APPLIED ICT

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Paper 9713/11
Written A
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Key Messages

Candidates appeared to have been well prepared for this assessment.

However, there are still some who appeared to rote learn answers from previous years' Mark Schemes. This is strongly advised against as, although questions might cover a similar topic, the scenarios might change considerably. In this paper, as with any exam paper at this standard, candidates are required to show a level of understanding as well as a depth of knowledge. This cannot be achieved by simply repeating mark points from previous Mark Schemes. The points listed on Mark Schemes are often a summary of the knowledge required to answer the question and should not be interpreted as an answer in itself. Candidates need to show an understanding of the scenario. As this is 'Applied ICT', candidates are expected apply their knowledge to the context of the scenario. It is important for candidates to realise that they need to refer back to the scenario when answering questions.

Knowledge of topics was evident in the majority of candidates, although the depth of understanding varied considerably.

Credit was distributed reasonably well with better ability candidates being able to score well on the paper.

Comments on specific questions

Question 1

Candidates did not do as well on this question as expected.

Many candidates provided brief responses which lacked sufficient detail to gain credit. A number of candidates reproduced answers from a previous year's Mark Scheme relating to a question asking for a comparison of advertising on a company's own site with advertising on a third party site. The context here was completely different and answers relating to pop ups and other factors relating to the design of web sites were largely irrelevant.

Question 2

Many candidates were able to gain credit in this question.

However, despite candidates understanding the basics of central heating control, they could not describe the functions of the various elements in a technical way. Many lost credit by failing to describe which temperature was being read or exactly what the roles of the sensors were. Some candidates gave detailed descriptions of the actual functioning of a central heating system and other candidates repeated answers relating to a 2011 question and described the use of compressors and other air conditioning components. ADC and actuator were often mentioned but there appeared to be a lack of confidence in the candidates as to what their function is.

Question 3

This question was better answered than other questions on the paper.

(a)   This was a straightforward question which was well answered by most candidates, although a small number of candidates appeared to ignore personal characteristics and wrote about the hardware needed.

(b) Many candidates gained credit on this question though it was not quite as well answered as part **(a)**. Candidates often started to provide an answer but failed to elaborate on their initial thoughts. Examples of this were brief mentions of being distracted and lack of contact with the office.

(c) This was not as well answered as parts **(a)** and **(b)**. Many candidates wrote about cheaper travelling costs and also thought that offices would be closed down in their entirety and wrote of not having any rent to pay at all and not having any utility costs when, in fact there would be lower costs because of this. A number of candidates wrote answers relating to benefits to the worker rather than the company.

(d) Not many candidates were clear in their answers relating to equipment costs and running costs but quite a few responded with there being no need for a dedicated fax machine/phone line. Quality and speed featured in a large number of cases. Many answers concerning 'easier', 'quicker', 'cheaper', or 'better quality' were produced but candidates failed to expand on these.

Question 4

This question was not well answered with the majority of candidates failing to gain much credit. This question related to the benefits of a well designed application form. Many candidates who did consider the benefits concentrated on just one feature and were therefore unable to gain full credit.

Many candidates wrote about the features of such a form rather than the benefits. A sizeable number just gave a list of details expected from an applicant. This indicates that the candidates may not have read the question carefully.

Question 5

This question was generally better answered than other questions on the paper.

Most candidates understood such systems but a fairly large number did not attempt the question. A number of candidates may have misunderstood the distinction between telephone, computer and server.

Question 6

Candidates did reasonably well on this question.

(a) Not many candidates produced a full response but many appeared to understand the principle. There appeared to be difficulty among a number of candidates as to how to express the answer. A number of candidates incorrectly answered that sharing a job was working alongside another employee.

(b) Slightly less well answered than part **(a)** but many gained partial credit, usually for answering that the company gained the skills of two workers for the price of one.

(c) Many responses to this question considered the negative emotional aspects of two workers sharing a job rather than the technical disadvantages. However many candidates managed to gain credit but those who had failed to realise the employees worked one after the other gave many incorrect answers.

Question 7

This question was not as well answered as expected.

(a)   Many candidates appeared to understand the concept but few were able to give a complete answer. Credit was generally gained for writing about the need for a signed contract. Many candidates then wrote generalised answers without making succinct points. A number of candidates wrote about aspects of the data protection act, whilst some considered that duty of confidence referred to the ability of staff to carry out their job. Many candidates referred to customers rather than employees when answering the question.

