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GCSE

Edexcel GCSE in

Applied Information and Communication Technology (Double Award) (2331)

Unit 1:ICT Tools and Applications

Teacher Guidance Notes 2005/2006
This document accompanies the Activity Booklet 2005/2006

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Pre-Release Material

Edexcel GCSE in
Applied Information and
Communication Technology (Double
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CONTENTS

All pre-release materials relating to Unit 1 are only available on the Edexcel website. They may be updated from time to time. Centres should check the front page of each document to ensure that they have the most recent version.

Centres must download this Activity Booklet. Hard copy will be sent to centres only if they request it (in writing) from the Assessment Leader. The case study is meant to act as a focus for teaching, learning and discussion. The activities do *not* carry marks. The examination builds upon, but does not repeat, the activities in the Activity Booklet. It will use the same scenario.

Equipment Requirements
Each student must be provided with:
- A desktop computer capable of running the following software:
  - Word processing software
  - Publications software
  - Database software
  - Spreadsheet software
  - Multimedia/presentation software

The specification and specimen assessment materials provide details of the activities which each type of software must support - as do the past examination papers.

- An ink jet or laser printer (colour printing is not essential).
- Mouse and UK keyboard.
- Sufficient individual storage space.
- Access to the Internet for some of the pre-release activities. The examination itself does not require Internet access.

Using the Activity Booklet
The Activity Booklet consists of a scenario and a set of practical hands-on activities focusing on the following five skill areas:
- Presentation of information (all Activities/Tasks)
- Organisation and analysis of numerical information (Activity 4)
- Organisation and analysis of structured information (Activity 3)
- Organisation and presentation of information using multimedia/presentation software (Activity 2)
- Communication, searching and selection of information (Activity 1)

Whilst working on the activities, students are expected to practise effective file management and standard ways of working.

The Smarts Leisure Park website can be accessed at www.smartsleisure.co.uk, Students will need to refer to it for Tasks INT1 to INT3 and for Task SP6.

Within each activity, tasks are generally progressive and should be completed in order.

In addition the following tasks require the prior completion of other tasks in other activities:-

- SP12 cannot be completed before DB1 to DB7

- WP1 and WP2 cannot be completed before INT1 to INT3

- WP3 cannot be completed before DB11

Relationship between the Activity Booklet and the Examination

The Smarts Leisure Park scenario will be used as the context for the examinations in January 2005, May 2005, January 2006 and May 2006.

The Activity Booklet is designed to act as a focus for teaching, learning and discussion. The activities do not carry marks.

The tasks take students step-by-step through many of the concepts and skills that may be assessed in the examination.

The examination builds upon, but does not repeat, the activities in the Booklet. It will have a similar format and style.

In addition, students are encouraged to visit the Smarts website at regular intervals to check for updates. The Leisure Park will expand as time goes on and any new material may be used in the construction of examination activities.

The Examination

The examination is **computer-based**, but not on-line. It is two hours and 30 minutes in duration.

The examination is un-tiered. Each activity is generally progressive. Students may choose to omit some or all of the more challenging tasks within each activity.

Students may not bring textbooks or any other material into the examination. Students may make use of any electronic help files which are commercially produced as part of the relevant software package.

Centre produced help files/templates etc are **NOT** permitted in the examination.

Standard Ways of Working
1. Students should be encouraged to confine printouts to **one A4 sheet** unless otherwise specified**.**
2. Students need to practise saving each task - before printing it wherever possible.
3. Proof-reading skills are essential for the examination and each activity will provide opportunities to develop these skills.
4. Students should be encouraged to read each complete task before starting work on it.
5. All printouts **MUST** be labelled <u>before</u> printing with:

Candidate Name   Candidate Number   Centre Number

Instructions for the labelling of printouts are posted on the Edexcel website and are included in the relevant edition of the Instructions for the Conduct of the Examination. Candidates must practise the necessary skills in preparation for the examination.

Students will find help on examination technique and hints and tips in the Candidate Kit, a copy of which was issued to each centre in Spring 2004. Further copies can be downloaded from the Edexcel website.

Using Datafiles
In the examination, candidates are given a number of data files which they need to import and manipulate in various ways. Whilst this activity booklet provides considerable practice in application of skills, the growing number of past papers should be used to ensure that candidates are able to make full use of the datafiles provided in the examination. All past papers use the Smarts scenario.

