feature and wrote about the field names. But as with other prose questions of this type on the paper answers seemed to lack depth and this was evident in **part (a)**

(a)   This question, appeared on paper to be straightforward, but answers lacked depth therefore even though candidates knew the answer they could not give enough detail to gain the mark. For example good colours, good writing rather than bright colours so they attract the audience or clear and readable fonts.

(b)   This was a new topic for the examination and as such some candidates seemed to find the question challenging. The answers we were looking for included larger fonts, highly contrasting colours or even text to speech. Some candidates misread the question rather than answering for visually impaired people. Some candidates over think the questions and answered about forms containing AI systems.

INFORMATION AND COMMUNICATION TECHNOLOGY

Paper 0417/13
Theory 13

Key messages

This paper due to the issues with **Question 9a** was in line overall with previous sessions but as six extra marks were added to all candidates it looked on paper to be slightly easier compared with other examinations in this series.The paper showed a very good range of marks with the men mark in the high 20s. The range was fairly evenly spread between 6 and 49 marks. The paper covered a large range of topics, some new ones and some that had been seen on previous examination papers, therefore giving a good coverage of the syllabus. The balance included technical questions as well as more general questions. This year's paper had less marks available than in previous papers, reducing the marks to 80 rather than 100.

As the scenarios of the paper change it is important that candidates read the question carefully before answering it as marks are awarded for answering the question that has been set. Candidates who performed well in this paper used specific and detailed language when answering the prose questions. To a lesser extent than in previous years some candidates answer the comparison questions using a split answer of advantages and disadvantages, with a line drawn down the answer lines. This type of layout does not give enough scope to gain high marks as the answers are simply statements without a comparison.

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General comments

There is an increasing trend of candidates missing out answers to questions and therefore not attempting an answer. Sometimes attempting an answer may result in answers being correct. The paper gave all candidates an opportunity to demonstrate their knowledge and understanding of ICT using a wide variety of topics.

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 that space. Any extra answers placed on the same line or below the numbered responses are ignored. Candidates need to be clear in the answers given rather than using basic statements like it is quicker. A good rule of thumb it to add 'because' and then give a valid reason. All answers on the paper should relate back to the question being set.

In several cases, handwriting was quite difficult to decipher. Examiners spend time trying to decipher words where the writing is not clear but candidates do risk their answer not gaining marks where handwriting is undecipherable.

Comments on specific questions

Question 1

Surprisingly this was a challenging question with many of the candidates appearing not to understand the term validation check. The Examiners gave three examples to act as scaffolding to help candidates with their answers. The type of answer we expected were length check, range check and check digit.

Question 2

This question was quite well answered with most candidates gaining at least three marks.

(a) The answer to this question was section break but the Examiners allowed page break as an alternative answer. This may not be the case in future series.

(b) Image file format was generally well understood with most candidates gaining marks here.

(c) Footers were well understood by the majority of the candidates, and most were able at least to give an example of what was contained in a footer.

Question 3

Overall this question was quite well answered although **part (b)** was challenging for some candidates.

(a) Most candidates were able to specify appropriate display formats. Some found the question challenging and tried to write data to go into the boxes rather than the type of format.

(b) This part of the question was quite challenging for many of the candidates. Most candidates knew that a QR code would redirect a user to a website, however fewer candidates could describe how this could happen by writing 'with my phone' rather than with a 'device with a camera'. Candidates understood that a QR code contained information about the product and saved space on the packaging.

(c) The correct formula or an explanation as to why it was wrong was well answered with most candidates gaining marks. The Examiners allowed other variations to BODMAS.

Question 4

This question was quite well answered with many candidates able to give some good answers, gowever **part (a)** was more challenging than **part (b)**.

(a) This was a challenging question although there were some good answers concerning the user ID and password. Most candidates could distinguish between user IDs and passwords and also understand their purpose. The user ID gives access to the computer system whilst the password protects the data. Many candidates knew the User ID was unique, but some also thought that the password was also unique. Some candidates quoted that it would be a combination of both the user Id and password that would make the login details unique.

