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# **GCE EXAMINERS' REPORTS**

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**APPLIED ICT  
AS/Advanced**

**SUMMER 2016**

Grade boundary information for this subject is available on the WJEC public website at:  
<https://www.wjecservices.co.uk/MarkToUMS/default.aspx?!=en>

### **Online Results Analysis**

WJEC provides information to examination centres via the WJEC secure website. This is restricted to centre staff only. Access is granted to centre staff by the Examinations Officer at the centre.

### **Annual Statistical Report**

The annual Statistical Report (issued in the second half of the Autumn Term) gives overall outcomes of all examinations administered by WJEC.

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**APPLIED ICT**  
**General Certificate of Education**  
**Summer 2016**  
**Advanced Subsidiary/Advanced**  
**UNIT 1: eBUSINESS – GAINING SKILLS IN eBUSINESS**

**General remarks**

The AICT 1 paper is divided into two parts; Part A comprising a one hour written examination paper and Part B, a series of tasks to be carried out in a practical two hour examination.

The paper for Part A was provided to centres in an on-screen format that requires candidates to enter their responses into text boxes with one screen per question. Where centres were not able to access the on-screen examination, traditional paper-based examination papers were used. These papers required candidates to write their responses in the spaces on the paper. Neither examination format appeared to cause problems from the candidate's perspective nor did the format appear to influence candidate outcomes.

In many cases candidates provided brief responses to questions that carried a significant number of marks. Candidates should note the wording of the questions, which is designed to suggest the level of the detail required in candidates' responses by the use of words or phrases such as 'state', 'describe briefly', 'explain' or 'describe in detail'.

Centres and candidates are reminded of the value of giving examples to clarify an answer and in some cases to provide additional evidence of a candidate's understanding of the topic of the question. A good example, even if not specifically requested, can often help to secure a mark when a description is lacking clarity or detail.

Some candidates lost marks by not relating their responses to the context of the question or the given scenario. Candidates should be aware that this is an applied qualification and the examination is designed to test their ability to put their knowledge of ICT into the given situations. If a question describes a specific context and invites the candidates to refer to the context, then marks will be lost if this is not done.

The standard of language used was generally good, though some weaker candidates lost marks through the apparent inability to express themselves clearly.

In Part B of the examination, candidates were required to carry out a series of on-screen practical tasks set in the same context as Part A of the examination. Many candidates were able to demonstrate good practical skills their database packages, however, the ability of a significant minority of candidates to use web authoring software effectively was concerning and many candidates failed to gain the quality marks available for this task.

## **Part A – written paper (40 marks)**

### **Question 1**

Many candidates responded to this question by providing descriptions of the work carried out by the business rather than identify the sector in which the business operated.

Most candidates were able to identify a stakeholder or group of stakeholders in the organisation but some struggled to describe their interest in the success of the business.

### **Question 2**

Most candidates attempted to define the difference between data and information but few were able to explain their responses in terms of the given context and therefore were not able to access both marks for this question.

The responses to the relational database question were very disappointing with few candidates scoring more than half marks. The candidates will have spent a large amount of time working on the database element of AICT2 and therefore it was anticipated that they would have developed a good understanding of the advantages of using relational database.

### **Question 3**

This question was worded in such a way that candidates were required to describe steps that PPP could take to ensure that the business complied with the principles of the Data Protection Act. However, the majority of the candidates simply stated the principles of the act rather than describing actions the business could take to ensure compliance.

### **Question 4**

This question required candidates to describe different methods for backing up data such as incremental backup etc. However many candidates described media that could be used rather than the methodology to be used and therefore failed to gain all available marks.

### **Question 5**

The information flow question was done well with most candidates gaining at least four of the five marks available.

### **Question 6**

Most candidates were able to identify at least one realistic method of communication between the business and its employees. Many candidates scored well on this question.

### **Question 7**

Most candidates were able to identify an appropriate technology, such as video conferencing, and state an advantage of its use. However many candidates were not able to describe disadvantages in suitably technical terminology to gain the remaining marks.

## **Question 8**

Very few candidates were able to access this question. Few appeared to have the required knowledge about MIS systems and many candidates provided descriptions of project management software rather than an MIS system. It appeared that the majority of the candidates had not been sufficiently prepared for this question.

## **Question 9**

It had been thought that this would be an accessible question for all candidates with its focus on the advanced features of spreadsheet software. Candidates will have completed the spreadsheet element of AICT2 and should have been autonomous users of such packages.

Those candidates who were able to identify suitable features and functions appeared to be unable to set their answers in the context of the PPP organisation or to suggest ways in which these technologies could be used in the operation of the pet sitting services.

In future candidates would benefit from producing well-written responses with appropriate use of technical terminology.

### **Part B – Practical tasks (60 marks)**

Many candidates were able to access marks for the two practical tasks. However, some candidates appeared to have difficulties in carrying out even the most basic tasks and some even discussed their lack of familiarity with the software applications to be used.