(b)   A sizeable number of candidates did not attempt this question. Candidates either understood the question and gained full credit, or gave alternative answers relating to encryption which gained no credit.

(c)   This was not very well answered. Many candidates concentrated on security giving answers about hacking and viruses.

Question 8

Candidates found this question rather challenging and a lack of detailed understanding was evident.

(a)   Many candidates failed to mention the role of the key field.

(b)   Many candidates appeared not to have read the scenario and the question itself concentrating on the processing of payroll. Those that did were able to show a general understanding of the process but did not identify specific steps in the process.

Question 9

A reasonable number of candidates obtained credit in this question. This was a straightforward question but a surprising number of candidates did not read it thoroughly and gave answers that involved the use of Gantt charts and other aspects of time management software, e.g. stop watches. Some candidates described the process of setting up a meeting without using any software. Others gave answers concerning the software rather than what the user had to do while using the software.

Question 10

This question was not as well answered by candidates.

(a)   Many did not attempt this question. Of those that did, few candidates seemed to know what a check digit is. Many gave general descriptions and most related to length checks rather than check digits. There was some recognition that it was the last 'digit' at the end of a bar code. Many misunderstood and thought that comparing the barcode with a database entry would be sufficient, not realising that the code should be checked on entry.

(b)   A number of candidates did not attempt this question. Those that did answer the question did not do so very well, as it appeared that few had read the scenario and/or the question. Many candidates assumed that the computer marked the questions thus given rise to answers such as "no Examiners needed" and "no need to pay Examiners", etc. Very few candidates stated that the exam paper would have to be scanned and stored and that at the end of the process, the credit for each question would be saved to candidate's record and/or the total credit would be saved to candidate's record.

(c)   More candidates attempted this question than the parts **(a)** and **(b)**. Unfortunately, answers were again general without giving sufficient detail required by the Mark Scheme. Many suggested that Examiners would mark more quickly.

Question 11

This question was better answered than preceding questions.

(a) Responses were good for this question, particularly for naming components. However, a number of candidates who named the components failed to give descriptions involving examples relating to the scenario. Candidates who were not properly prepared tended to give components in terms of input, process and output and did not gain credit.

(b) This question was not very well answered. Most candidates had little idea of a reason for the use of the various technical expressions given. Many just tried to describe each term itself.

(c) A number of candidates understood the nature of live data but few continued on to develop an answer showing an understanding of the use of live data to test the system. Candidates appeared to understand there would be differences between the results but failed to write about how amendments would then need to be made to the system. Few could describe the testing with reference to the scenario. Many candidates answered the testing part with reference to normal, abnormal and extreme data rather than to live data.

(d) The question required responses that gave detailed answers to both parts of each method. Unfortunately most candidates failed to provide sufficient detail, often just naming the method. The drawbacks were described better than the methods.

APPLIED ICT

> **Paper 9713/12**
> **Written A**

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(b)   Slightly less well answered than part **(a)** but many gained partial credit, usually for answering that the company gained the skills of two workers for the price of one.

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(a)   Many candidates appeared to understand the concept but few were able to give a complete answer. Credit was generally gained for writing about the need for a signed contract. Many candidates then wrote generalised answers without making succinct points. A number of candidates wrote about aspects of the data protection act, whilst some considered that duty of confidence referred to the ability of staff to carry out their job. Many candidates referred to customers rather than employees when answering the question.

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This question was better answered than preceding questions.

(a)   Responses were good for this question, particularly for naming components. However, a number of candidates who named the components failed to give descriptions involving examples relating to the scenario. Candidates who were not properly prepared tended to give components in terms of input, process and output and did not gain credit.

(b)   This question was not very well answered. Most candidates had little idea of a reason for the use of the various technical expressions given. Many just tried to describe each term itself.

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APPLIED ICT

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Knowledge of topics was evident in the majority of candidates, although the depth of understanding varied considerably.

Credit was distributed reasonably well with better ability candidates being able to score well on the paper.

Comments on specific questions

Question 1

Candidates did fairly well on this question with most candidates able to gain credit.

(a) A number of candidates did not read the question carefully. The two key points of the question were that it referred specifically to key logging, and not hacking in general, and also it asked for ways in which the bank would attempt to prevent this from happening. Despite this, many good answers were seen from candidates who had read the question carefully and gave good descriptions of the use of TANs and two factor authentication as well as banks providing customers with anti-spyware. Most candidates were able to gain credit for the bank asking for a limited number of characters from the password.