(b) Biometric methods were well understood by many of the candidates. The question asked for examples of biometrics i.e. fingerprint for examples, but we were lenient with candidates that gave the device i.e. fingerprint scanner. However some candidates gave examples that were not appropriate to the question, and these did not gain credit.

Question 5

This was a challenging question for candidates. It looked at the differences between a cloud-based laptop and a laptop that contained an SSD. Most answers that gained marks concerned the need or not for the internet, and the difference in storage amounts available to the two different laptops. Some candidates wrote answers that related to hacking, but this was not a difference as both systems could be hacked. The batter answers related to the size of storage and the fact that once bought the laptop with SSD did not have any other storage costs whereas the laptop that used the cloud had to pay monthly for storage.

Question 6

This was a challenging question with few candidates understanding the concept of a computer model. Many believed that it was an actual model bridge and composed their answers accordingly. Correct answers generally centred around the concepts of safety and costs. Even though these candidates gained marks for these answers few candidates were able to explain why these were important. For the prose questions candidates need to give reasons or expansions to their answers in order to achieve good marks.

Question 7

This was a very challenging question for most candidates especially in **part (a)** which was a new topic for the examination.

(a)   Extended reality is a mixture of virtual reality and augmented reality. Few candidates gained marks on this question as they described virtual reality rather than extended reality.

(b)   This topic had been set previous and candidates then were able to gain good marks, however candidates found this question was more challenging than in previous examination series. Candidates knew what a 3D printer was and how it operated but could not relate this to industrial processes and the reasons that 3D printers were a good idea or a bad idea. Some candidates wrote that 3D printers worked faster than a human carrying out the task and that they could work all night. However, candidates could have gained marks by stating that if there had been a power outage or a fault in the programming then no one would know until it was too late. There was a misconception that 3D printers produced perfect models but did not add that it depended on the program. Some candidates correctly stated that the 3D printer could only work with some materials and that they produced fewer parts, and their initial cost could be high.

    This was one of the harder questions on the paper and candidates had to analyse the use of 3D printers giving both positives and negatives.

Question 8

Most of this question was quite challenging for the candidates, with only **part (b)** gaining good marks.

(a)   This was a challenging question with candidates explaining the concepts concerned with the internet working or not and this affecting the smart security system. Some candidates thought that if the internet connection failed then the system would go off, rather than the owner not being able to monitor it.

(b)   There were some good answers to this question with the concepts of sensors used in a security system being understood by most candidates.

(c)   This question which was related to the ANPR system was generally well understood and some good answers were seen. Some candidates did not fully read the question and thought the system had to do with road safety. Some candidates however thought that the CCTV camera was in some way the intelligent body and did not envisage any connected computer system or database.

(d)   Some sensible problems that could occur to stop the number plate being read were seen. However with some of the answers seen this session some candidates do not give the full explanation or reasoning behind their answers. For example some candidates rightly stated that 'it may confuse numbers and letters' without explaining why this would be the case. Others stated that the number plate could not be reads if it was dirty or the weather conditions were bad without expanding on the answers given.

Question 9

(a)   Due to an error on the number of lines for this question the examination board decided that all candidates should receive the maximum 6 marks.

(b)   This was a challenging question with candidates still having issues with the topic. This time the question placed the examples associated with corporate house style in **part (b)**. Many candidates mixed up house style and making documents look professional. Some candidates however gave correct answers that related to consistency of the webpages and that if corporate house style was used then the webpages could be linked directly with the University.

(c)   Surprisingly the features of house style were not well known. Candidates understood the features of the corporate house style could be colour and font or even logo. But they did not expand upon these answers only giving one-word answers and therefore marks could not be awarded the marks. Stating the position of the logo or the size of the logo would have achieved the marks. The answers the Examiners were looking for were font style or font type and background colour etc.

Question 10

As a whole this question was quite challenging for the candidates.

