



**General Certificate of Education (A-level)  
January 2011**

**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.

Further copies of this Mark Scheme are available from: [aqa.org.uk](http://aqa.org.uk)

Copyright © 2011 AQA and its licensors. All rights reserved.

**Copyright**

AQA retains the copyright on all its publications. However, registered centres for AQA are permitted to copy material from this booklet for their own internal use, with the following important exception: AQA cannot give permission to centres to photocopy any material that is acknowledged to a third party even for internal use within the centre.

Set and published by the Assessment and Qualifications Alliance.

The Assessment and Qualifications Alliance (AQA) is a company limited by guarantee registered in England and Wales (company number 3644723) and a registered charity (registered charity number 1073334).  
Registered address: AQA, Devas Street, Manchester M15 6EX.

**SECTION A**

- 1** Explain what is meant by Information and Communication Technology (ICT).  
*(4 marks)*

**Guidance for examiners on how to mark this question**

The use of technology for the input, storage, processing and transfer of data and the output of information.

There are many ways of answering this question. It is not a definition. Check unusual answers with your Team Leader.

Give credit if explained by means of examples.

Allow any 4 relevant points.

**Example answer**

ICT means the use of technology for the input of data (1), storage of data (1), processing of data (1) and output of information. (1)

- 2 The following table shows activities relating to the use of ICT systems. For each one, write the name of the legislation or act that makes it illegal.

Name of Legislation/Act	Activity
	Accessing an ICT system without authorisation
	Misuse of personal data
	Use of unlicensed software
	Creating and sending a virus via email

(4 marks)

**Guidance for examiners on how to mark this question**

One mark for each correct answer.

There may be variations in the way answers are phrased.

Do not need to use the word Act.

Must have copyright plus designs or patents.

Year is not necessary.

Do not accept abbreviations.

**Example answer**

Name of Legislation/Act	Activity
Computer Misuse Act	Accessing an ICT system without authorisation
Data Protection Act	Misuse of personal data
Copyright, Design and Patents Act	Use of unlicensed software
Computer Misuse Act	Creating and sending a virus via email

---

**3(a)** Define the term information.

*(2 marks)*

**Guidance for examiners on how to mark this question**

2 marks for defining information.

Give credit for examples if information clearly defined.

**Example answer**

Information is data which has been processed (1) information is output from an ICT system. (1)

---

**3(b)** You use the Internet to research information for an essay that you are writing.

Explain, using examples, why there might be problems with using information obtained in this way.

*(6 marks)*

**Guidance for examiners on how to mark this question**

For max marks at least 2 examples.

Max 4 if no examples.

Do not accept relevance unless it relates to the filtering of large amounts

**Example answer**

The information could be out of date (1) because the website has not been updated (1), for example census figures from 1991 are being used to predict housing requirements in 2011. (1) The information might be wrong or not be accurate. (1) A photograph that I download might be subject to copyright (1) so I must acknowledge the source. (1)

**4** Describe the characteristics of the Internet and the World Wide Web.

*(4 marks)*

**Guidance for examiners on how to mark this question**

Max 3 marks if only described Internet or WWW.

Allow access via a web browser and uses HTML as characteristics of the WWW.

**Example answer**

The Internet is a series of interlinked networks (1) which cover the globe/world. (1)  
The WWW is collection of multimedia resources (1) which is hosted by the Internet.  
(1)

## SECTION B

**5(a)** A picture is data in the form of a still image.

Explain, using examples, other forms that data can take.

*(6 marks)*

### **Guidance for examiners on how to mark this question**

Max 4 if just a list and no examples.

NB Still image no marks

Do not allow data types / letters/words / characters.

Accept file types as examples.

### **Example answer**

Data can take the form of text (1) for example names and addresses. (1) Data can be in the form of numbers (1) for example quantity of stock. (1) Data can be in the form of sound (1) for example a music track. (1)



**5(b)** You need to upload and send some pictures from your digital camera via the Internet to your Uncle who lives in New Zealand. Standards exist that allow pictures to be uploaded and sent in this way.

