General Certificate of Secondary Education (Short Course)
June 2012

ICT   45204

(Specification 4520)

Unit 1: Systems and applications in ICT

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 students' 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 students' 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 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.

COMPONENT NUMBER:	**45204**
COMPONENT NAME:	**GCSE ICT Short Course**
STATUS:	**Final v1.0**
DATE:	**July 2012**

To Examiners:

1. **When to award '0' (zero) when inputting marks on CMI+:**
   A mark of 0 should be awarded where a candidate has attempted a question but failed to write anything credit worthy.
   Insert a hyphen when a candidate has not attempted a question, so that eventually the Principal Examiner will be able to distinguish between the two (unattempted/nothing credit worthy) in any statistics.
2. This mark scheme contains the correct responses which we believe that candidates are most likely to give. Other valid responses are possible to some questions and should be credited. Examiners should refer to a Team Leader off-mark scheme responses that they believe are creditworthy.

1	(a)		A monochrome laser printer A digital projector	**Correct answer only** **Correct answer only**	1 1

1	(b)		An operating system	**Correct answer only**	1

1	(c)		Scanner Web cam	**Correct answer only** **Correct answer only**	1 1

1	(d)		In case the original data is lost, corrupted, deleted accidentally, computer breaks down/crashes/damaged. OR The backup can then used to recover/ restore/replace/retrieve /transfer /up-to-date copy the original data. Or the idea it is kept as a second copy/ exactly the same file/ spare copy/ get the file back/ revert to an earlier version still have the data. OR cannot be retrieved again. **Any 1 x 1 mark**		1

2	(a)	(i)	**F** (allow **Inbox**)	**Correct answer only**	1

2	(a)	(ii)	**H** (allow **Signature**)	**Correct answer only**	1

2	(a)	(iii)	**B** (allow **Bcc**)	**Correct answer only**	1

2	(b)	(i)	Identical e-mails that are sent in bulk, often from a commercial organisations **Correct answer only**	1

2	(b)	(ii)	Use of spam/junk e-mail filters/filters/block spam Use of spam/junk e-mail folders Not signing up to offers on the Internet Use features in Outlook (search for widely used strings of characters) **NOT** just delete /**NOT** cookies **Any 1 x 1 mark**	1

3	(a)	**Name**		
		Title	at least 3	

Name
Title   at least 3
Address (other addresses count as REPEATS)
Postcode   at least 7 (3 space 3)
Telephone numbers
Telephone number (day)   at least 11
Telephone number (evening)   at least 11
Contact tel. number/emergency number   at least 11
Mobile tel. number   at least 11
                NOTE MAX TWO TELEPHONE NUMBERS
Other fields
E-mail address   at least 20/memo
Gender   at least 6 (allow M/F
                                                                                  or tick box)
Photo   box to fit
Date of membership/expiry of membership   at least 8 (2-2-2/4)
Identification given   at least 10
DOB (NOT age)   at least 8 (2-2-2/4)
(allow over 18 and YES/NO)   at least 3
Medical conditions   at least 20/memo
Access issues   at least 20/memo
Membership type   at least 10/memo/list
Payment type/method   at least 20/memo
Signature   memo
NB – could use the date at end of form

NOT NI – Not doctor, not doctor's address etc.
Boxes **OR** [_] – open boxes **OR** boxes **OR** clear dashes unless memo specified
Memo = lines/boxes/dashes
IGNORE FILLING IN

Mark only the first 4 fields
Ignore correct duplicate fields e.g. 3rd telephone no – these do not count in the FOUR.
Look for;
Correct field name – do not penalise lack of capitals
Correct number of boxes/dashes memo field for the corresponding field

			name. Award a mark for each **TWO** correct field names or number of boxes **6** correct scores **3 marks** **3** correct scores **1 mark**		4

3	(b)		Questionnaires Online/web based/Internet/mobile phone forms E-mail forms OCR scan of form Not just forms / NOT just e-mails NOT just Data Capture Form NOT just interviews **Any 2 x 1 mark**		2

4	(a)		**Readability -** too difficult/**hard to read**. / Font too small or hard to read / clear text over images **Visual impact** – Most important items **not made to stand out**. **Colour contrast** between background is poor **Details** – hard to spot/see the information. Some **key details** need to be made **bigger**. **Consistent layout** – no consistent layout or style or use of the same font. Does **not look professional** **Fit for audience** – not fit for a year 11 audience, would lose their attention quickly. E.g. colourful to attract students **Exciting/relevance** of a suitable **image** is needed. Don't stretch or squash images. **Any 2 x 1 mark**		2

4	(b)		Buttons **Correct answer only** Sound effects **Correct answer only**		2

4	(c)		**First mark for the description** The way in which the presentation moves/changes from one slide to another. Controls how the next slide is presented.	1	

			2ⁿᵈ mark for a suitable example
			      - next page flies in from the right
			      - action buttons
			      - click moves in next slide
			      - slide enters in to the sound of breaking glass
			      - lots of others possible
			                            Any 2 x 1 mark
				2	