(a) (i), (ii), (iii) The difference between interview, observation and questionnaires was known by many candidates. In place of interview some incorrectly used words like 'communication', 'conversation' or 'dialogue'. **Parts (i)** and **(ii)** were well answered but in **(iii)** candidates wrote answers like surveys which is too vague an answer.

(b)   This was a challenging question even though it was a standard question. Few were able to correctly identify items that needed to be designed after the systems analysis.

INFORMATION AND COMMUNICATION TECHNOLOGY

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Paper 0417/02

Document Production, Data Manipulation and Presentations

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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 named font for the type specified
- enter accurately text in bold on the question paper
- use proofing techniques to identify errors and ensure consistency of presentation
- retain existing styles applied to document recall text
- be able to distinguish between the database page header/footer area and the report header/footer area and understand which is appropriate to use
- ensure they include their identification details in tasks before printing as instructed on the question paper
- produce legible screenshots which show the outcome of an action rather than the skill process
- printout the Evidence Document as this contains supporting evidence that could substantially improve their grade.

General comments

Candidate performance was at the same level as previous sessions. Overall, the candidates appeared to be well prepared for the examination with most attempting all tasks. The database tasks proved most challenging for the majority of the candidates. Candidates also had difficulty in linking the correct text in the presentation and in formatting the table accurately. The paper gave a good spread of marks and the majority of candidates showed a good level of skill.

Candidates must be able to distinguish between the typeface categories of serif and sans-serif font types. These are not the actual 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. Marks are available for accurate data entry of this text which must be keyed exactly as shown, including punctuation and capitalisation. Candidates are advised to carefully check their data entry to ensure it matches the text on the question paper. Common errors include 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 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 screenshots to ensure important elements are still shown such as primary keys and all the fields in the database table structure.

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 of the work, marks cannot be awarded. 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 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 – *The Evidence Document*

An Evidence Document was created and used by most candidates to store screenshot evidence. Occasionally, the screenshots were too small or faint to be read, or essential information had been cropped out. A small number of candidates did not print identification details on every page of the document so marks could not be awarded for those pages. A small minority of candidates did not present the Evidence Document for marking.

Task 2 – *Document*

Question 1

All candidates opened the correct file and most saved it correctly with the required file name. A few candidates incorrectly saved it in the original RTF format rather than the format of the word processing software being used, and a few did not enter the filename in capitals as shown on the question paper. Screenshot evidence of the outcome of the save was performed better than previous sessions with most capturing the folder contents after the file has been saved rather than showing the save in process. Most candidates retained the page setup settings as instructed. A few candidates made changes to the existing paragraph styles which had already been created and applied, even though the question paper instructed that no changes should be made.

Question 2

A number of candidates did not attempt to remove the two-page breaks from the recalled text. Those that did, often lost the spacing between the paragraphs or joined the paragraphs together therefore losing the paragraph breaks completely.

Question 3

The majority of candidates included an automated page number correctly aligned to the left in the header. An automated field was not always used with the keyed number 1 appearing on all pages. Some candidates used a style of numbering that included the word 'Page' which was acceptable providing left alignment with the page margin was maintained. The footer text had occasional capitalisation or spelling errors with '*Market'* entered as '*Marked'* or '*Marketed'* and 'R*eview'* as 'R*eviewed'*. Most candidates inserted all their details after the footer text and aligned this to the right margin. Candidates who used the built-in content control to align items did not always remove superfluous text or placeholders in the header and/or footer areas.

Question 4

Most candidates formatted the correct text to be two equally spaced columns with the correct spacing between the columns. However, controlling the text displayed in columns was not always well done with some candidates including the final two paragraphs in the column selection or changing the entire document to two columns. Several did not include the final full stop in their selection. The initial column break was occasionally inserted below rather than above the subheading and sometimes a page break was inserted instead of a section break. The space between the columns was not always changed from the default value or was much larger than 2 centimetres.