(b) Many candidates gained credit on this question and it was better answered than part **(a)**. Some candidates provided incomplete answers. Many candidates did well realising that the bank might need fewer offices and staff but would still need some. Some candidates did not read the question carefully and described benefits to the customer.

(c) This was as well answered as part **(b)**. Some candidates wrote imprecise answers about hacking but most argued that costs would initially be high for a number of reasons with several candidates giving very good reasons.

(d) This part was not answered well by candidates. Many ignored the question's requirements that security methods were not to be given and based their answers on this. The question as with all the other parts differentiated well with better candidates providing some very good answers.

Question 2

Candidates scored well on part **(a)** but not as well on the other two parts.

(a)   This part of the question was well answered by most candidates. There were very few wrong answers with most answering with business advertising and a number answering with service advertising.

(b)   Both this and part **(c)** proved difficult for a number of candidates. This was surprising as it should have been a fairly straightforward question and a number of candidates found it so. Many candidates ignored the part of the question which asked candidates to answer with regard to the scenario.

(c)   This was slightly better answered than part **(b)**. Many candidates wrote about it reaching more people than other methods but provided few alternative answers.

Question 3

The vast majority of candidates were able to gain credit on this question though only the better ability candidates scored highly. A number of candidates made minor points without expanding on them in sufficient detail. Many described features without saying why they would be of benefit.

Question 4

This question was reasonably well answered with the majority of candidates gaining some credit. Part **(b)** was better answered than part **(a)**.

(a)   Candidates were often able to name extra hardware but often were unable to describe more than one of them or how they could be used in this scenario. A number wrote about communicating with their teacher using a web cam and microphone in the classroom situation despite the fact that the teacher would be in the same room.

(b)   Candidates provided much better answers. Again, however, a number gave examples without a description or writing about how they would be used. Most candidates did provided at least two good answers though a small minority gave brand names for which no credit could be given.

Question 5

Most candidates appeared to understand what user documentation was but many found the question difficult. Most could describe items of user documentation but few were able to give reasons for their inclusion. A number were unable to write about more than one or two items.

Question 6

Again many candidates found this question difficult with part **(i)** being poorly answered, with most candidates suggesting the sensor could be found within the compressor. In part **(ii)**, candidates often described such a system and how it works without covering the role of the microprocessor. Some candidates answered as though this was a central heating system.

Question 7

This question was not as well answered by candidates.

(a)   Many candidates appeared not to have met the terms before and a substantial number of candidates omitted this answer. Of those that did attempt the question, a number of candidates confused kerning with leading.

(b)   Although better answered than **(a)**, this part was still not very well answered. A number of answers were imprecise with responses such as 'it would be easy to print'. A number of candidates failed to mention size or type in their answer.

Question 8

Candidates answered this question well. The topic seemed well understood by most candidates with several providing good answers.

Question 9

This was not as well answered as previous questions.

(a) Quite a number of candidates did not answer this question. Of those that did, many did not describe one item. Those that did were usually able to give two correct answers. Answers were often brief with some being unrelated to the question.

(b) Many candidates provided one word answers which is an approach which is unlikely to gain credit at this level. A number of candidates listed items from a payslip rather than items from a financial report. The question differentiated well with high ability candidates gaining high credit.

Question 10

This question was not as well answered as expected. Very few candidates provided detailed descriptions of the method. A substantial number of candidates provided one word answers for the method. However, candidates seemed to be able to provide drawbacks of each method even when detailed descriptions were lacking.

Question 11

This question was better answered than preceding questions although part **(c)** was not well answered.

(a) Although a number of candidates failed to answer this question, the overall credit awarded was good. Many candidates did not give examples using the scenario but were able to gain credit for the descriptions of the activities. Quite a number of candidates missed the instruction within the question and gave unrelated examples. These candidates still gained credit for the description but failed to gain credit for the examples.

(b) This question was very well answered. The majority of candidates gave the correct answer.

(c) Most candidates appeared not to have understood the term. Few candidates achieved full credit though many gained partial credit usually for describing the need for finding the optimum time to be spent on individual tasks.

