



A-LEVEL

ICT

INF01

Mark scheme
June 2015

Version 1: Final

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

1	Name storage media currently available to students, giving examples of what they can be used for.	(6 marks)
<p>Purpose of the Question</p> <p>Application of knowledge and understanding of storage media and their uses</p>		
<p>Guidance for examiners on how to mark this question</p> <p>Candidates are required to give at least two storage media, with an example for each. The other marks may be gained by the candidate giving more media or more examples, or a combination of the two. Max 4 marks if no examples given.</p> <p>Breadth or depth</p>		
<p>Example answer</p> <p>A student could store a song (1) on a memory stick (1) they could also use it to transfer their coursework between home and school(1) He/she could use their PC's hard drive at home (1) to store their holiday photos (1) enabling them to free space on their iPhone. (1)</p>		
<p>Area of the Specification and AOs this question covers</p> <p>3.1.5 AO1.5</p>		
<p>Notes to examiners</p> <p>Candidates may answer this question stating media as optical etc.</p>		

2	<p>For each item of equipment in Table 1:</p> <ul style="list-style-type: none"> State if it meets health and safety guidelines for a computer user, by circling either 'Yes' or 'No'. Justify your choice. 	<i>(6 marks)</i>									
Purpose of the Question											
Knowledge and understanding of health and safety in relation to the use of ICT.											
Guidance for examiners on how to mark this question											
Meets guidelines - One mark for the correct answer circled Up to two marks for each justification											
Example answer											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 35%;">Equipment</th> <th style="width: 20%;">Meets Guidelines</th> <th style="width: 45%;">Justification</th> </tr> </thead> <tbody> <tr> <td></td> <td style="text-align: center;"> Yes (1) No </td> <td style="text-align: center;"> This keyboard is shaped ergonomically (1) to reduce the possibility of the user suffering from RSI. (1) </td> </tr> <tr> <td></td> <td style="text-align: center;"> Yes No (1) </td> <td style="text-align: center;"> The chair that is used needs to be adjustable (1) to ensure that the computer user is at the right height and does not suffer from backache through lack of support. (1) </td> </tr> </tbody> </table>			Equipment	Meets Guidelines	Justification		Yes (1) No	This keyboard is shaped ergonomically (1) to reduce the possibility of the user suffering from RSI. (1)		Yes No (1)	The chair that is used needs to be adjustable (1) to ensure that the computer user is at the right height and does not suffer from backache through lack of support. (1)
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	Yes No (1)	The chair that is used needs to be adjustable (1) to ensure that the computer user is at the right height and does not suffer from backache through lack of support. (1)									
Area of the Specification and AOs this question covers											
3.1.1 AO1.4											

3	<p>Evaluation of any ICT solution involves assessing its effectiveness against the client's requirements for that solution.</p> <p>Explain how you would evaluate the effectiveness of a solution. Use at least one example of client requirements in your answer.</p>	(4 marks)
	<p>Purpose of the Question</p> <p>Knowledge and understanding of the evaluation of ICT-related solutions</p>	
	<p>Guidance for examiners on how to mark this question</p> <p>Marks for depth or breadth Up to 3 marks for the explanation of how the effectiveness of the solution would be evaluated.</p> <p>The candidate must give at least one example of a client requirement for full marks</p>	
	<p>Example answers</p> <p>One client requirement is to have a logo on every web page (1) to evaluate this I would check with my client by showing them each page and asking if they are satisfied. (1) Another client requirement is to have robust data entry (1) I would test the validation I put in and would show the positive results to my client. (1)</p>	
	<p>Area of the Specification and AOs this question covers</p> <p>3.1.10 AO2.6</p>	

4	Describe the techniques you could use to ensure that data entry into an ICT system is robust.	(4 marks)
<p>Purpose of the Question</p> <p>Application of knowledge and understanding of the design of data entry into ICT systems</p>		
<p>Guidance for examiners on how to mark this question</p> <p>Candidates are required to describe the techniques used to ensure robust data entry.</p> <p>Reference to validation and verification must be included for full marks</p> <p>Breadth or depth</p>		
<p>Example answer</p> <p>Validation checks that the data is sensible (1) for example, putting a range check on a customer number (1) or a length check on a phone number. (1) Verification can be used to compare the double entry of a password. (1)</p>		
<p>Area of the Specification and AOs this question covers</p> <p>3.1.3 AO1.1</p>		