Question 5

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. A number of candidates did not base the style on the 'default' or 'normal' paragraph style as instructed. The style formatting was mostly set correctly although some candidates did not evidence 0-point spacing after the style. A number of candidates incorrectly entered 'sans-serif' as the font name which is not a recognised font. A named font style with attributes of the sans-serif typeface category must be selected and applied. Other candidates set '*Times New Roman*' as the font style which is not a sans-serif font style. Screenshot evidence of the *VG-subhead* style provided details of the settings created for this style.

Question 6

Most candidates correctly identified all four subheadings in the document and applied the subhead style created in step 5 to each subheading. The formatting of the subheading text needed to match the settings seen in the Evidence Document screenshot for the *VG-subhead* style. A few candidates applied the formatting to the subheadings without providing screenshot evidence that the subhead style had been created and therefore did not gain any of the style marks.

Question 7

Candidates found moving a paragraph challenging. Most candidates moved the paragraph to the correct location, but this was not done with the accuracy required. Some candidates moved the heading with the paragraph or copied the text instead of moving it. The most common error was inconsistent spacing left where the text was moved from, or below the moved paragraph in the new location. Some candidates joined the moved paragraph to the previous paragraph, so it was no longer a single paragraph.

Question 8

Most candidates created a vertical bar chart. The correct selection of data was not always well done with several candidates including the '*Region'* row in their selection or did not include the region names. A few horizontal bar charts were seen.

Question 9

The chart labels often contained data entry errors such as incorrect capitalisation and words or spaces missing from the chart title. The category axis label was often placed on the value axis or was spelt incorrectly.

Question 10

Data values were usually displayed correctly. Occasionally, these were omitted or placed in the middle or bottom of the bar instead of along the top of each bar.

Question 11

Candidates who attempted this step usually controlled the value axis scale with a minimum value of 0, a maximum of 1500 and increments of 300. Occasionally, the scale was unchanged, or incorrectly displayed as 0 to 1600 with increments of 200.

Question 12

The chart was usually placed in the correct position, within the column width and with data displayed in full. Where rotated or slanted category region labels had been used, these were occasionally truncated.

Question 13

The majority of candidates modified the *VG-list* style but did not always produce screenshots to evidence all the changes. The most frequent errors included not changing the bullets to a numbered list, not changing from a serif to sans-serif font style and not applying italic enhancement. Very few candidates presented screenshot evidence of aligning the numbered bullets to the left margin.

Question 14

Indenting the paragraph from both margins was mostly completed well. A few candidates indented more than one paragraph and not all candidates indented the text from both margins. Occasionally, the indents were much larger than 1.5 centimetres suggesting the indent was in inches.

Question 15

In most cases the overall presentation of the document was good. Most documents were presented in landscape orientation although occasionally the page margins had been changed. Good proofreading skills were not always evident as the two spelling errors in the first paragraph were often not corrected and widows/orphans were not controlled. Some candidates incorrectly made changes to the formatting of the existing styles in the recall document. The VG-title style was changed to a sans-serif font style and justification, linespacing and consistent paragraph spacing were changed for the VG-body style. A few candidates inserted unnecessary hard returns between paragraphs creating inconsistent spacing between paragraphs.

Task 3 – *Database*

Question 16

Examining the csv file and identifying the most appropriate field containing unique data for the primary field produced a mixed response. Most candidates correctly selected the *Game_Code* field as the primary field but a number of candidates set this on the first field in the table *Game_Title* (which contained duplicate data), included an ID field and set this as the primary key or did not set a primary field at all. Importing of the csv file using the correct field names and data types was mostly done correctly with the exception of the G*lobal_Sales* data which was rarely stored and displayed to 3 decimal places. These values were either not formatted at all or stored and displayed as integers. Some screenshot evidence was cropped so did not show all nine fields in the games table.

Question 17

There were very few issues with importing the second csv file with most candidates using the correct field names and data types. As the primary key was given in the question paper, there was little issue setting this correctly. A number of candidates did not provide screenshot evidence of the platforms table structure but provided two screenshots of the games table instead.