#### **Task 1**

Almost all candidates were able to recognise the need to split the data into two tables as indicated by the emboldened text in the stem of the task. A minority of the candidates used action queries to achieve this, gaining additional credit for their work.

Most candidates attempted to create relationships between their tables. Some candidates failed to recognise the need for the use of primary keys for both tables. A minority of candidates attempted to add additional fields to create relationships. Candidates should ensure that they remove any duplicated data.

Where candidates had structured the data correctly they were able to create an appropriate form with the required subform. Most candidates were able to insert the logo and title the form. Many candidates were able to add the required buttons to the form.

Extremely few candidates were able to gain full marks for the report.

- Many candidates were able to create the calculated fields in the query to generate the data for the report.
- Where candidates had created the correct relationship between the tables they experienced fewer problems generating the document.
- Many candidates were not able to differentiate between information to be shown on the first page of the report and information to be included on each page.
- Very few were able to insert the correct page break.

## **Task 2**

Many candidates were able to access almost all the marks for the web authoring task although even more able found it difficult to access quality marks for the presentation of their pages.

Almost all candidates were able to create the two web pages and most were able to set up the required navigation system. A pleasing number of candidates were able to create the rollover image and hyperlink it to the second page. Surprisingly few candidates formatted the price list appropriately and thus lost layout marks.

Similarly, few candidates were able to format the contact form appropriately although most included the required fields and submit button.

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**UNIT 2: eSKILLS – MANAGING eBUSINESS DATA**

**General comments**

Many good projects were seen during the moderation process, with a large number of centres marking to the appropriate standard.

Most centres completed the required paperwork correctly. In future, it would be helpful if the centres' assessors could complete the comment/justification sections of the cover sheet to explain their marking decisions. Centres may find it useful to note separately the marks awarded for the spreadsheet and database elements of the design and implementation of each.

**Specification**

Many candidates were able to analyse the scenario and produce a working specification summarising the intended outcomes of the coursework. However, in some instances, it appeared that the candidates did not have the necessary prior knowledge, understanding and skills in the use of database and spreadsheet software to be able to give sufficiently technical justifications of the methods to be used in the solution.

**System Design**

This section was completed to a good standard by the majority of candidates, however, those candidates that did not have the necessary prior skills were unable to design the processing requirements of the systems.

In some instances the design matched the completed system and seemed to have been completed retrospectively. It is essential that the design is completed before the implementation and should not be changed to match the completed system. Candidates would benefit from researching standard documentation in order to design effective outputs.

**Implementation**

Most candidates produced good database systems, including a series of related tables, effective data entry forms and the required outputs. A significant minority of candidates produced database systems that were too simplistic and failed to produce the required outputs.

Most candidates produced a spreadsheet solution that met the requirements of the scenario. A significant minority of candidates limited their marks as they used a mail merge facility to produce payslips rather than allowing the outputs to be achieved within the spreadsheet system.

## **Testing**

Most candidates achieved some marks in this section of the work. A significant minority failed to evidence prototyping or the use of feedback to refine their systems. Many candidates failed to test the accuracy of their calculations appropriately. Thorough testing of the logic and the outputs from the systems would lead to candidates scoring higher marks in this section.

## **Documentation**

Most candidates produced good screen-based instructions for the use of both the database and spreadsheet solutions. However, many candidates failed to produce technical documentation that provided sufficient detail to allow a competent third party to carry out maintenance of the systems.

## **Review**

Candidates who had produced a specification that included measurable objectives completed this section to a good standard. A significant minority of candidates did not comment on their own performance and changes of approach effectively and would benefit from keeping a record of their progress whilst completing the design and implementation sections.

## **Portfolio**

The majority of candidates produce good portfolios to showcase their work.

A significant minority of candidates failed to provide a context for the solutions and supporting evidence, resulting in low marks for this area of the specification.

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## **UNIT 3: eWARE – HARDWARE AND SOFTWARE**

### **General comments**

In most cases, candidates had addressed the requirements of the controlled assignment, *J and V Computing*, and produced the required outcomes completed to an appropriate standard for AS level. As with the other units of the practitioner qualification, the entry for this series was relatively low.

### **Task 1 – Preliminary research**

Most candidates presented evidence of Internet-based research that addressed the software and hardware requirements indicated in the scenario. The more successful candidates noted why the various items would be relevant to the requirements and identified common programming languages, but few extended their research to cover associated development environments.

### **Task 2 – Specification**

Most candidates produced technical specifications that covered the hardware requirements indicated in the scenario. As in previous series, less successful candidates tended to rely on manufacturers' technical specifications, with little editing.

Successful candidates included alternative specifications, with some discussion on relative merits and disadvantages, leading to final recommendations based on technical appraisals, although very few candidates decided to follow the suggestion in the scenario to consider reconditioned desktop computers for the training suite.

The most successful candidates related their choices to their interpretation of the client's requirements and gave software equal consideration, covering operating systems and programming/application software, as indicated in the scenario, in addition to standard office applications.