5(a)	Describe, using examples from your Sample Work, what you included in your problem identification.	(6 marks)
<p>Purpose of the Question</p> <p>Allocation of knowledge and understanding of problem identification</p>		
<p>Guidance for examiners on how to mark this question</p> <p>Check page reference first (no page numbers, no reference or incorrect page reference you must refer to a Senior Examiner)</p> <p>No problem described no marks</p> <p>Depth or breadth.</p> <p>Award marks for the following</p> <p>Identification of client, user and audience (Max 1 mark)</p> <p>Description of the problem</p> <p>Listing of client requirements</p> <p>Interpreting those requirements as input, processes and output</p> <p>Examples</p> <p>Candidates can gain marks in a number of ways. They may refer to all of the above, in not much detail, or some, in great detail</p> <p>For full marks the candidate must include at least two examples.</p>		

<p>Example answer</p> <p>In my problem identification I included a description of the client and user (1) I listed the client requirements (1) the main requirement was that I produced a website for the company. (1) The client requirements included what the solution was to produce (1) and how the solution was to work, (1) such as image zoom on mouse rollover.(1) I also interpreted the client requirements as input, processing and output. (1)</p>	
<p>Area of the Specification and AOs this question covers</p> <p>3.1.2 AO2.1</p>	

5(b)	With reference to your Sample Work, explain, using examples of your client's requirements, why you needed to identify and clearly document what these requirements were.	(6 marks)
	<p>Purpose of the Question</p> <p>Knowledge and understanding of problem identification</p>	
	<p>Guidance for examiners on how to mark this question</p> <p>Check page reference first (no page numbers, no reference or incorrect page reference you must refer to a Senior Examiner)</p> <p>No client requirements no marks</p> <p>Up to 4 marks for explaining the purpose Up to 4 marks for examples</p> <p>Full marks can be awarded as 4 for explanations and 2 for examples, or vice versa or 3 and 3.</p>	
	<p>Example answer</p> <p>The purpose of producing the list of client requirements was to agree with the client what they required (1) so that I knew exactly what I was to produce. (1) One requirement was to ensure all calculations were accurate (1) I was able to test this in the working solution. (1) I was able to evaluate the solution by going back to the requirements, (1) for example by showing my client the output and checking that this was what they wanted. (1)</p>	
	<p>Area of the Specification and AOs this question covers</p> <p>3.1.2 AO2.1</p>	

5(c)	<p>One reason for testing a solution is to ensure validity of data input.</p> <p>What other reasons are there for testing?</p>	(3 marks)
	<p>Purpose of the Question</p> <p>Understanding of testing of ICT-related solutions</p>	
	<p>Guidance for examiners on how to mark this question</p> <p>One reason one mark</p>	
	<p>Example answer</p> <p>Other reasons for testing are to ensure that the solution meets the client requirements (1) accuracy of output (1) and that the solution is usable by the user. (1)</p>	
	<p>Area of the Specification and AOs this question covers</p> <p>3.1.2 AO2.4</p>	

5(d)	With reference to your test plan, test data and testing evidence, describe and justify tests you have carried out for two different reasons.	<i>(10 marks)</i>
<p>Purpose of the Question</p> <p>Understanding and application of knowledge of testing of ICT-related solutions</p>		
<p>Guidance for examiners on how to mark this question</p> <p>Check page reference first (no page reference or incorrect page reference no marks)</p> <p>Award marks for the following</p> <p>Description of the tests performed Justification of why test was performed Identification of the test data used Justification for test data used How the test is to be performed Reporting on the result</p> <p>Max 7 marks if the tests are for only one reason</p>		
<p>Example answer</p> <p>One test I carried out was to ensure accuracy of output (1) this was test number 12 which tested a total. (1) The data was 10, 5 and 15 (1) the actual result was 30 (1) to check the calculation was correct I entered the numbers into a calculator (1) this gave 30 which proved the calculation was correct. (1)</p> <p>Another test I did was to test the validity of data input (1) test 3 tested the customer number range check. (1) I tested it with normal data of 222, (1) this should have been accepted.(1)</p>		
<p>Area of the Specification and AOs this question covers</p> <p>3.1.9 AO2.4</p>		

