A-LEVEL

ICT

Unit 2: Living in the Digital World
Mark scheme

Mark schemes are prepared by the Lead Assessment Writer 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 associates participate in and is the scheme which was used by them in this examination. The standardisation process ensures that the mark scheme covers the students' responses to questions and that every associate understands and applies it in the same correct way. As preparation for standardisation each associate analyses a number of students' scripts: alternative answers not already covered by the mark scheme are discussed and legislated for. If, after the standardisation process, associates encounter unusual answers which have not been raised they are required to refer these to the Lead Assessment Writer.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of students' 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

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. 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 cover
    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

1	The first row of the table below has been completed for you with one example of what ICT can provide. Complete the table by giving four other examples of what ICT can provide. ICT can provide	*(4 marks)*
	Fast repetitive processing	
	Purpose of the Question Knowledge of what ICT can provide	
	Guidance for examiners on how to mark this question 1 mark for each feature, DO NOT credit fast repetitive processing. Any four from: Vast storage capacity Improved presentation of information Improved security of data and/or processes Improved accessibility to information Improved accessibility to services The facility to search in many different ways that would otherwise be impossible. The facility to combine data in many different ways that would otherwise be impossible. Accept any response that clearly has same meaning.	
	Area of the Specification and AOs this question covers 3.2.7	

2	Good written communication skills and patience are two personal qualities that are necessary for an effective ICT professional. For each of the above personal qualities, explain, using an example, why this quality would be useful to ICT professionals.	*(6 marks)*
	Purpose of the Question Knowledge and understanding of the qualities needed to work in ICT	
	Guidance for examiners on how to mark this question 1 mark for each valid point Must explain both skills and provide an example for each skill for full marks Credit more than one example if relevant. Credit types of IT professional.	
	Example answer Good written communication skills would be needed by a systems analyst (1) to document the solution to a problem (1) using suitable vocabulary. (1) Patience would be needed when working on a help desk. (1) The ICT professional would need patience in order to prevent a user from becoming flustered or anxious (1) when the user is explaining their problem at length and in non-technical terms. (1)	
	Area of the Specification and AOs this question covers 3.2.3	

3	Using examples, explain the characteristics of batch, interactive and transaction processing.	*(8 marks)*
	Purpose of the Question	
	Knowledge and understanding of types of processing	
	Guidance for examiners on how to mark this question	
	Must have at least two examples Need to explain all three types of processing for full marks	
	Example answer	
	Batch processing could be used to produce monthly wage slips. (1) The data would be gathered together in batches over a period of several weeks (1) and then processed altogether at the same time. (1)	
	Interactive processing could be used when a user interacts with a wizard. (1) A dialogue is established between the user and the computer. (1)	
	Transaction processing could be used when paying for goods online. (1) Each transaction is processed as it is received (1) and must be completed before another can start. (1)	
	Area of the Specification and AOs this question covers	
	3.2.7	

4 (a)	Interfaces are designed to allow people to interact with ICT systems. Look at the pictures of icons below. For each of the icons, suggest an action that would be carried out if the icon was selected	*(4 marks)*
	Purpose of the Question Knowledge of the features of computer interfaces	
	Guidance for examiners on how to mark this question Answer needs to refer to an action. Allow search for data as an action for the second icon. 1 mark for each correct action	
	Example answer The question mark could be used to display a help page. (1) The magnifying glass could be used to zoom the page. (1) The shopping cart could be used to add/select/choose items that you wish to purchase from an e-commerce web site. (1) The calendar could be used to open an appointments package (1)	
	Area of the Specification and AOs this question covers 3.2.3	

4 (b)	Explain what an icon is and why they are used in computer interfaces.	(4 marks)
	Purpose of the Question Application of knowledge and understanding of the features of computer interfaces	
	Guidance for examiners on how to mark this question Marks for explaining what an icon is and reasons for their use in computer interfaces. No marks for examples.	
	Example answer Icons are small images (pictograms) (1) which have a clear universal meaning. (1) They minimise language problems for foreign language speakers (1) allowing them to navigate a computer system intuitively. (1)	
	Area of the Specification and AOs this question covers 3.2.3	

5	Concern for the environment is a factor that has caused people to worry about the ways in which ICT is used.	*(14 marks)*
	Read the extract of an article below	
	Discuss, with examples, the effects that the widespread use of ICT has had on the environment.	
	Purpose of the Question	
	Application of the knowledge and understanding of the effects that the widespread use of ICT has had on the environment.	
	Guidance for examiners on how to mark this question	
	Low mark range	
	Candidate identifies effects(s). The discussion shows some understanding of how the use of ICT systems has affected the environment.	
	0 – 4 marks	
	Medium mark range	
	Candidate outlines relevant effects with examples. The discussion shows understanding of how the use of ICT systems has affected the environment.	
	.**5 – 9 marks**	
	High mark range	
	Candidate discusses relevant positive and negative effects with examples. Candidate shows a clear understanding of how the use of ICT systems has affected the environment.	
	10 – 14 marks	
	Area of the Specification and AOs this question covers	
	3.2.8	

6 (a)	Social networking sites use ICT systems. Social networking sites are widely used by people of all ages and store large amounts of data in a variety of different forms. Using examples, what different forms of data could you upload to a social networking site.	*(8 marks)*
	Purpose of the Question Knowledge and understanding of different forms of data	
	Guidance for examiners on how to mark this question Marks to be awarded for forms of data and examples Must have at least 2 forms of data for full marks Max 3 examples for each form of data	
	Example answer I could upload photographs of my friends (1) which are images. (1) I could upload music clips (1) which are sound. (1) I could upload a blog (1) which could consist of text. (1) Finally I could upload videos of my favourite band (1) which are moving images. (1)	
	Area of the Specification and AOs this question covers 3.2.2	

6 (b)	Users of social networking sites can upload data to the sites.	(8 marks)
	Discuss how third parties could use this data.	
	Purpose of the Question	
	Application of knowledge and understanding of the commercial value of data	
	Guidance for examiners on how to mark this question	
	1 mark for each point made.	
	Example answer	
	Leaking of Personal Identity Information (1) for example users' email addresses (1) could be used to send advertising emails (1) to users. They could be specifically targeted (1) by using users' likes and dislikes. (1) Users' telephone numbers (1) can be used to contact users about specific services such as loft insulation. (1)	
	This may also lead to identity theft. (1)	
	Area of the Specification and AOs this question covers	
	3.2.5	

6 (c)	Procedures are one component of a social networking system, for example, applying privacy settings. Describe other components of a social networking system.	(4 marks)
	Purpose of the Question Application of knowledge of the components of ICT systems	
	Guidance for examiners on how to mark this question 1 mark for each valid point. All aspects of the question must be answered for full marks	
	Example answer The web site would be hosted on a web server (1) which would be the hardware of the system. (1) Users' personal details (1) would be the data in the system (1)	
	Area of the Specification and AOs this question covers 3.2.1	

7	Discuss the threats to society from cybercrime and what could be done to protect against it.	*(20 marks)*
	Purpose of the Question	
	Application of Knowledge and understanding of the safety and security of data in ICT systems	
	Guidance for examiners on how to mark this question	
	Low mark range	

Guidance for examiners on how to mark this question

Low mark range
Candidate identifies some threats from cybercrime and ways to protect against these threats.   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 threats from cybercrime and ways to protect against these threats. 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 threats from cybercrime and ways to protect against these threats demonstrating a good understanding of them. 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 threats from cybercrime and ways to protect against these threats, in an analytical manner, demonstrating an in depth understanding of them. 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

| | **Area of the Specification and AOs this question covers** | |
| | 3.2.5 | |