Question 18

The one-to-many relationship between the tables was usually well done but the screenshot evidence did not always confirm the type of relationship created. A screenshot of the relationship dialogue box will evidence the relationship type. The relationship diagram can only be credited if it shows the single and one-to-many infinity symbols confirming the relationship type.

Question 19

Most candidates located the correct record and amended the details accurately. Occasionally, the *Rank* was entered incorrectly as 454, 554 or 555.

Question 20

Most candidates entered the new record in the correct table. The new record occasionally contained data entry errors with the incorrect spelling of *Sprinter* and errors in *Lowena Interactive.* Candidates were penalised if they overwrote the first record in the database (*Red Crusade*) instead of entering this data as a new record at the end of the table.

Question 21

The first 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 or capitalisation errors or displayed additional text such as '*Query 1*' in the title area. The two search criterion was completed well by most candidates. The wildcard search on '*sport*' was

generally completed correctly. The most common error was searching for the records greater than 2011 instead of 2011 and later, and a few confused the greater than (>) and less than (<) operators. Most included the correct fields in the report although these were often in the wrong order as, without manual intervention, the software placed the sort field at the start of the report. This can be avoided by setting the sort order in the report structure rather than in the query or during the creation of the report if a report wizard is used. The sort order was usually correct. Occasionally, data in one or more fields was truncated (most commonly in the *Game_Title* field) and required some manipulation to ensure all data was fully visible. Most presented the report in portrait orientation, but this did not always fit on a single page. Most candidates entered their identification details on the report.

Question 22

The second report used fields from both tables. The report title was usually entered in a larger font size at the top of the report but occasionally contained data entry or capitalisation errors. Most candidates completed the search successfully. Occasionally, only *Action* or *Adventure* genres were found, not both. The *Rank* search was more challenging with searches finding records less than 200 (omitting the 200 record), records equal to 200 and some incorrectly used the greater than operator (>=200). The new field heading was usually entered accurately with only a few incurring a fault for omitting the underscore and/or a lower-case letter on '*price*'. Most correctly calculated the discounted price although this was often not formatted to display the same currency symbol as the *Price* field or 2 decimal places. Most included the correct fields in the report although these were often in the wrong order due to the sort being set during the creation of the report instead of in the report structure. Most fitted the report to a single page wide but truncation in one or more fields was common. The two-field sort was not completed well with a number of candidates sorting on the first (*Rank*) field only. This was probably due to the second sort field appearing first in the report. This again can be avoided by setting the sort order in the report structure after the report has been created instead of in the query or during the setup of the report. Most presented the report in landscape orientation with the correct fields displayed. A few candidates presented this report in portrait. The calculation to find the earliest release year (MIN) produced a mixed response. Incorrect functions used included AVG, SUM, COUNT and MAX. The screenshot did not always evidence that a database formula had been used and frequently the control box was truncated so the full formula was not fully visible. This value was not always positioned under the *Release_Year* column. Some candidates placed this calculation in the page footer, so it appeared at the end of every page in the report, rather than the report footer so it appeared at the end of report as instructed on the question paper. The label for this calculation was usually positioned correctly to the left of the value but occasionally contained capitalisation errors and/or additional punctuation. Identification details should be entered in the page footer, so they appear in the footer of every page, but several candidates entered these in the report footer, so they appeared only at the end of the report, or in the report header. A few candidates omitted their identification details from all pages of the report which could not then be assessed.

Task 4 – *Presentation*

Question 23

Most candidates successfully imported the 5 slides and presented each as a title and bulleted list. A small number of candidates imported the data but did not display bullets on the slides. Marks were not awarded where incorrect software had been used such as the RTF file opened, manipulated, and printed in word processing software.

Question 24

A number of candidates incorrectly entered their identification details in the page header instead of on the right on the slide header, so their details only printed at the top of each page and did not appear on every slide. When the details were entered on the slide header they were not always in the same position on every slide.