APPLIED ICT

General comments

The majority of candidates attempted and completed all elements of the paper. There were vast differences in the range of results from Centre to Centre and from candidate to candidate within Centres. The paper gave a good spread of marks. Candidate errors were spread evenly over the sections of the paper, although the application of candidates' knowledge to produce a report on validation and verification in databases and spreadsheets caused a number of candidates some problems.

A small but significant number of candidates failed to print their name, Centre number and candidate number on some of the documents submitted for assessment. Without clear printed evidence of the author of the work, Examiners were unable to award any marks for these pages. It is not acceptable for candidates to annotate their printouts by hand with their name as there is no real evidence that they are the originators of the work.

A small number of candidates omitted one or more of the pages from the required printouts. Some partially completed the spreadsheet task or submitted only a minimal word processed document. A small number of candidates submitted multiple printouts for some of the tasks and failed to cross out those printouts that were draft copies. Where multiple printouts are submitted, Examiners will only mark the first occurrence of each page.

The word processing task gave some problems for candidates. Whilst many demonstrated sound practical skills, some failed to attain many marks on the application of their knowledge and understanding as applied to the specified applications packages. A significant number of candidates copied text directly from a variety of Internet sources and submitted this as their own work. Examiners will give no credit for sections of text copied and pasted from the Internet, however in the context of the document it was acceptable to paraphrase elements of the text or use direct quotation to support their observations and give evidence and hence credence to their answers.

Comments on specific questions

Question 1

This question was completed well by most candidates, as evidenced by their subsequent printouts of this evidence document.

Question 2

This section was not performed well by many candidates. Almost all candidates had the required file, but a large number of candidates omitted the instruction to save this as a spreadsheet with the filename venues. This should have been saved in the file format of the spreadsheet application, rather than as a generic text file using comma separated values.

Question 3

Almost all candidates produced evidence of opening the file J12TOUR.CSV successfully.

Question 4

This section was performed well by most candidates, although a small number of candidates hid the rows or deleted the contents of the cells rather than the rows themselves. Some candidates deleted more than four rows.

Question 5

There were many different correct solutions to this question, with candidates electing to use either LOOKUP or VLOOKUP functions to attain their results. A very small number of candidates typed the values, presumably after manually calculating each result. Candidates were credited if they used external referencing to the spreadsheet saved in **Question 2** within this function. If functions like LOOKUP or VLOOKUP were used, candidates were also given credit for selecting the correct single cell, set as a relative reference to the code. At AS Level candidates are expected to be able to reference the correct range of cells for the lookup and the correct return column in the case of LOOKUP, or the correct offset in the case of VLOOKUP.

Questions 6 and 7

The same areas were assessed in these questions as in **Question 5**, although in each case the return column (if using LOOKUP) or offset (If using VLOOKUP) differentiated these functions from those used in **Question 5**. A small number of candidates did not use the code for the initial reference and used the venue name. This was not accepted in this instance as, if errors had been introduced in **Question 5**, the results of these would be carried forward to these stages. The most common errors found in these questions related to the use of a comma separated values file rather than a spreadsheet and the use of incorrect offsets in the data range.

Question 8

This was a reminder to verify that the formulae entered in steps 5 to 7 had been completed and produced the correct results. Candidates who sampled the data and checked that their lookups gave the correct results appeared to perform well, yet other candidates appear to have omitted or misinterpreted this question.

Question 9

This question caused significant issues for many candidates and consequently differentiated the very able candidates from the others. There was a requirement to use a nested IF structure, which almost all candidates attained with little problem. Many candidates ignored the part of the question that stated "If the next venue has:", the critical wording being "next", for example: ensuring a reference from row 2 to row 3. In the top row of the formulae (row 2), all references were required to look at row 3 (usually cell F3). A large number of candidates created their formulae with reference to the current venue.

There were a number of elementary mathematical errors found within these nested functions, for example candidates using F3<400 (which was incorrect) rather than F3=<400 or F3<401. Similar errors were located in the F3>=5000 portion of the formulae. A number of candidates did not get the logical sequence of this question correct, errors such as =IF(F3<5000,…,IF(F3<401 where the result of the first inequality test ensures an action so that It never reaches the second test. Some candidates produced exemplary solutions to this question, but with different methods of solution, depending on their choice of logical sequence.

Question 10

Most candidates created correct functions for this question like: =ROUND(60*H2/55,0), although a number omitted to round the result to the nearest minute. As this was required explicitly in the question, candidates who used INT, ROUNDUP or ROUNDDOWN functions were not awarded this mark unless they manipulated the result by adding (or subtracting as appropriate) 0.5.