There is also a specimen paper with datafiles available on the website.

The Candidate Kit
A revision pack for candidates was issued to centres in Spring 2004. This provides additional practice and many hints and tips on how to maximise achievement. Further copies may be downloaded from the Edexcel website.

Activity 1: Using the Internet and WP/Presentation Software
Students should be encouraged to look at navigation methods within websites – find, back, forward, navigation bars, hot spots etc.
Students are expected to locate, select and download relevant materials themselves.

Task INT1
Students should surf the Smart Leisure Park site to get a 'feel' for the company and to know where to find information for later tasks. There is no need to print everything out. Students should familiarise themselves with the company logo and contact details and should appreciate the need for consistency of style and proportions of graphics on all documents.

Task INT2
Students should use search engines to find appropriate sites. Refinement of searches should be considered at this stage in addition to features and components of web pages. Teachers may wish to use one of these addresses as a starting point:
http://www.lordswood-leisure-centre.co.uk/frame.htm
http://www.the-dome.co.uk/

Preparation of the report will provide students with their first opportunity to carry out a task similar to those found in the examination and to practise their labelling skills.

Task INT3
Students must use email software to complete this task. They should be able to paste screen shots into other documents. They should be encouraged to check that the screen shot shows all the required components. The company and all addresses are fictitious and there is no need to send the email.

Activity 2: Using Multimedia Software

Task MM1

Individual slides should be identified and the navigation route clearly shown.

Students are should be encouraged to see the importance of planning.

This is particularly the case here as attention should be drawn to the need for consistency in placement and size of text and graphics throughout a multimedia presentation.

A navigation route might simply indicate the sequence in which the slides will be projected, or it might show how navigation buttons allow the presenter to move through the slides.

Task MM2

Students are not expected to create their own graphics/sound files, although they may wish to do so. They should use their storyboards to help them.

Task MM3

The presentation should be tested by showing it to others. Students should encourage those viewing to role-play as new employees of the company.

This is a good opportunity for students to demonstrate progression from their first draft to the final presentation

Alterations to be made should be clearly shown on the printout.

Proofreading is an essential skill if students are to maximise achievement and they should check the presentation carefully before printing the final copy. They must be able to print a specified number of slides per page.

Activity 3: Using Database Software

Students must use <u>relational</u> database software for this activity.

This activity requires the creation of a relationship between two tables, which is clearly a higher level skill. Since the relationship must be established before entering data into the tables, the task appears early in the sequence.

Candidates who do not have the necessary skills can attempt most tasks using the tables separately. Only tasks DB12 to DB15 require the use of the relationship.

Students should produce reports with customers in mind as fitness for purpose is of prime importance in this applied ICT exam. Teachers are encouraged to familiarise their students with the qualities of business documents that make them fit for purpose. Some assistance in this area can be gained from the Candidate Kit.

Task DB1
Students should choose appropriate data types and validation rules/input masks by studying the information in Appendix 1.

Suitable data types should be entered. Students should be aware that the fields identified in the relationship must have the same structure although they do not have to have the same name.

Tasks DB2 and DB3
Students must prepare the structure of the two tables themselves.

Task DB4
It is essential that students have an intuitive understanding of referential integrity. They will need to be able to apply it but will not be required to explain it.
Students should only label the primary key and foreign key in the relationship NOT both primary keys.

Task DB5
When entering given data, students must ensure that they enter exactly what is required. This will only be achieved with care and proofreading. They may use a data entry form, type directly into the table or import the data. This is the first example of a situation where the task does not specify the method of labelling and students may use any sensible method so long as the details are printed, not handwritten.

It might be helpful as a centre to decide on the most appropriate methods of labelling database printouts as it has become evident that no one solution suits all centres. Database reports allow the entry of headers and footers and must be labelled as instructed.

Task DB6
The data entry form should be well laid out and should aid the input of data. Students should be encouraged to customise the form by entering meaningful titles and field names, and possibly by using dropdown boxes or helpful messages.

Task DB7
Students must use the data entry form to enter the data and may wish to amend their forms in the light of experience. Again it is essential that they enter the data exactly as given.
They should ensure that the table is sorted as required before printing it.

Task DB8
Students should take care to show all fields in the results of this search, as specified.