Most candidates included quotations based on retail prices obtained from online catalogues and correctly based their final selections on performance, rather than cost. Very few candidates included the cost of the extended warranties mentioned in the scenario.

### **Task 3 – Enhancements**

The scenario should guide candidates towards a selected area for further enhancement – in this case, the writing and cross-platform testing of mobile applications. A minority of candidates failed to identify this area and concentrated on general enhancements to their specifications.

#### **Task 4 – Configuration**

Candidates were required to carry out five separate configuration tasks using the simulation software provided and use screen-prints to evidence the configuration work. Candidates were also asked to justify their selections for the various settings.

As in previous series, most candidates scored high marks in this section and carried out the required configurations correctly. Where marks were lost, this tended to be the result of very brief, or missing, justifications.

#### **Task 5 – Customisation**

Candidates were required to create three automated routines or macros to help with the evaluation of the client's training courses. Candidates were to provide evidence of their routines in the form of annotated code listings. No other evidence was required.

The majority of candidates produced the required listings and scored high marks in this section, although the standard of annotation varied.

#### **Tasks 6 and 7 – Standard ways of working**

Several suitably formatted documents with well-summarised information were seen, although less successful candidates tended to include general information, not specifically directed towards the scenario business.

#### **Task 8 – User support**

Candidates were required to create three flow charts, each designed to help troubleshoot a common ICT problem. Most candidates included three charts based on a sequence of questions with a reasonably logical flow between alternative responses.

The most successful candidates included charts with questions of increasing technical content leading to the problem being solved or reference to further technical support.

As in all previous series, the user support charts remain an area of difficulty, with few candidates progressing beyond very simple diagnostics to propose solutions to possible technical faults.

#### **Task 9 – Review**

As described in the unit specification, candidates were requested to relate their technical specifications to the client's requirements and consider the efficiency of their automated routines. They were also requested to comment on possible changes of approach that would improve personal performance.

Several candidates reviewed work done for all sections of the unit as opposed to concentrating on the areas specified.

Candidates scoring high marks presented evaluative comments about their work without lengthy descriptions of process. They identified changes of approach likely to lead to improvement of performance and avoided vague suggestions about organisation of time and making greater effort.

## **Task 10 – Client information pack**

Candidates are required to link their work to a given template, or client information pack. The use of the template is intended to help candidates ensure that all work is completed and that the finished versions of the work for each task are presented to the examiner.

Most candidates linked all their evidence to the given template, adding links as required to suit their files and thereby gained full marks for the task. As in previous series, a minority of candidates had re-organised their work folders and files after linking to the templates, or had re-named the template after creating the hyperlinks, and therefore did not provide a working information pack.

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## **UNIT 4: eMOBILE – 21st CENTURY MOBILE COMMUNICATIONS**

### **General comments**

It was pleasing to see the range of approaches that candidates had taken to the scenario this series. Some candidates produced high quality on-screen outcomes to present the recommendations to the family. The following covers the areas where marks were not seen to be in line with exam board expectations and repeats specific guidance from previous reports.

A number of candidates did not achieve good marks in the Networking, Connectivity and Internet Recommendations sections. A number of centres continue to give credit for theoretical understanding and bookwork for these areas. Whilst it is important for candidates to have knowledge of the topics contained within the specification, it is expected that candidates make specific recommendations based upon the needs of the family as outlined in the scenario. Costings and options should also be included in these sections in order to access the higher ranges of marks.

The comments below are specific to the projects seen this series and reinforce previously published guidance for successful completion of each section. The following recommendations to candidates should assist in the completion of the projects.

### **Requirements specification**

The majority of candidates successfully completed the Requirements Specification sections; however, all candidates should be encouraged to make clear any assumptions or interpretations of the scenario in this section in order to access the higher marks. Not all candidates summarised the budgetary limitations. Fewer candidates addressed the potential for future sales from the additional budget.

Overall recommendations to candidates for this section would include:

- Use the given scenario to summarise the requirements for each member of the family – take each member of the family separately. The specification should be a single document for the entire family.
- Use sub-headings for each of the following categories: Hardware requirements; Networking requirements; Connectivity requirements and Internet requirements.
- Discuss any assumptions you are making.
- Include details of future requirements for the family.
- Summarise the budget limitations.

## Hardware recommendations

Most centres gave accurate marks for this section and it was pleasing to see the variety of options recommended for the scenario. Many candidates did prepare this evidence for the eQuote as though they were working for the organisation; however, sometimes the context of the presentation of the evidence lacked the professionalism one would expect from a business organisation.

This scenario made it clear that the family requirements were for higher specification equipment and the available budget was set accordingly. Many candidates chose to spend as little of the available funds as possible and often took a low value option. It was interesting to see that some candidates chose to offer price-range bundles as options for the family – this was seen to be representative of realistic practice.

Some candidates included external links to live Internet sites that would encourage the family to purchase from another provider and could also not be guaranteed to still be available at the time of moderation.