Question 25

Most candidates attempted to change the layout of the correct slide although this was not always set as a title and table layout. Some candidates incorrectly inserted a new slide for the table. The majority of candidates managed to create a table of 3 columns and 6 rows but a few had tables with 6 rows but numerous columns. Formatting the table as instructed within the presentation software proved challenging for some candidates. A number of candidates did not apply a plain table style but applied a themed background with shading and colour in the rows. Those candidates that applied a plain table style were more

successful in displaying internal and external gridlines. Occasionally, the table extended off the slide so not all gridlines were visible, and it was not possible to assess how many columns or rows had been set.

Question 26

The data from the correct source file was usually imported into the table although occasionally this text was incomplete with missing full stops or changes to the original source data. A number of candidates did not adjust the column widths and as a result, the data in column 3 wrapped over more than 3 lines.

Question 27

Candidates found setting the row height challenging. The row heights were often inconsistent and very few managed to set all 6 rows to a height of 2 centimetres.

Question 28

Formatting the first column to look like the question paper was generally well done. Most candidates managed to merge the cells, rotate the text and apply white text on a black background. Candidates were less successful with centring all the text in the table both vertically and horizontally.

Question 29

Most candidates attempted to demote the bullets and format the 7 lines of text as shown on the question paper, but few achieved full marks for this question. Most correctly indented the text and applied a dashed bullet style but there was not always a space between the dash and the text. Common errors were not applying italic enhancement and not decreasing the size of the text.

Question 30

On this paper the hyperlink produced a mixed response. A common error was not applying the link to the correct two words with some candidates including more text or setting the hyperlink on the full line of text. Some candidates produced no screenshot evidence of the hyperlink, or the evidence did not show the text linked to the correct slide.

Question 31

Most candidates printed in portrait orientation with two slides each filling half the page. Controlling the printing was not so well done with many candidates printing all the slides in the presentation instead of printing only slides 2, 3, 4 and 5. Candidates who also printed slide 1 as a single full-page slide were not penalised.

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 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.

INFORMATION AND COMMUNICATION TECHNOLOGY

Paper 0417/03
Practical Test 03

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 CSS and HTML and screen shots submitted can be easily read by examiners without the use of magnification devices.
*   Candidates need to follow the instructions on the question paper in respect of the HTML tags that can be used for a task and not rely upon WYSIWYG software to provide a correct solution.
*   Candidates should have a sound understanding of HTML, not just be able to create a page using WYSIWYG software, or where it is used be able to edit the markup appropriately.
*   Candidates need to ensure that all spreadsheet column widths are wide enough to display the data/formulae whilst using a font size large enough to enable examiners to read the work, without the use of magnification devices.
*   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.

General comments

There were significant differences in the range of results from centre to centre and from candidate to candidate within centres. The paper gave a good range of marks and candidate errors were spread evenly over the sections of the paper.

Candidates must ensure that the text within the CSS, HTML and all spreadsheet printouts is fully visible, large enough and clear 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 – File Management

Question 1

The **tgs** folder was created as specified by most candidates who also located and stored the required files in this folder. However, when taking a screenshot of this folder, a significant number of candidates cropped the image so that the folder name **tgs** was not visible. Examiners were, therefore, unable to verify that the files viewed were in the correct storage location. Another common omission was displaying the file details without the image dimensions.

Task 3 – Web Page

Question 2

Performance on this question was significantly better on this paper than in similar questions in previous sessions. Many candidates produced the structure of the page within a single table and had a structure as shown in the diagram. Almost all candidates did not display the letters in the cells as instructed in the question paper.

Question 3

The majority of candidates placed the three images in the correct table cells, with the giraffe image in cell A, the banner/logo in cell B and the image of the giraffe's head in cell F. Few candidates set appropriate alternate text for all 3 of these images. The **alt** text attribute should contain text that is used by a text reader to indicate what the image is for the partially sighted in the event that the image fails to display in the browser. This needs to be detailed enough for a user to understand what the image represents.