Question 11

This instruction was completed well by the majority of candidates, although many did not round up the number of drivers to the nearest whole number. Some candidates attempted to round using the ROUND or INT functions but did not remember to adjust for the truncation or rounding down. Many candidates attained correct solutions like =INT(1+I2/300)*G2, although a significant number of candidates did not remember to multiply by the number of trucks in column G. Many used ROUNDUP functions although some erroneously used this function and +1.

Question 12

Many candidates did not replicate for each journey. Some replicated extra rows including cells H18 and G18 which were not required as the tour had finished at that point.

Question 13

Candidates had the freedom to select which cells were appropriate for the labels and formulae required for this question. Where candidates selected logical locations, for example: below the relevant columns or in a small block below the main table credit was awarded. With the exception of selecting appropriate cells, this question was generally answered well with candidates using SUM, MAX and MIN functions appropriately.

Question 14

This question was completed with 100% accuracy by most candidates, although there were a small number of case errors with initial capitalisation and a number of candidates who did not right align the contents of the footer.

Question 15

This question was completed well by most candidates, although some omitted the labels created in step 13. Candidates who deleted too many rows in Step 4 were unable to apply this formatting to row 1.

Question 16

Almost all candidates printed the spreadsheet with the correct orientation, the majority with all labels and values fully visible, but a small number of candidates included the row and column headings, despite a clear instruction that these were not required. A small number of candidates were unable to fit the printout onto the width of a single page.

Question 17

Almost all candidates printed the spreadsheet showing the formulae and functions used. More candidates had some formulae partially truncated and therefore not fully visible compared with the previous printout. A significant number of candidates did not include the row and column headings on their printouts.

Question 18

The majority of candidates attempted to generate this chart. A significant number selected line graphs although the data was not continuous. Most candidates selected some form of a bar chart, although labelling was not completed to a high standard with a significant number of candidates omitting labels. Most of the labels created by candidates were descriptive and fit for purpose. A very small number of candidates labelled with inappropriate font sizes, for example: having a chart title in a font size much smaller than the category and value axis labels or titles. The use of a legend was fine providing this text was not repeated as the value axis title. A significant number of candidates did not select the correct data for the chart, despite the instruction to use the miles driven to each venue, many created it from each venue, ensuring that the data was offset from the labels.

Question 19

This question was marked for two elements, the content and the application of the house styles in the provided file to demonstrate a candidate's word processing skills.

For the content there were many excellent responses, well thought through and related by the candidates to the context of spreadsheet and database applications. However, there were a large number of candidates who searched the Internet and copied and pasted their findings as their own words. Sources included Wikipedia, Teach-ICT.Com and a number of resources produced by Centres as teaching and revision tools. Where candidates had copied and pasted in this manner no marks were awarded for content.

There were also a significant number of copied texts from online technical sources describing validation during data transmission and even elements like double entry verification of passwords on the Internet or extracts directly lifted from the help sections for applications packages like Open Office or Microsoft Office. Candidates who created their own responses related to these topics, identifying what validation and

verification are, how they are used within database and spreadsheets; and the different methods and techniques used to ensure the reliability of data or the accuracy of data entry were credited. The use of proofreading was a common error in the context of this question, with a significant number of candidates confusing proofreading with visual verification. A significant number of candidates found references to verification and validation techniques as used in production lines and process control. This became almost their entire response however, despite not being appropriate to this particular question.

The skills required to create the document with the given styles enabled many candidates to attain high marks on this question. Candidates did not have to apply all elements from the stylesheet to their document but if elements like bullet points were used, they were expected to use the styles given for these elements. The most common area where candidates did not attain high marks was the lack of consistency throughout the document, perhaps setting paragraph spacing correctly in two or three paragraphs, then having one paragraph that did not meet the requirements of the stylesheet or that was inconsistent with the other elements.

Most candidates set the document as specified into 2 columns (with the exception of the heading), and had headings and subheadings in a white font on a black background, although a small number of candidates also set the body text to this style. The most common error was where candidates set text as a serif font rather than as a sans-serif font. In setting the columns, some failed to flow the text from column one into the second column but managed to split the document sections across the columns. This resulted in inconsistent spacing throughout the document and led to a lack of evidence for some of the styles applied.

Question 20

This was completed as specified by almost all candidates.