Explain why these standards are needed.

*(4 marks)*

**Guidance for examiners on how to mark this question**

Up to 4 marks for explanation of why standards are needed either with or without examples.

Max 2 if answer not in context.

Allow examples of standards.

Max 2 for a list of standards.

**Example answer**

The digital camera needs to use a standard so that it is able to connect to the computer (1) and transfer the images. (1) The pictures sent from the first machine need to be in a recognised format such as jpg (1) so that the receiving machine can display them correctly. (1)

**6(a)** Social networking websites are popular with many people. The ethical use of these sites can be a matter for concern.

Describe the ethical issues that might arise as a result of the use of social networking sites.

*(6 marks)*

**Guidance for examiners on how to mark this question**

Must be at least 2 issues for max marks.

**Example answer**

Probably one of the major ethical issues is that you do not know who you are talking to (1) or making friends with. It could be anyone pretending to be a person of your own age (1) who attempts to adversely influence you. (1)

Another ethical issue concerns the use of personal data, (1) which might be sold on to third parties for marketing purposes. (1)

Another issue would be cyber-bullying. (1)

**6(b)** Discuss, using examples, the value of the personal data that is held on social networking websites both to the owners of the personal data and to third parties.  
*(6 marks)*

**Guidance for examiners on how to mark this question**

Must have at least 2 examples for max marks.

There are a wide range of third parties including illegal users.

**Example answer**

Personal photographs will have little commercial value (1) but may have great sentimental value to their owners. (1) However data such as names and email addresses and personal preferences could have great commercial value (1) because they could be sold to marketing companies (1) who can use targeted marketing advertisements (1) Personal details can be valuable to criminals. (1)

**6(c)** The security and privacy of personal data held on these social networking websites is a very important issue.

Discuss the measures that could be provided to ensure the security and privacy of personal data belonging to members of social networking websites.

*(8 marks)*

**Guidance for examiners on how to mark this question**

Discussion may involve users, providers and other agencies.

**Example answer**

The members should have a username and password (1) that will prevent unauthorised access to their account. (1) Members of the site should be encouraged to use the facilities available (1) to restrict access to their personal details to their 'friends'. (1) The providers should protect the social networking site with a firewall (1) to prevent hackers from accessing the stored data. (1) Governments are introducing regulations (1) to ensure that social networking providers provide the facilities to restrict access. (1)

**6(d)** Members like to be able to access social networking sites at any time of the day or night.

Discuss the ways in which the social networking provider could undertake backup and recovery operations whilst ensuring continuity of service.

*(10 marks)*

**Guidance for examiners on how to mark this question**

Backup and/or recovery factors related to the idea of providing continuity of service.

**Example answer**

As the website is in use all the time, some form of continuous backup (1) would be the most appropriate. An online backup service using the Internet (1) could be used using a specialist company. (1) Data would be continuously copied to the backup company meaning that it would be immediately available for recovery (1). There would be a very large amount of data to backup so the type of backup (1) would need to be considered. An incremental backup (1) that only backs up the data that has changed since the last backup would be suitable. (1) This could be carried out every hour. (1) The social network provider would need to make certain that suitable hardware (1) and trained staff (1) were available for the recovery process.

- 7 You are currently working as an ICT support technician at a different college and have decided to apply for this job.

Using the advertisement provided, write a letter of application explaining what makes you a suitable candidate for the job.

(20 marks)

**Guidance for examiners on how to mark this question**

You should be looking for

- Relevant personal qualities;
- Why they are necessary;
- In relation to the job advertisement.

**Low mark range**

Candidate identifies some personal qualities and/or team working skills appropriate for the job advertised. 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 some personal qualities and/or team working skills appropriate for the job advertised demonstrating some understanding of these qualities and skills. 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 explains some of the personal qualities and team working skills appropriate for the job advertised demonstrating a good understanding of these qualities and skills and relating some of them to the advertisement. 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 explains many personal qualities and team working skills appropriate for the job advertised clearly demonstrating an in-depth understanding of these qualities and skills relating most of them to the advertisement. 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**