The instruction to use inline style attributes to make sure that the logo fits the full width of cell B appeared to be challenging to a significant number of candidates. Many ignored the 'use inline style attributes' part of the question placing an HTML **width** attribute, for example **width=100%** within the **img** tab rather than a **style** attribute such as **style="width:100%"**. A significant number of candidates using WYSIWYG packages had attempted to set two different width attributes in the **img** tag, one set by the package and then their own attempt to set the width to 100%. Only one width attribute should be present within this tag both from an efficiency perspective and to ensure that all browsers parse the correct value when rendering the web page.

Question 4

This step was performed well by most candidates. Many candidates correctly placed extra h2 tags or break tags to split the paragraphs. There were some typographical errors in the typed text. Not all candidates set this into style h2 with a surprising number using a combination of h2 and paragraph tags.

Question 5

A large number of candidates ignored the instruction to use video and source tags to place the video, many allowing their software to attempt to insert the video tags. Candidates used <object>, and in some cases even <img>, but these gained no credit. Of those candidates, who attempted this using the <video> and </video> tags, not all set the width and height of the video to the specified values. Some candidates erroneously set their error message as part of an alt attribute (which is not used with the video tag) or did not place the error message between the <video> and </video> tags. The most common error seen from candidates attempting to use the video tags was the failure to include source tags, instead attempting to place the src and type attributes directly into the video tag. Most candidates correctly used the controls attribute, although a significant number attempted to add values to this attribute which are not required.

Question 6

This step was frequently completed as specified with the stylesheet attached, although not all candidates placed this in the head section. The most frequent error was to overwrite the values set in the stylesheet in the HTML of the web page, often by setting the table width to 100% using an HTML attribute. Some candidates erroneously included a file path which enabled the file to be attached on their computer but would not work when uploaded to a web server.

Question 7

The stylesheet was often edited, but few candidates corrected the spelling of **collapse** despite an instruction to correct the mistake in the existing stylesheet. Few candidates centre aligned the tables within the browser window using **margin-left: auto** and **margin-right: auto**, although a very small number of candidates did attain these marks using the compressed version with a single margin element. A number of candidates did not use **width:85%** to set the table width with a variety of incorrect responses, such as background-width:85%. Table borders and gridlines were frequently visible in the browser view of the web page and few candidates had switched the border(s) off in the CSS. To ensure this happened, borders had to be switched off (using whichever method the candidate chose) in both the table and td selectors. Many candidates set the background colour as specified, although a small number did not get the red, green and blue components in the correct order, resulting in a pink background to the web page rather than a light blue one.

Styles h1 and h2 were frequently set to display the correct fonts in the order specified. However, a number of candidates only selected a single font rather than allowing the browser to select from the list given. A number of candidates introduced typographical errors in the font names with Cosmic often replacing Comic in both fonts. A number of candidates omitted the speech marks from both specified font names, whilst other candidates added them to the generic sans-serif declaration value. Most candidates who attempted the **font-family** declarations did so using two selectors together to make these more efficient. A number of candidates ignored the instruction that all colour codes must be in hexadecimal, some using the colour word blue and others omitting the # to inform the browser the following characters are in hex. A significant number of candidates did not place their details as a CSS comment at the start of the stylesheet. A number of candidates included HTML in their stylesheet despite clear instructions not to do so. Most candidates placed a copy of their stylesheet in the Evidence Document although not all made it easy to read with some very small screen shots seen by examiners.

Question 8

Browser and HTML evidence were not always seen from candidates, often one of these elements was omitted from the Evidence Document. Not all candidates displayed the address bar in the browser and some candidates did not use a browser at all, displaying their page in an editor which gained them few marks. Some candidates provided a printout, rather than a screen print of the web page. Most candidates placed a copy of their HTML in their Evidence Document, often copying and pasting the text. Those candidates who attempted this with screen shots were less successful, as some screen shots did not display all the HTML and the text in others was so small or had so little contrast between the background colour and the text, so they were sometimes unreadable. It is important that candidates present examiners with work that will gain them the marks, to this end, appropriate font size and readability are critical.