Question 21

Although the majority of candidates created the 4 slides, frequently with the master slide items, the slide content was rarely as specified; with a significant number of accuracy errors in the text entry, particularly related to case.

Question 22

This hyperlink from 'Band news' was usually created as specified. The hyperlink from the text 'RockICT website' was also completed well in most of the work seen, although there were a number of candidates who had added extra file paths to the URL given in the question paper, for example: rather than a URL of http://www.rockict.net, many candidates selected http://www.rockict.net/venues/ as the URL.

Question 23

The image was added by most candidates and the majority selected an appropriate image. Although many candidates added this image and had created a hyperlink for the mailto: command with the correct address and subject line, few showed evidence that the image was selected and therefore this image was the object from which the hyperlink was created.

Questions 24 and 25

These questions were completed as specified by almost all of the candidates. A number of candidates printed individual slides rather than the 4 to a page required by the question paper.

APPLIED ICT

Key Messages

A few candidates did not attempt to answer all the questions and consequently lost opportunities to score marks.

Many candidates appeared to know the syllabus content but did not apply their knowledge to the scenarios and context set in the questions. Candidates must read the scenarios carefully and apply their knowledge when answering the questions. Further, candidates must read the question carefully before attempting to answer it; there were a number of instances where it was apparent that candidates were not answering the question as set.

Comments on specific questions

Question 1

(a) This question was about the requirements for a new network. Candidates were expected to be able to apply their knowledge of network hardware and its use to the context of a new network installation.

Many candidates could identify the hardware but not state the purpose of the devices. A number of candidates transposed the purpose of, e.g. a hub and a switch and consequently did not score the marks for the purpose.

Bridges and physical/hardware firewalls were also possible answers but were rarely seen in the responses of candidates.

Many candidates listed the type of networks possible, e.g. ring, star, or bus and consequently did not score marks.

Some candidates attempted to source their answers from the connection methods given in **Question 2**. While marks were available for mentioning cabling or a wireless link, it is not possible to score marks in one question by copying the information given in another as this will not answer the question.

(b) This question was about the workings of a firewall and how it might work to increase the security of the network. Many candidates answered this question quite well but very few were able to score full marks. Common correct answers were filtering on IP addresses, keywords and the blocking of unauthorised access but the latter was often poorly stated with references to "block users" or "stop unwanted people" being seen.

(c) In this question most candidates did not go further than list the source IP address, destination IP address and the sequence number of the packet. The other items of information found in an IP header were not mentioned. Some candidates erroneously stated that parity bits were present in the header.

Question 2

This question gave the candidates the method of connection and asked for a description of the method and a benefit of using each. Candidates will not score marks for repeating the same benefit three times over – it is not likely to be correct.

(i)   Most candidates scored the mark for the benefit but were unable to properly describe a twisted pair cable. A common answer was a repeat of the question, e.g. a twisted pair is two twisted cables. Candidates are expected to be able to supply a detailed answer to score the marks.

(ii)   As for part **(i)**, answers lacked the detail necessary to score the mark for the description, many omitting the fact that light is used for carrying the data. Many, however, stated correctly that fibre-optic cable has the benefit of being less susceptible to electrical or magnetic interference.

(iii)   Many candidates correctly described Wi-Fi as wireless or cable-free but were unable to add that radio-waves were used to transmit data.

Question 3

(a)   This question was about the devices that a trainee pilot would use whilst in the simulator. Devices that are used to move the simulator, such as the hydraulic rams to move the whole, or its components such as the motors to move seats, were not required as answers.

Most candidates scored well on this question. Common, correct answers were headphones, microphone and headset but some candidates were able to describe appropriate switches or levers that could be used by the trainee.

(b)   This question was well answered by most candidates; many scoring high marks on this question.

Question 4

This question was about the design and creation of a new car, the questions being designed to test candidates' knowledge of project management and the use of the tools to create the design of the car.

(a)   The use of Gantt charts appeared to be well known by some candidates but not by others. Those candidates that scored well described how Gantt charts could be used to show project task, sub-tasks and stages of completion, timings and sequential and parallel tasks.

Common poor answers included references to costing, contacting workers and "seeing which jobs were being done".

(b)   Most candidates failed to score more than half marks on this question. Candidates were required to describe the workings of the "Just in Time" process and not how a stock control system, using barcodes, database functions, etc., works.