5	(a)	(i)	**D** (allow Feasibility study) **Correct answer only**		1

5	(a)	(ii)	**A** (allow Analysis) **Correct answer only**		1

5	(a)	(iii)	**B** (allow Design) **Correct answer only**		1

| 5 | (b) | (bi) (bii) | Test data
Actual results/outcomes/Test results
Expected results/outcomes/ Desired outcomes of the test (NOT just desired outcomes)
Allow Alpha/Beta testing for a max of 2 marks
If heading is clearly wrong there is no follow on. However if **the heading is clarified** by the 'why it is needed' then the **max is 1 mark**   **Any 2 x 1 mark** | 2 |
| | | | **Why needed – must link to correct part of b(i)**
Test data -to plan what data is needed to carry out the required tests
Actual/Test results- to compare with the expected results (to see if the test works)
Evaluate results/see if the system works
Expected/Predicted results - to compare with the actual results / see what the test should give/show (to see if the test works)
Predict what you think/expect will happen/be outcome or results   **Any 2 x 1 mark** | 2 |

| 6 | (a) | | Currency   **Correct answer only** | 1 |

| 6 | (b) | | **Each feature to be credited only once.**
Colours
Bold
Font size
Right align/centre/left align/text alignment
Show grid/use grid line/cell borders
Merge cells
Widen/alter/resize/expand/scale columns/cells   **Any 2 x 1 mark** | 1 |

| 6 | (c) | | =ROUND(B19/B16,2)   **Correct answer only** | 1 |

6	(d)	Firstly read the **whole answer**. Next decide which mark band's description **best matches** the answer given. Finally (if needed), is the answer given, at the **top or the bottom** of the mark range	
		No rewardable material 0 marks	
		Lower mark range 1 – 2 marks There are simple even vague features given for using a spreadsheet. It will **not** be clear why these features are better.	
		Mid mark range 3 – 4 marks There is evidence of **some understanding** shown through the use of **mostly correct** examples that **describe** appropriate features of a spreadsheet compared to a database. At least two examples given are supported by some relevant description/reasoning.	
		High mark 5 marks There is evidence of a **clear understanding** shown through the use of **correct** examples that **clearly describe** the advantages of a spreadsheet compared to a database. At least two examples given are well supported by reasoned arguments.	
		Possible examples include Calculations – easier to use or understand what is happening Formulae – wider range available More cell formats for calculations Replication of formula Autosum Modelling Easier to edit data/formula Use multi-linked sheets Conditional formatting	5

7	(a)	(i)	00897649 and 00897602	**Correct answer only**	1

7	(a)	(ii)	008977672	**Correct answer only**	1

7	(b)	(i)	Make him an **impossible/unrealistic age**(DOB)/to still be alive/would be dead by now/ no one is that age. Would make him 160/161/162 by now (or some high age like greater than 150) Does not match the other records/ other DOBs	1

7	(b)	(ii)	Set a **limit/range** on DOB or **Range check**	**1 mark**	1

7	(c)	Firstly read the **whole answer**. Next decide which mark band's description **best matches** the answer given. Finally (if needed), is the answer given, at the **top or the bottom** of the mark range **No rewardable material 0 marks**	
		Lower mark range 1 – 2 marks There are simple even vague statements relating to responsible behaviour online.	
		Mid mark range 3 – 4 marks There is evidence of **some understanding** shown through the use of **mostly correct** examples that **describe** advice about responsible behaviour online. At least two examples given are supported by some relevant description/reasoning.	
		High mark 5 marks There is evidence of a **clear understanding** shown through the use of **correct** examples that **clearly describe** advice about responsible behaviour online. At least two examples given are well supported by reasoned arguments.	
		Possible examples include Not misusing images Not making defamatory statements/libel/slander online Hazards from:- Phishing emails Mirror image websites Sending viruses accidentally or carelessly	5

8	Firstly read the **whole answer**. Next decide which mark band's description **best matches** the answer given. Finally, is the answer given, at the **top, middle or the bottom** of the mark range **No rewardable material**	**0 marks**	
	Level 1 Lower mark range **Subject Criterion Context** There are simple, even vague statements about communications or entertainment technology. **Quality of Written Communication** The candidate has used a form and style of writing which has **many** deficiencies. Ideas are not **often** clearly expressed. Sentences and paragraphs are **often** not well-connected or **at times** bullet points may have been used. Specialist vocabulary has been used **inappropriately** or **not at all**. **Much** of the text is **legible** and **some** of the meaning is **clear**. There are **many** errors of spelling, punctuation and grammar but it should still be possible to understand **much** of the response.	**1-3 marks**	