Overall recommendations to candidates for this section would include:

- Remember to put this into context – *you* are working for a company and you would like the family to purchase the items from *you* – avoid directing the family to another provider.
- Avoid copying and pasting copious amounts of detail here (focus on the necessary detail).
- Discuss the benefits and drawbacks of each option and make your recommendations.
- Include costings for each item

## Networking recommendations

Many candidates presented some good recommendations for the networking solutions for the family and included some schematic diagrams for connections and arrangement of devices – this is very good practice for this section. It was evident that work presented from some candidates focused mostly upon theoretical understanding of items covered in the specification rather than recommendations for the use and implementation of network hardware for the family. Please note that it is not necessary to repeat the networking recommendations for each member of the family should there be a household solution.

Overall recommendations to candidates for this section would include:

- As with the previous section, remember to put this into context – *you* are working for a company and you would like the family to purchase the items from *you* – avoid directing the family to another provider.
- Make specific recommendations. Avoid copying and pasting copious amounts of detail here (focus on the necessary detail).
- Discuss the benefits and drawbacks of each option and make your recommendations.
- Include costings for each item.
- Consider a network diagram/animated model.
- Explain security issues and options for the family.

## Connectivity recommendations

Many candidates still compile evidence referring to theoretical understanding of items within the connectivity section of the specification. Candidates should concentrate on specific recommended solutions to complement the hardware and networking recommendations for the family. Please note that it is not necessary to repeat the recommendations for each member of the family if there is a household solution.

Overall recommendations to candidates for this section would include:

- As with the previous section, remember to put this into context – *you* are working for a company and you would like the family to purchase the items from *you* – avoid directing the family to another provider.
- Avoid theory bookwork here – make sure you concentrate on making specific recommendations for your solution.
- Include wired and wireless options.
- Discuss the benefits and drawbacks of each option and make your recommendations.
- Include costings for each item.
- Consider a connection diagram/animated model.

## Internet recommendations

Some candidates produced good evidence for this section and most centre marks reflected this accurately.

Please note that it is not necessary to repeat the recommendations for each member of the family should there be a household solution.

Overall recommendations to candidates for this section would include:

- As with the previous section, remember to put this into context – *you* are working for a company and you would like the family to purchase the services from *you* – avoid directing the family to another provider.
- Avoid theory bookwork here – make sure you concentrate on making specific recommendations for your solution.
- Include Internet, email and VoIP solutions where appropriate.
- Discuss the benefits and drawbacks of each option and make your recommendations.
- Include costings for each option.

## Culture and society

Some candidates provided very lengthy evidence for this section, giving almost too much detail about specific issues that could affect the family with the use of the recommended items. A summary of issues relevant to the members of the family would be more appropriate – each member of the family exists in different environments in their daily lives and the use of mobile phones and other devices could impact on their individual circumstances. It is not expected, for example, that a lengthy description of the effects of radiation on the brain, would necessarily cover this section in isolation. A more appropriate view could include a discussion of relevant issues to the scenario such as: issues of using mobile phones when driving (further opportunities for future accessories sales?); use of mobile phones within school/college environments or trains (quiet carriages?) and buses, etc. The relevant issues considered should include all items of recommended hardware.

Overall recommendations to candidates for this section would include:

- Avoid theory bookwork here – make sure you concentrate on making specific issues for consideration and recommendations for the appropriate use of your specified options.
- Consider the benefits of adopting your proposals, and summarise the benefits to the family.

### **eQuote**

Some candidates presented their recommendations to the family in what was seen as a very professional on-screen multimedia product. This contained all of the required information for the family and incorporated a variety of relevant multimedia features. This allowed access to the high marks in this section. A small number of candidates presented their on-screen information using very trivial formatting – this did affect the allocation of marks to the candidates.

Overall recommendations to candidates for this section would include:

- The eQuote should:
  - be professionally formatted in the context of the scenario
  - introduce you as the contact for the organisation
  - NOT include links to external websites – all links should be self-contained: remember external web pages frequently change!
- Look at other published examples of multimedia publishing – some on-screen books are textual only; investigate other methods of utilising multimedia to effectively present information.
- You will gain credit for incorporating suitable multimedia components, for example, images, animations, sounds, videos, again remembering the need for it to be fit for purpose in a business context and relevant to the recommendations. Avoid the use of multimedia content which does not support the recommendations.
- Make the eQuote interesting and exciting for the recipient!

### **Review**

In general, centre assessment of candidates' work for this section was accurate. In order to access the higher marks, candidates should consider the following recommendations:

Overall recommendations to candidates for this section would include:

- Use sub-headings:
  - State sources of information (if web-based, state URL and date information retrieved).
- Comment on your own performance:
  - How did you feel you performed in completing this coursework?
  - What skills did you develop?
  - What difficulties did you encounter?
  - What would you do differently or improve next time?
- Compare your eQuote to other methods of electronic communication of similar information.
- Make sure you spell-check and proofread your work.
- Use appropriate technical terminology in your review.