(c)   Most candidates could explain the use of a few features of CAD giving explanations of 3D views or viewing from angles. Most candidates failed to explain CAM in any detail at all. Many candidates described 3D printing which was incorrect.

Question 5

This question was not well answered by the majority of candidates. There appeared to be a lack of knowledge about the parts of expert systems. Many candidates failed to score marks because their answers to part **(a)** and part **(b)** were transposed due to a lack of understanding of the specifics of the parts of an expert system.

(a)   Many candidates did not score the full marks because, while they could correctly identify the parts of the knowledge base, they could not describe them. A common error here was to describe the inference engine.

(b) This part of **Question 5** was better answered as candidates had a number of parts to choose from. A common response was to describe either the interface or inference engine, but many candidates attempted to describe more than one part.

Question 6

This question was about regional governments and services provided by its website.

Too many candidates gave generic answers about websites and what can found on them such as on-line shopping or banking. Candidates must read the question properly if they expect to provide answers that score high marks.

Good responses included references to, e.g. education and learning opportunities, community issues and news, local government employment issues, financial matters such as rates, tax benefits, pensions, health information such as local doctors, hospitals, safe practices, environmental issues and electoral issues such as voter registration.

Many candidates, however, gave superficial answers that did not properly identify or describe a regional government issue/item or give an appropriate example as required by the question.

Question 7

This was not well answered as few candidates did little more than repeat the question.

Whilst many candidates made references to averages, few went further to describe some of the statistics that could be generated.

Question 8

Most candidates could answer the parts of the question about video and phone conferencing but could not give contextual responses to the section on instant messaging. It was expected that candidates would write about the benefits and drawbacks of the use of instant messaging to senior staff. Generic answers about candidates' own use did not score marks.

Question 9

Candidates scored the full range of marks in this question. Some candidates could give a good range of descriptions but many gave a general answer addressing the Digital Divide, with little reference to the question or scenario.

Candidates expecting to score high marks should address all aspects of this question by giving descriptions of the disadvantages caused by both the lack of access to ICT and by the lack of skill in ICT.

APPLIED ICT

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APPLIED ICT

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Comments on specific questions

Question 1

(a)   Most candidates answered this question well, being able to correctly describe the items held about a product.

(b)   Many candidates gave good answers and scored well on this question, but some failed to give more than a description of automatic re-ordering, neglecting to consider other benefits such as accurate monitoring of stock, showing trends in sales and reducing staffing levels due lack of need to keep counting stock and putting prices on goods.

(c)   There were some good answers seen with many candidates scoring well with responses that were good descriptions of the benefits.

Some candidates did not read the question properly and gave answers that referred to stock control. Candidates will lose marks if they do not read the question carefully and give answers that are not required.

Also, candidates should note the number of benefits that are asked for by the question. Extra marks will not be awarded once the required number of benefits has been described, so candidates should be advised not to write more than is required of them.

Question 2

This question was about the networking of the café and tested basic knowledge of networking methods and hardware.

(a)   Most candidates gave good answers to this question but a few candidates did not score many marks because they failed to consider more than the lack of cabling.

(b)   This was a question that proved quite easy for candidates to score high marks. Most candidates answered this question well.

(c)   For answers to be given credit, candidates had to give descriptions of hardware with reference to wireless capabilities. Many candidates gave descriptions in generic terms such as "network card" and so did not gain credit. Descriptions of wireless access points, wireless routers and wireless network cards were required.

(d)   This question asked candidates to explain two common terms associated with Internet access but many candidates could not give more than a brief comment on the terms. URL was not often expanded correctly but merely stated to be the address of a page/site while HTML was only stated to be "what webpages are written in" and not given its full terminology.

(e)   An Internet protocol is a set of rules that computers use to transmit data over the Internet. Most candidates could identify a protocol, such as FTP or HTTP, and many could go on to describe the protocol by giving a suitable use for it.

Question 3

This question was well answered by the majority of candidates. Most identified suitable sensors and gave a correct use for them. However, a few candidates gave sensors that would not be appropriate for weather monitoring.

Question 4

(a)   Most candidates could correctly explain the role of the knowledge engineer but a few failed to attempt the question at all.

(b)   This question was not answered well by many candidates. Candidates are expected to be able to explain the roles of the parts of expert systems.

Question 5

(a)   This question required candidates to consider the actions that might be taken by a hacker in attempting to breach the security of a website and then to suggest how these might be countered. Most candidates could describe the possible actions and suggest some preventative procedures.