	Level 2 Lower mid mark range **Subject Criterion Context** There is evidence of **some understanding** shown by a limited description of at least two communications or entertainment technologies. **Quality of Written Communication** The candidate has used a form and style of writing which has **some** deficiencies. Ideas are not **always** clearly expressed. Sentences and paragraphs may **not** be well-connected or **at times** bullet points may have been used. Specialist vocabulary has been used on a **limited** number of occasions. **Most** of the text is **legible** and **some** of the meaning is **clear**. There are **some** errors of spelling, punctuation and grammar but it should still be possible to understand **most** of the response.	**4-6 marks**	
	Level 3 Higher mid mark range **Subject Criterion Context** There is evidence of a more **developed understanding** shown through the use of at least three **suitable** examples that **describe** the **impact** on society. At least one example comes from 'communications technology' and at least one example comes from 'entertainment technology'. **Quality of Written Communication** The candidate has **mostly** used a form and style of writing **appropriate** to purpose and has expressed some complex ideas **reasonably clearly** and **fluently**. The candidate has usually used **well linked** sentences and paragraphs. Specialist vocabulary has been used on a number of occasions but **not always appropriately.** Text is **legible** and **most** of the meaning is **clear**. There are **occasional** errors of spelling, punctuation and grammar.	**7-9 marks**	
	Level 4 High mark range . **Subject Criterion Context** There is evidence of a **clear understanding** shown through the use of **relevant** examples that **clearly describe** at least one valid **advantage** and one valid **disadvantage** of the **impact** on society. Examples are well supported by reasoned arguments. There is evidence of a **clear understanding** shown through the use of at least three **suitable** examples that **discuss** the **impact** on society. At least one example comes from 'communications technology' and at least one example comes from 'entertainment technology' **Quality of Written Communication** 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** throughout. Text is **legible** and the meaning is **clear**. There are **few** if any errors of	**10-12**	

		marks	
	spelling, punctuation and grammar.	**marks**	
	Quality of Written Communication Skills The candidate's quality of written communication skills will be one of the factors influencing the actual mark an examiner will give within a level of response. The quality of written communication skills associated with each level is indicated above		
	Possible examples include **Wireless (WFi and Bluetooth)** and **Wired networks**, network speeds **Internet revolution (various)** **Developing countries issues** **Confidentiality/security of data/cookies** **Keeping in contact/social networks** **Entertainment systems –** TV/video streaming, games consoles. Integrated entertainment systems		
			12

9	Firstly read the **whole answer**. Next decide which mark band's description **best matches** the answer given. Finally, is the answer given, at the **top, middle or the bottom** of the mark range **No rewardable material**	**0 marks**	
	Level 1 Lower mark range **Subject Criterion Context** There are simple, even vague statements about issues/problems with sources of information. **Quality of Written Communication** The candidate has used a form and style of writing which has **many** deficiencies. Ideas are not **often** clearly expressed. Sentences and paragraphs are **often** not well-connected or **at times** bullet points may have been used. Specialist vocabulary has been used **inappropriately** or **not at all**. **Much** of the text is **legible** and **some** of the meaning is **clear**. There are **many** errors of spelling, punctuation and grammar but it should still be possible to understand **much** of the response.	**1-3 marks**	

	Level 2 Lower mid mark range **Subject Criterion Context** There is evidence of **some understanding or use** shown by giving examples of at least two **issues/problems** with finding, selecting and using information from a range of sources. Examples are supported by limited descriptions. **Quality of Written Communication** The candidate has used a form and style of writing which has **some** deficiencies. Ideas are not **always** clearly expressed. Sentences and paragraphs may **not** be well-connected or **at times** bullet points may have been used. Specialist vocabulary has been used on a **limited** number of occasions. **Most** of the text is **legible** and **some** of the meaning is **clear**. There are **some** errors of spelling, punctuation and grammar but it should still be possible to understand **most** of the response.	**4-6 marks**
	Level 3 Higher mid mark range **Subject Criterion Context** There is evidence of a more **developed understanding** shown through the use of **suitable** examples that **describe** at least three valid **problems** with finding, selecting and using information from a range of sources. Examples are supported by suitable descriptions. **Quality of Written Communication** The candidate has **mostly** used a form and style of writing **appropriate** to purpose and has expressed some complex ideas **reasonably clearly** and **fluently**. The candidate has usually used **well linked** sentences and paragraphs. Specialist vocabulary has been used on a number of occasions but **not always appropriately.** Text is **legible** and **most** of the meaning is **clear**. There are **occasional** errors of spelling, punctuation and grammar.	**7-9 marks**
	Level 4 High mark range . **Subject Criterion Context** There is evidence of a **clear understanding** shown through the use of **relevant** examples that **discuss** more than at least three **problems** with finding, selecting and using information from a range of sources. Examples are well supported by reasoned arguments. **Quality of Written Communication** 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** throughout. Text is **legible** and the meaning is **clear**. There are **few** if any errors of spelling, punctuation and grammar.	**10-12 marks**
	Quality of Written Communication Skills The candidate's quality of written communication skills will be one of the factors influencing the actual mark an examiner will give within a	

level of response. The quality of written communication skills associated with each level is indicated above		
Examples include **Discrimination in selecting appropriate sources**, what is appropriate, newspapers/magazines, books/ebooks, maps, DVD-ROMs, Internet etc. **Need for precision in framing questions,** especially the need to translate enquiries expressed in 'ordinary language' into a form that can be use by search engines. **Refining search conditions** use of multiple search conditions and relational operators (AND, OR, wild cards and the use of quotation marks around phrases etc. **Evaluate/ensure accuracy and plausibility of the information ,** especially information from websites		12

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