Task 4 – Spreadsheets

Question 9

Opening, examining, and saving the file appeared to have been completed with few problems by the vast majority of candidates, although many saved it as a comma separated values (.csv) file rather than as a spreadsheet. The placement of the text and automated functions in the header appeared to be more challenging, with the candidate details on the left frequently correct but the automated text on the right less frequently so, with the file path sometimes omitted. Some candidates did not follow the instructions to save using the filename, the underscore and then candidate details.

Question 10

Many candidates inserted the two new columns to the left of column A and formatted the spreadsheet as shown, but there were few errors and omissions were seen. These included:

- not merging the correct cells in row 1 and column N.
- not right aligning the contents of cells in column A.
- not centre aligning the contents of cells in row 2.
- not reducing the width of columns B, H and M.
- not wrapping the contents of the merged cell N1:N2 as shown in the question paper.

Question 11

The majority of candidates used appropriate sum functions to complete this step. A number of candidates used formulae like =C4+D4+E4+F4 which did not meet the requirements of the question as it asked for a function. The best acceptable solutions were =SUM(C4:F4) or =SUM(C4,D4,E4,F4) but solutions such as =SUM(C4+D4+E4+F4) were not deemed acceptable as the sum function was not used within the calculation.

Question 12

The majority of candidates used appropriate sum functions to complete this step. A number of candidates used formulae like =I4+J4+K4 which did not meet the requirements of the question as it asked for a function. The best acceptable solutions were =SUM(I4:K4) or =SUM(I4,J4,K4) but solutions such as =SUM(I4+J4+K4) were not deemed acceptable as the sum function was not used within the calculation.

Question 13

Most candidates placed a correct formula in cell N4. A small number of candidates used =L4-G4 rather than =G4-L4.

Question 14

Some candidates placed a correct formula in cell O4, some candidates omitted this question, others incorrectly used absolute referencing on the reference to O3. A variety of other erroneous attempts such as =L4+G4 and =L4-G4 were also seen.

Question 15

Most candidates who had attempted all 4 formulae replicated them correctly, although not all of them did so down to row 15.

Question 16

Despite clear instructions in the introduction that all currency values must be in dollars ($) displayed to 2 decimal places, this was not evident in a significant number of candidates' work as they did not apply appropriate formatting to cells containing numeric data. The omission of cell O3 being was the most frequent error. A variety of other currencies were seen, the most common being pound sterling and naira.

Question 17

This question appeared to be challenging for a number of candidates. Many would have appeared to set the conditional formatting (as there was evidence of coloured text and backgrounds in the printouts) but not all these candidates displayed screenshots in their Evidence Document showing their methods. Where the evidence was presented, several candidates did not show the range of cells the formatting was being applied to or did not select less than zero as the criterion. A number of candidates took the phrase about negative numbers in the question paper to search based on text containing "-". While this might work for the present case, it would not work if negative numbers were displayed in brackets. Hence a numeric search on <0 would be more effective.

Question 18

This was completed correctly by almost all candidates. However, row and column headings were sometimes not visible and formulae or data were not fully visible.

Question 19

This was completed correctly by almost all candidates, but row and column headings were sometimes visible and occasionally the data was not fully visible. Some candidates did not print the entire spreadsheet showing the values, printing only the cells, containing numeric data. Some candidates did not fit this printout to a single landscape page. Data, particularly in cell C2, was frequently not fully visible.

Question 20

Many candidates completed the data entry as specified but not all got the correct resulting values (due to formulae errors), nor displayed all the data in full on a single landscape page. Data, particularly in cell C2, was frequently not fully visible.

Task 5 – Printing the Evidence Document

This was printed as specified by almost all candidates.