Final

**General Certificate of Education (A-level)
January 2013**

ICT   **INFO2**

(Specification 2520)

Unit 2: Living in the Digital World

Final

Mark Scheme

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation events which all examiners participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for standardisation each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, examiners encounter unusual answers which have not been raised they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

GENERAL GUIDANCE NOTES FOR EXAMINERS

Overall guidelines

1. All examples accepted should be clearly related to the subject area and should not be "generalised" examples.

2. Attention should be paid to ensure that marks are not awarded for simple restating of the question or the stem, often involving the exact same terms.

3. It should be remembered that scripts could be seen after they are marked and so consistency of approach and correct mechanics of marking are essential.

4. Rules on positioning of ticks and marks are to aid in checking and remarking of scripts.

5. Do not expect the candidate to use the exact wording given in the mark scheme. If you are in doubt as to the correctness of an answer given by the candidate, consult your Team Leader.

6. The answers given in the mark scheme are exemplars. Credit must be given for other correct answers not given in the mark scheme. Please refer to Team Leaders where there is any doubt.

7. One-word answers, where acceptable, will be indicated on the question paper.

8. The meaning of ICT-specific words and phrases are generally as defined by *BCS Glossary of Computing and ICT* (current edition).

Specific marking guidelines

9. The basic rule is one mark one tick. The tick to be positioned at the point where the mark is gained in the answer and definitely not in the margin.

10. The only figures in the margin should be sub-totals for parts of questions and a final total for the whole question in the box provided.

11. All writing must be marked as read, either by the presence of ticks or by striking through the script with a vertical line.

12. Where candidates have added extra to their answers on additional pages, the total mark should be indicated as „including x marks from supplementary page y". The total mark should be written in the appropriate printed box on the question paper.

13. The use of the following symbols/marks is acceptable:

a. BOD – where the benefit of the doubt is given for the point the candidate is making. This is generally where poor writing or English is an issue. Its widespread use should be avoided.

b. An omission sign ^ should be used where the candidate has given insufficient information to gain a mark. This is particularly useful when a teacher or student looks at scripts against a mark scheme.

c. It may be appropriate to indicate where the same point has been covered more than once by an arrow or where a point has been covered in several lines of prose by the use of brackets.

d. For questions where candidates" answers are assessed for QWC, no individual ticks should be written on the script as it should be marked holistically.

14. Markers are responsible for checking:

a. The transposition of marks to the front

b. That all work has been marked on each script

c. That all marks for individual questions are totalled correctly

d. That the script total is transferred to the box at the top right of the script.

e. That they **clearly** initial the script, under the total at the top right, so it is possible for the Principal Examiner to identify each markers work.

SECTION A

1	What are the components of an ICT system?	*(4 marks)*
	Purpose of the Question Knowledge of the components of an ICT system.	
	Guidance for examiners on how to mark this question 4 marks if all 6 components stated 3 marks if 3,4,5 components stated 2 marks if 2 components stated 1 mark if 1 component stated	
	Example answer The components of an ICT system are people, procedures, hardware, software, data and information. (4)	

2	Explain **two** personal qualities that an ICT helpdesk operative would need in order to carry out this job effectively.	*(4 marks)*
	Purpose of the Question Application of knowledge and understanding of the personal qualities needed for ICT professionals to work effectively within the industry.	
	Guidance for examiners on how to mark this question One mark for each relevant quality stated and one for an expansion in context.	
	Example answer ICT helpdesk operatives would need to have good oral communication skills (1), in order to be able to explain the solution to the problem clearly. (1) ICT helpdesk operatives would need to have good listening skills (1), in order to be able to understand the problem. (1)	

3(a)	Define the term *information*	(2 marks)
	Purpose of the Question Knowledge and understanding of the concept of information being created by the processing of data to give it meaning/context.	
	Guidance for examiners on how to mark this question Definition of the term information.	
	Example answer Information is data that has been processed. (1) The processing gives it context or meaning. (1)	

3(b)	Explain, with examples, factors that can affect the quality of information	*(6 marks)*
	Purpose of the Question Knowledge and understanding of the factors that affect quality of information	
	Guidance for examiners on how to mark this question One mark for naming a factor up to a maximum of 3. One mark for each expansion or example. Must refer to at least two factors for full marks.	
	Example answer Information needs to be up-to-date (1) population statistics for 2001 would be of little use for a report written about population in 2013. (1) Information must be relevant. (1) Information gathered from an Internet search may well have too many unnecessary facts. (1) Information must be from a reliable source. (1) For example using the UNESCO website would be a reliable source for finding out the history of a particular world heritage site. (1)	

4	The terms World Wide Web, Internet, Extranet and Intranet are often confused. Read the definitions below. Match the correct letters from **A, B, C** and **D** with the definitions given in the table below.	*(4 marks)*
	Purpose of the Question Knowledge of the characteristics of networks.	
	Guidance for examiners on how to mark this question One mark for the correct matching of each term.	