(b)   This question proved difficult for most candidates. A common error in the responses was to fail to consider how the information was placed on the website so that it could be downloaded easily. The question required a consideration of, e.g. hyperlinks to the content, the format of the content and how it would be stored.

Question 6

(a)   This question was not well answered by most candidates.

(b)   Most candidates could correctly describe how an architect could use a CAD model.

Question 7

(a) (i)   Many candidates could correctly explain how ICT could improve access to theatre bookings.

   (ii)   Many candidates could correctly explain how ICT could improve access to employment opportunities.

   (iii)   Many candidates could correctly explain how ICT could improve access to health care.

(b)   This question was well answered by most candidates who correctly described problems associated with online auctions and the appropriate solutions to the problems.

APPLIED ICT

General comments

Candidates were well prepared with ICT skills for the tasks set in this session. It must be remembered, however, that the examination requires more than the display of correct individual results and evidence of process and method.

At A2 Level, candidates are required to recognise that they are tasked with creating a simple system, usually within a business scenario. As such, solutions to the individual tasks and their integration and automation should demonstrate consideration of their efficiency and robustness in terms of an input-process-output model designed for non-expert users.

Within the business scenario as described for this session, the discriminating factor in terms of attainment was where candidates failed to create a model that would continue to display accurate results as data was amended.

Comments on specific questions

Tasks 1 and 2 – Create a financial model and prepare a summary document

In the first task candidates were required to create a simple spreadsheet that could be used to display data for venues that met a given criterion; in this case the capacity of the venue.

Only the use of the SUBTOTAL function provided the required information effectively. A number of candidates achieved the correct data for the criterion as specified, but their solutions would not have displayed correct results as data was amended or criteria changed.

In the second task, candidates were required to extend the spreadsheet to model costs and potential profits for venues selected using a new criterion. It was at this stage that many candidates failed to create a sufficiently robust model and used manually inserted data instead of references and formulae. No credit was given merely for correct values. The task was to create a model which would automatically update values as criteria were changed.

The final part of the task was to prepare a Tour proposal document using the template provided. Most candidates realised this was more than a simple "cut and paste" exercise and provided evidence of the data link as required. It was clear, however, that very few candidates had experience of working with data link options and most failed to consider the implications of the data types and option switches. Marks were awarded for linking the data as a spreadsheet or in .rtf format, i.e. not as a bitmap or HTML, etc. Similarly, few candidates provided evidence that the AutoUpdate options had been considered and set correctly, not merely assumed.

Tasks 3 – Reference new data and prepare a chart

Most candidates managed to correctly reference the Regions data using a lookup formula. It is worth noting however, that at A2 Level, candidates are expected to demonstrate that they understand the need for efficient solutions that will provide accurate results with different data. Whilst the simple "LOOKUP()" formula provided accurate results in this instance, credit was given for recognising the advantages of the "VLOOKUP()" formula with the facility to demand an exact match.

Almost all candidates managed to display the correct selection of venues.

Very few candidates failed to provide evidence of their method of determining the number of venues in each region and certainly most candidates provided a chart to match the specifications given in the question paper.

Task 4 – Mail Merge letters using a template document

Most candidates performed the mail merge successfully but many failed to "proof" the document for layout or formatting errors and provided letters that were not "fit for purpose". It is worth Centres noting that within a business scenario, a number of marks are attributed to criteria that reflect this aspect of a solution.

Few candidates failed to show the conditional field as a merge field, but those who could only manage to display the evidence as a screenshot lost credit. Some Centres would benefit from covering the display and print options of word processing applications in more detail.

Whilst most candidates clearly understood the syntax and format of conditional fields, some made mistakes with the logic. This resulted in incorrect data. Simply proofing the results against the data would have enabled correction before printing.

Task 5 – Create, edit and annotate macro to automate the formatting of the letters before final printouts

The macro required was created successfully by many candidates but few managed to annotate the individual routines as required. A number exported the text to a word processing application and inserted description and headings but this is not an acceptable solution. It is reasonable to expect candidates working at A2 Level to have the skills necessary to annotate a macro and present documented code for others to follow and amend or augment.

It may be worth reiterating that Centres would profit from emphasising that in this paper candidates are tasked with creating simple systems. As such the drawing of attention to the possibility of possible further development should also be encouraged.