## **ePORTFOLIO**

There are no specific marks for an eportfolio; however, it would be seen as good practice to have an opening screen with the intended audience being the assessor/moderator. The following links are suggested:

- Requirements specification
- eQuote to the family from the organisation containing:
  - Hardware recommendations
  - Networking recommendations
  - Connectivity recommendations
  - Internet recommendations
  - Overall costing within budget
- Culture and society
- Review

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## **UNIT 5: ePROJECT – PROJECT PLANNING FOR ICT**

### **Problem Definition**

Most candidates were able to reassess the Problem Definition in light of the Revised Client Requirements and update the document accordingly. Centres are increasingly adept in instructing candidates to show all changes that have occurred in the controlled time in a different colour to aid both the centre marking and the moderation process.

There were some interesting interpretations of the Revised Client Requirements, but it was very clear this year that, compared with previous years, those candidates who fully considered the wider impact of the new requirements and full analysed and embedded them into their Problem Definition did, on the whole, go on to produce better solutions in latter stages of this unit. Those candidates who limited their thinking and imagination at this stage did not progress the solution as well as they might have, and this affected both the marks in this section and in subsequent sections.

### **Project Organisation**

Centres are again reminded that marks can only be awarded for the candidates' use of project management software for the fifteen hours' controlled time.

In most cases, there was good use of the project management software used by centres. In only a small number of cases, candidates used this software as a means of recording what they had done, rather than a forward planning tool. In other words, they were using the software more as a diary rather than a project management tool and this needs to be strongly discouraged. Candidates are expected to use the project management software to plan how they expect to use the fifteen hours controlled time and this serves as the baseline plan. In this plan, they should consider the main tasks, sub-tasks, critical path including predecessors and any resources that may be needed, along with any checkpoints and contingency that may be appropriate.

As the baseline plan changes as the Revised Client Requirements are introduced, candidates must update their plan accordingly. Similarly, as candidates progress through the controlled time, they will need to update their plan as some sub-tasks take less time than expected and some will take more. Candidates must also communicate their progress, preferably by using the 'notes' section of the project management software. This should not simply be an account of what they have done, but should consider the consequences of, for example, a sub-task taking longer than expected and explain how they will make up this time.

## **The Project**

There were some excellent, imaginative and innovative solutions to the Revised Client Requirements this year. In a small number of cases, there were some superficial solutions, but the majority of candidates were able to embed the new requirements into the whole of their solution.

Centres are reminded that what they are marking is the way in which the candidate has developed the solution in light of the Revised Client Requirements. Therefore, it is the way in which the candidate has developed the solution as an individual during the controlled time that determines the mark for this section.

Again, it was clear that some candidates still struggle with implementing the Revised Client Requirements in Excel and this is mainly because they do not engage in the development of the prototype solution during the group work stage as much as they should. Without fully addressing the Revised Client Requirements, candidates can expect to have a very low mark for this section.

## **Review**

In some cases, the review was more of a reflective 'diary' of what happened during the fifteen-hour controlled conditions rather than a focussed review using proper evaluative writing at the standard required at A2 level. Most centres now ensure that candidates cover all of the headings from the specification which is encouraging, but now need to work with candidates on a more evaluative style of writing.

## **Presentation**

Centres are once again reminded to take care in ensuring that the links within the ePortfolio are not pointing to networked drives and that the ePortfolio works as expected after burning it to the disk. In some cases, this problem has resulted in centres awarding five marks for ePortfolios which worked, whilst the work was on the network but that failed to work after transferring the work to disk. In such cases, this can almost put the centre out of tolerance on this small section alone.

A small number of centres do not use the given template for the ePortfolio and prefer to get candidates to create unnecessarily complex HTML ePortfolios. This is a distraction for the candidates and often results in broken links. Furthermore, candidates would be better employed focussing their efforts on work that will directly yield higher marks.

Candidates *must* be discouraged from password-protecting documents that are linked from their ePortfolios.

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## **UNIT 6: eSTUDIO – ICT MARKETING COMMUNICATIONS**

### **General comments**

As in previous series, this was the most popular of the A2 project units and many very good ePortfolios of work were seen. Centres had generally ensured that their candidates had access to a range of suitable software and the skills to produce effective graphic and multimedia products.

The unit requires candidates to produce both graphic and multimedia products and, for this series, was based on the *Fares & Wares* scenario. The requirements of the scenario were presented under the following headings:

### **Requirements Specification**

Most candidates scored well in this section, producing an accurate summary describing the purpose of the campaign and listing a series of success criteria based on the given campaign objectives. As in previous years, identifying success criteria that were both realistic and measurable proved to be a difficulty and candidates were not penalised at moderation if this was not fully achieved.

The majority of candidates produced test plans that provided for objective testing, where this was possible, for example, length of video, navigation of website, etc and subjective testing of graphic outcomes, usually involving peer surveys.

### **Graphic Design**

Most candidates presented initial ideas and included some illustration of their development, although in several cases the initial design work appeared to have been hastily prepared and annotated.