6	<p>A Sixth Form College Principal is concerned that the marketing of the college is not effective and would like you to design a website for prospective students and their parents.</p> <p>What should you consider before you start your design? How would this impact on what you would need to include on the web pages to ensure you meet the needs of a varied audience?</p>	(15 marks)
	<p>Purpose of the Question</p> <p>Application of knowledge and understanding of the design of solutions in relation to a website with a varied audience. Skills in the design of solutions.</p>	
	<p>Guidance for examiners on how to mark this question</p> <p>Credit to be given if characteristics of users are discussed.</p> <p>Marks to be awarded for candidate stating what could be put on the web page(s), giving examples where appropriate.</p> <p>Reference to objects Information to be added Uniformity Guidance Navigational aids</p>	
	<p>Guidance for examiners on how to mark this question</p> <p>Zero marks 0 marks The candidate has written nothing that is worthy of credit.</p> <p>Low mark range 1 – 5 marks For the lower marks in this range the candidate gives one consideration or feature to include. For the higher range the candidate has made reference to more than one consideration or feature.</p> <p>Mid mark range 6 - 10 marks The candidate describes considerations and design features. For the higher marks in the range the candidate has highlighted the considerations and given detail of some features that need to be included to meet the audience needs.</p> <p>Good mark range 11- 15 marks The candidate explains considerations and design features. For the higher marks the candidate has answered all aspects of the question.</p>	
	<p>Area of the Specification and AOs this question covers</p> <p>3.1.3 AO1.6, AO2.2</p>	

7	<p>The ICT students at a college are being given the opportunity to take part in a three-week exchange with ICT students in a European country.</p> <p>In the first week they will attend college and then in weeks two and three they will be out on work placement with local IT firms.</p> <p>The students will have to keep up to date with their college work while they are away. They will also have to write a daily journal, keep in touch with family and friends, record their spending and create a photographic record which on their return they will present to students at their college.</p> <p>Discuss the hardware and software that the students will need to take with them.</p>	(20 marks)
<p>Purpose of the Question</p> <p>Understanding and application of the uses of ICT</p>		
<p>Guidance for examiners on how to mark this question</p> <p>Zero Mark 0 marks The candidate has written nothing that is worthy of credit.</p> <p>Low mark range 1 – 5 marks For the lower marks in this range a candidate names at least one hardware and/or software the students will require for the uses stated. For the higher marks in this range at least one of the uses stated in the question has been addressed, as well as reference to hardware and software.</p> <p>The candidate has used a form and style of writing that is barely appropriate to 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.</p> <p>Mid mark range 6 - 10 marks The candidate shows some understanding of the hardware and software the students will require for the uses stated. For the lower marks in this band a candidate may just list the hardware and software required for at least two uses stated in the question. For the higher marks in the band a candidate gives more detail of the hardware and software.</p> <p>Meaning is nearly always clear. The candidate has, in the main, used a form and style of writing, which is appropriate for its purpose; with some lapses. The candidate has expressed simple ideas clearly and reasonably fluently. Candidate has used sentences and paragraphs. Information or arguments are generally relevant. There may be some errors of spelling, punctuation and grammar. Text is legible.</p> <p>Good mark range 11 - 15 marks The candidate shows a good understanding of the hardware and software, giving examples of both that the students will require for the uses stated. For the higher marks in this band a candidate will have addressed at least three of the uses stated in the question, with some explanation.</p>		

<p>Some specialist vocabulary used has been explained. Meaning is clear. The candidate has, in the main, used a form and style of writing, which is appropriate for its purpose; with 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.</p> <p>High mark range 16 - 20 marks</p> <p>The candidate discusses the hardware and software the students will require for the uses stated. All uses stated in the question have been addressed. Examples in context have been used.</p> <p>Any specialist vocabulary used has been explained. 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. There are few, if any, errors of spelling, punctuation and grammar. Text is legible.</p>	
<p>Area of the Specification and AOs this question covers</p> <p>3.1.4, 3.1.6, 3.1.7, 3.1.8 AO1.2, AO1.5</p>	