	Definition	**Letter**
4(a)	A private internal network accessible to the employees of a company.	D
4(b)	A collection of multimedia resources accessed through a browser.	A
4(c)	A global collection of linked computer networks.	B
4(d)	A private network that is accessible to the customers of a company as well as its employees.	C

5	A home network was badly damaged in a fire. Figure 1 shows a hard drive that was part of it. All the data stored on the hard drive was lost. Unfortunately, the users of the home network had never backed up their data. What recommendations would you make for backup and recovery to prevent data loss in the future?	*(8 marks)*
	Purpose of the Question Application of knowledge and understanding of the process of backing up and recovering data.	
	Guidance for examiners on how to mark this question One mark for per correct point and one mark for each expansion/example in context of a home network. Max 6 if only backup or recovery mentioned.	
	Example answer I would recommend that one member of the family puts in place a regular (1) backup procedure for example at the end of each day. (1) A suitable medium (1) would be needed for the backup; for example for a home network, on-line backup could be used (1) or a recordable DVD. (1) The backups should be regularly tested to ensure the data from the home network can be restored. (1) If the backups are not made on line then their storage location (1) needs to be considered; for example the designated family member might choose to store the backups at a friend's house. (1)	

6	ICT systems are used to allow people to telework.	(12 marks)
	Discuss, using examples, the above statement in relation to individuals and society.	

	Purpose of the Question Application of knowledge and understanding of the consequences of teleworking on individuals and society.	

	Guidance for examiners on how to mark this question Banded marking using the guide below.	

	Example answer **Low mark range** Candidate has made simple statements regarding ICT systems and teleworking. **0 – 4 marks** **Medium mark range** Candidate has discussed the advantages and disadvantages of teleworking. The discussion demonstrates some understanding. Some examples have been used which relate to individuals/society. They may make some reference as to how ICT allows people to telework. **5 – 9 marks** **High mark range** Candidate has discussed how ICT systems are used to allow people to telework. The discussion shows good understanding and includes detailed examples which relate to both individuals and society. **10 – 12 marks**	

7	**Figure 2** shows two phones to scale. Discuss how the features of the two phones provide suitable interaction for users with different characteristics and requirements.	*(12 marks)*
	Purpose of the Question Application of knowledge and understanding of the characteristics of users and user interfaces.	
	Guidance for examiners on how to mark this question Banded marking as shown below.	
	Example answer **Low mark range** Candidate identifies some visible features of the 2 phones and may relate some of these to either characteristics of users or user requirements. **0-4 marks** **Medium mark range** Candidate describes a range of visible features of the 2 phones and tries to relate them to more than one characteristic of users and their requirements. **5-8 marks** **High mark range** Candidate uses a good range of visible features of the 2 phones clearly explaining how they provide suitable interaction for users with a range of characteristics and requirements. **9-12 marks**	

8	Discuss the ways that help and support can be provided to users of online systems.	*(8 marks)*
	Purpose of the Question Application of Knowledge and understanding of the provision of help and support for users.	
	Guidance for examiners on how to mark this question One mark for each valid point made. Max 6 if only one way. Max 4 if just a list.	
	Example answer The on line system could provide context sensitive help (1) where the user hovers over a feature (1) and a popup box provides an explanation of the feature. (1) The online system could provide a link to a user forum (1) where the user could ask for help from more experienced users. (1) There could be a link to a list of frequently asked questions. (1) On line videos could be available (1) which provide a visual demonstration of how a feature could be used. (1)	

9	Read the articles below.	(20 marks)
	Personal data held in ICT systems may not be private or safe.	
	Discuss the concerns that people have regarding the privacy and security of their personal data held in ICT systems and the consequences of the disclosure, loss or theft of such data.	

Purpose of the Question

Application of knowledge and understanding of the need to protect personal data in ICT systems

Guidance for examiners on how to mark this question

Low mark range
Candidate **identifies** some concerns but makes little attempt to discuss these concerns and the consequences of the disclosure, loss or theft of such data. The candidate has used a form and style of writing which is barely appropriate for its purpose. The candidate has expressed simple ideas clearly, but may be imprecise and awkward in dealing with complex or subtle concepts. Information or arguments may be of doubtful relevance or be obscurely presented. Errors in spelling, punctuation and grammar may be noticeable and intrusive to understanding, suggesting weaknesses in these areas. Text is barely legible.

0 – 5 marks

Medium mark range
Candidate **outlines** concerns. The candidate demonstrates some understanding of these concerns and the consequences of the disclosure, loss or theft of such data. The candidate has used a form and style of writing which is sometimes appropriate for its purpose but with many deficiencies. The candidate has expressed straightforward ideas clearly, if not always fluently. Sentences and paragraphs may not always be well-connected. Information or arguments may sometimes stray from the point of information or may be weakly presented. There may be some errors of spelling, punctuation and grammar, but not such as to cause problems in the reader's understanding and not such as to suggest a weakness in these areas. Text is legible.

6 – 10 marks

Good mark range
Candidate **describes** concerns demonstrating a clear understanding of them and the possible consequences. Meaning is clear. The candidate has in the main used a form and style of writing appropriate for its purpose, with only occasional lapses. The candidate has expressed moderately complex ideas clearly and reasonably fluently. Candidate has used well-linked sentences and paragraphs. Information or arguments are generally relevant and well structured. There may be occasional errors of spelling, punctuation and grammar. Text is legible.

11 – 15 marks

High mark range
Candidate **discusses** concerns, clearly demonstrating an in depth understanding of both these concerns and the consequences of the disclosure, loss or theft of such data. Meaning is clear. The candidate has selected and used a form and style of writing appropriate to purpose and has expressed complex ideas clearly and fluently. Sentences and paragraphs follow on from one another clearly and coherently. Specialist vocabulary has been used appropriately. There are few if any errors of spelling, punctuation and grammar. Text is legible.

16 – 20 marks