The most successful candidates addressed the requirements to include details of elements for further development and demonstrated their knowledge of the available software by identifying the tools and techniques they intended to use in the development of their work.

### **Multimedia Design**

The use of storyboards and timelines in the design of multimedia products was an area of improvement over previous years, but only a minority of candidates identified the tools and techniques they intended to use in the development of their video advert and animation.

## Graphic Products

As in previous series, most candidates provided screen shots that confirmed the software used and some extensive records, comprising step-by-step screen shots of the production process were seen. The most successful candidates were more selective and presented screen shots to demonstrate significant developments and the use of software tools that they had found to be particularly effective.

The set of graphic products for the *Fares & Wares* campaign comprised;

*Vector-based drawing of an original design for the Fares & Wares logo*

Successful candidates produced designs that were clearly related to the scenario and included graphic features and colour combinations that set a theme for the campaign products.

Less successful logos tended to be basic in terms of use of software and provided a less obvious link to the *Fares & Wares* scenario.

*A set of three products to encourage people to visit one of the fairs. The products are to be generic, but must be readily customised to suit different venues and dates:*

- *a Fares & Wares poster giving details about a fair to be held in your region*
- *an advertisement for the fair to be published in your local newspaper*
- *an audio podcast for local radio.*

The posters and newspaper adverts tended to be the most successful of the graphic products, with several effective combinations of text and image over suitable backgrounds, and with some candidates making good use of distortion to shape images of their graphics and create realistic representations of the products in use.

Some scope for improvement in the image editing work was noted where layering could have been used to provide foreground features and thereby further enhance the final representations of the posters.

The podcasts tended to be well done, with many well-recorded and interesting products that blended music with spoken content.

*A design for a food stall to be used at a fair:*

- *vector-based front elevation of a food stall drawn to scale*
- *finished food stall elevation with added colour scheme, graphics and signage*
- *representation showing the food stall in use*

The food stall elevation provided an opportunity to demonstrate accuracy in vector work and several candidates achieved this, although many drawings without titles, dimensions and scale were seen. The most successful elevations went beyond simple rectangular designs to include a variety of shapes and features such as wheels and canopies. Finished elevations varied in quality, but were generally disappointing, with most candidates adding flat colour and plain text for signage and with little use of colour gradients or shading for depth.

The representation of the food stall in use was a further opportunity to demonstrate photo editing skills, and some successful and realistic representations were seen, although the lack of development of the base elevation drawing and lack of judgement of scale resulted in many disappointing outcomes. Again, some use of layering to provide foreground features would have enhanced the final representations.

*Designs for three branded items to be given away at the fairs:*

- *vector-based drawings of a FaresandWares.co.uk car sticker, a balloon with your Fares & Wares logo and a Fares & Wares sun visor cap*
- *representations showing the branded items in use*

In previous series, the representations of similar products have been used to demonstrate techniques, such as control of transparency and shadow, use of wire frames and features such as reflection and mirroring.

For this series, candidates generally presented simple designs for the branded items and demonstrated only limited software skills by superimposing their logos onto images of products without further editing.

### **Multimedia products**

In addition to the podcast described above, the set of graphic products for the *Fares & Wares* campaign comprised:

- *45 - 60 second video to promote a local venue for a fair to potential stallholders.*

A wide range of approaches to the authoring of the promotional video were seen. The most successful examples focused on a local event, and involved both original and secondary video sequences, with well-timed transitions and synchronised music with voice over.

- *Promotional animation for a regional speciality.*

The intention of this product was to produce an asset or assets that could be used to improve the user experience provided by the website. Most candidates produced tween-based animations as required.

The most successful animations comprised objects and backgrounds that were well-matched to the brand image of the chosen regional speciality. Less successful animations relied on motion paths and did not feature purpose-made assets with moving parts.

- *Webpages for the FaresandWares.co.uk website to comprise:*
  - *Fares & Wares splash screen, featuring the logo, with audio and an option to skip the splash screen*
  - *regional home page, featuring the podcast and images of the poster and newspaper advert in use*
  - *regional producers' page, featuring the animation and other food or craft products from your area*
  - *regional fair page, featuring the video and the representations of your food stall and branded products*

Most candidates produced a website of four pages that presented the required information. Many effective splash screens with loading bars, audio introductions and skip buttons were presented. Several candidates included images of their graphic products on the web pages, usually to good effect, and many appropriate animations that had been well-integrated within the page designs were seen.

The most successful candidates addressed all the stated requirements for content and demonstrated skill in the use of roll-overs, transitions, etc. to produce web pages with well-designed navigational features, carefully chosen colour schemes, clear fonts and consistent layouts.

In some instances, navigation between pages did not work as intended, small default fonts had been used and objects had not been placed on the pages to achieve a coherent layout. There were also a limited number of examples where images and other assets could not display because they had been moved after saving of the web pages.