Task DB9
This task should not produce duplicates.
Students should check that output is correct by manual testing.

Task DB10
Students should be aware that a report is a method of presentation and should check that their output not only shows the required information but that it is fit for purpose. For example, there should be a suitable heading and column headers should be customised to make sense (e.g. spaces between words). Students should also understand that they must produce a database report using database software and not by copying/pasting material into a word processor to make a word processed report.

Candidate details should be entered in the page footer area as specified. A common error here is for the details to be entered in the report footer which may appear further up the page.

Task DB11
This table is created for use in a later activity (WP3). It is not linked to the other tables. When designing the structure, students should refer to the content of the Enquiry Forms in Appendix 2.

Task DB12
This task requires a multiple sort.
The field Day Num is used to sort the table. It has values from 1 to 7 only. If Day was used, the output would be alphabetical rather than sequential. Day Num solves this problem. It should not be included in the printout.

Tasks DB13
Students should be careful that only the specified fields are shown in the report and, as in DB10, they should ensure that the report is fit for purpose.

DB14/15
Students should check that output is correct by manual testing.

Activity 4: Using Spreadsheet Software

Students must be proficient at switching to and from formula view and at printing the view required in each task.

Students should check that printouts showing formulae have columns wide enough to display complete formulae.

Landscape format may be used to confine task printouts to one A4 sheet.

Row and column headings and gridlines should be printed. Experience has shown that students often do not know how to set their software to print grid lines and row and column headings.

Formulae should be efficient and use appropriate operators and functions. Functions should not be included unnecessarily – this particularly applies to SUM.

Task SP1
Students must include all information from the table except daily cost. They should ensure that formatting is carried out as specified.

Task SP2
Students should practise efficient techniques for inserting and moving data.

Task SP3
As with all formulae, students should check that they have entered and replicated formulae correctly by checking the results produced.
The term 'copy down' has been used successfully in the examinations to avoid the term 'replicate'.

Task SP4
Students should be clear about the meaning of the term **function**, be able to select the appropriate function when required and know when to avoid using one.

Task SP5
Candidates need to be able to move sections of data in a spreadsheet, not necessarily complete rows or columns, leaving the rest of the data intact.

Task SP6
Students are free to decide on suitable bikes and equipment for the riders. Information on the suitability of the bikes available is on the Smarts website.

Task SP7
Guidance should be given on the design of the spreadsheet structure using the suggested headings.

Task SP8
Students are likely to use a wizard for this task and should take care to check the output and customise it where necessary. The chart should be clearly labelled and only include the required data. Students should be able to use a legend but should also know how to remove unnecessary legends produced by wizards.

Task SP9

All students should practise the construction of IF statements that simply display messages, but the more able should be aware that IF statements can do more.

This task requires the use of an IF statement that performs a calculation if the criterion is true. The written expression is given to assist students but further guidance may be required. Students may wish to use a different format for the discount calculation (such as *0.9).

Centres may wish to offer an alternative task that requires a simple IF statement to display messages only.

Task SP10
Students must use either an absolute cell reference or a named cell. They should be aware of the purpose of this technique and be able to carry out 'what-if' exercises.

Task SP11
This task is intended to make students aware that the AVERAGE function is not always appropriate.

Students should be able to format the results to the given number of decimal places.

Task SP12
Students should be able to copy data from one application to another. This spreadsheet could be used to calculate income etc.

Activity 5: Using Word Processing and Database Software

Templates and wizards may be used to help design the business documents as long as the output is original and fit for purpose.

Task WP1

Students must use the company logo – this can be found on the Smarts website.
This task provides an opportunity to explore templates and read-only files.
Experience has shown that many students have a poor grasp of the structure and elements of business letterheads and should be given good examples to follow.

Task WP2

The business letter should include standard features and have an appropriate layout, including indication of the enclosed report. The letter should be prepared using the letterhead produced for Task WP1 without alteration.

Task WP3

This task requires a standard mail merge letter, with the data source being the ENQUIRIES Table created in Task DB11. The body of the letter must include the given paragraph. Students must print the standard letter showing the merge fields. It is appreciated that in some software packages it is not possible to produce a print out with the merge fields showing as they are replaced with the contents of the first record. In these circumstance a screenshot may be the best solution.

Task WP4

There should be four letters printed.