## **Review**

*Produce a review document that evaluates and suggests improvements covering:*

- *the final products*
- *the tools and techniques used*
- *own performance*

As for other units, the review was done well in examples where the evaluation of the final products included some consideration of end-user feedback, leading to suggestions for further improvement. The reviews of the tools and techniques used ranged from simple descriptions of process to the consideration of the effectiveness of a range of software facilities, as required for the higher marks.

The most successful candidates commented on their own performance and identified changes of approach likely to lead to improvement of performance and/or outcomes. They did not include comments about lack of time or effort.

## **ePortfolio**

*Produce an ePortfolio to provide a context and showcase for the campaign products.*

Most candidates produced a functional ePortfolio that provided access to the products and supporting evidence.

In general, the ePortfolios provided limited context but were usually easy to navigate. The more successful candidates were able to target their work towards the assessor and design pages that were clear and that highlighted their final products.

## APPLIED ICT

### General Certificate of Education

Summer 2016

### Advanced Subsidiary/Advanced

## UNIT 7: eCONNECT – ICT NETWORKING PRINCIPLES, DESIGN AND MANAGEMENT

The AICT 7 paper is divided into two parts: Part A, comprising a one-hour on-line examination paper and Part B, which is a practical two-hour examination. The responses to Part B are submitted on CD.

### Part A

#### General comments

Part A of the examination was completed on-line using the BTL secure website.

#### Remarks for specific responses

- Q.1 (a) *Describe three advantages of using networked computers compared to stand alone computers.*

Many candidates gave benefits of networked computers compared to standalone computers.

- (b) *Describe three disadvantages of installing and using networked computers compared to standalone computers.*

Most candidates were able to give at least one disadvantage of installing and using networked computers compared to standalone computers.

- Q.2 (a) *State two characteristics of a VLAN.*

- (b) *State two characteristics of a Virtual Private Network (VPN).*

- (c) *Describe the processes used to keep communication secure on a Virtual Private Network (VPN).*

Many candidates seemed under-prepared to answer questions on this area of the specification.

- Q.3 *Name four communication protocols identifying a suitable use of each.*

Most candidates were able to name at least one communication protocol and identify a suitable use.

- Q.4 (a) *Name each transmission method described below:*
- (i) *data is transmitted in both directions at the same time*
  - (ii) *data is transmitted in both directions but only in one direction at any time*
  - (iii) *data is transmitted in one direction only*

This question was generally well-answered

- (b) *Describe the difference between serial and parallel transmission methods, giving an example of where each transmission method might be used.*

Most candidates were able to describe serial and parallel transmission methods but it was very disappointing to see many candidates could not give an example of where each transmission method might be used.

- Q.5 (a) *Describe the difference in processing capability between thin client workstations and standard workstations.*
- (b) *Explain why Green Rock should consider installing a thin client network.*

Many candidates seemed unable to answer questions on this area of the specification but this varied by centre.

- Q.6 *Describe the main features of a peer-to-peer network and give one reason why Green Rock might consider installing a peer-to-peer network.*

Most candidates gained at least one mark for this question.

- Q.7 *Explain how packet switching operates on the internet. Your answer should include reasons why packet switching is the preferred method of communication on wide area networks.*

It was quite disappointing to see some candidates unable to explain how packet switching operates on the internet but many candidates gave clear extended answers, gaining high marks.

## **Part B – The Recommendation**

### **General comments**

Part B – The Recommendation part of the examination was completed using network design software and print screen evidence in a word processed document. Candidates typed written responses to some tasks in the same document.

The scenario and tasks were of a similar type to previous papers.

## **Remarks for specific responses**

### **Task 1**

Centres should remind candidates that a 'scatter gun' approach of placing all hardware in all rooms will not gain marks, as marks were deducted for inappropriately located hardware.

The location of each component is important. Thought should be given to where the servers and switches should be located.

Candidates can gain full marks with different solutions if they correctly justify their choices.

### **Task 2**

Many candidates were able to describe fibre optic and twisted pair and give two disadvantages of installing fibre optic compared with twisted pair.

### **Task 3**

Most candidates were able to give reasons for installing wireless communication infrastructure and scored well on this task.

## **Part B – The Implementation**

### **General comments**

Part B – The Implementation part of the examination was completed using server simulation software and print screen evidence in a word-processed document. Candidates typed written responses to some tasks in the same document.

Candidates labelled their screen shots as instructed. However, centres should encourage candidates not to severely crop their screen shots as evidence may be lost. Also there is no need to reduce the size of the screen shots to make many fit on one page. They are not printed, therefore no paper is saved and it is important that the examiner can read all the detail on the screen.

The examiner must have clear evidence to be able to award marks.

Candidates were expected to create users, computers, groups, folders and set share permissions to meet the given objectives.

Generally, most candidates were able to carry out the practical tasks but many seemed unable to justify their choices and failed to refer back to the given objectives.

Centres must direct candidates to read and refer to the objectives when justifying their choices, particularly when deciding on share permissions.

### **Remarks for specific responses**

Task 4 asked for rules that the candidate would recommend when naming objects to be used in the network. Some candidates gave conventions and failed to gain marks.

When completing Tasks 8 and 9, candidates should refer and use the given objectives to determine who should be in which group and what permissions each group should be given.

The permissions should be justified with reference to the objectives.

Candidates should describe the permissions that they are going to set using the correct terminology such as 'Full Control' or 'Read' and not in general terms such as 'update' or 'view' the database.

## **APPLIED ICT**

### **General Certificate of Education**

**Summer 2016**

### **Advanced Subsidiary/Advanced**

## **UNIT 8: eLEARN – PRODUCING EDUCATIONAL SOFTWARE SOLUTIONS**

### **General comments**

As with the other units of the practitioner qualification, the entry for AICT 8 in this series was relatively low and from centres able to support their candidates to address the programming aspects of the unit specification.

All candidates had chosen to produce their programs using Visual Basic. In most cases, candidates had produced good quality solutions that were appropriate for the audience and purpose. Several excellent examples of original learning systems were seen, with solutions targeted at a young audience tending to be the most successful.

### **Problem definition**

Most candidates had undertaken some analysis of current practices for the delivery of their learning content and were able to use this research to form a problem definition that identified the broad aims and limitations for the proposed eLearning system.

The majority of candidates were able to produce detailed problem definitions and to form clear and measureable criteria for the evaluation of the finished eLearning system.

### **Design an eLearning package**

Many candidates produced designs that were sufficiently detailed to allow the system to be implemented by a competent third party. Some candidates produced comprehensive designs for eLearning systems that were clearly suitable for the intended audience and purpose, with due consideration of data, processes and user interaction.

### **Create an eLearning package**

A range of eLearning systems was seen. Most candidates were able to produce systems that were functional, and many produced systems that included well-thought out features, including engaging interfaces and interesting scoring systems.

### **Tutorial**

Some excellent tutorials were seen. In these examples the candidates had made good use of the on-screen environment to demonstrate the use of their systems and had ensured that the tutorials were directed towards each of their intended audiences.

## **Test an eLearning package**

Many candidates were able to design effective test data to test both the functionality and logic of their implemented systems, although, as in previous series, several examples were seen where test documents lacked the discussion of results required to access the higher marks for this section.

## **Review**

This section was an area of overall improvement, with fewer candidates providing reviews that comprised narrative rather than evaluative content, and with most candidates demonstrating an awareness of the requirements of the specification for the review for this unit.

In a minority of cases, candidates failed to cover all five of the areas contained in section 8.8 of the specification, but simply provided a description of their work.

## **ePortfolio**

Most candidates provided functional ePortfolios that had been themed to reflect the context of their eLearning packages.

**APPLIED ICT**  
**General Certificate of Education**  
**Summer 2016**  
**Advanced Subsidiary/Advanced**  
**UNIT 9: eTRANSACT – SELLING AND ICT**

**General comments**

As with other units of the practitioner qualification, the entry for AICT 9 this series was relatively low.

All centres following this unit had addressed the difficulties experienced in previous years and had adopted realistic solutions for presenting working versions of the candidates' websites for external moderation.

As in previous series, most candidates had successfully addressed the requirements of the specification and created eCommerce websites that allowed the end user to view and purchase goods.

**Design an eTransact system**

Many candidates presented clear designs that included all the information required to create the website, including clear structure diagrams, proposals for navigation, user interaction and graphic content.

Most candidates had given due consideration to the structures required for efficient storage of all information required to carry out transactions. Some candidates had designed data entry facilities and validation routines.

**Create an eTransact system**

Most candidates created functional websites that comprised a series of web pages designed to present products. Most of the websites enabled stages of a transaction to take place. Many candidates created fully functional, easy to navigate websites comprising a series of well-structured web pages that enable multiple purchases in a single transaction.

Many candidates created efficient data structures that stored all information required to operate a 'shopping basket' and carry out a transaction and provided the consumer with the details expected from a commercial system.

**Test an eTransact system**

Most candidates had created comprehensive test plans that enabled them to test all areas of their system. The test results were often presented with appropriate commentaries.

## **Provide customer advice**

As in previous series, most candidates had carried out some research into distance selling regulations and the terms and conditions documented on a range of commercial websites. The results of the candidates' research were generally presented as part of the transactional website, as required.

## **Review**

This section was an area of overall improvement, with fewer candidates providing reviews that comprised narrative rather than evaluative content and with most candidates demonstrating an awareness of the requirements of the specification for the review for this unit.

In a minority of cases, candidates failed to cover all areas contained in section 9.8 of the specification, but simply provided a description of their work.

## **dPortfolio**

Most of the candidates' ePortfolios were fully functional, although, in some cases, candidates would have benefited from testing the navigational links to ensure that all work could be accessed when the completed project was removed from the school/college network.



WJEC  
245 Western Avenue  
Cardiff CF5 2YX  
Tel No 029 2026 5000  
Fax 029 2057 5994  
E-mail: [exams@wjec.co.uk](mailto:exams@wjec.co.uk)  
website: [www.wjec.co.uk](http://www.wjec.co.uk)