



Rewarding Learning

General Certificate of Secondary Education

2015

**Information and Communication Technology
(Short Course)**

Unit 2: Understanding ICT Systems in Everyday Use
and its Implications for Individuals, Organisations, Society
and the Wider World

[GIT41]

WEDNESDAY 13 MAY, MORNING

**MARK
SCHEME**

General Marking Instructions

Introduction

Mark schemes are intended to ensure that the GCSE examinations are marked consistently and fairly. The mark schemes provide markers with an indication of the nature and range of candidates' responses likely to be worthy of credit. They also set out the criteria which they should apply in allocating marks to candidates' responses. The mark schemes should be read in conjunction with these general marking instructions.

Assessment Objectives

Below are the assessment objectives for GCSE ICT.

Candidates must:

- recall, select and communicate their knowledge and understanding of ICT;
- apply knowledge, understanding and skills to produce ICT-based solutions; and
- analyse, evaluate, make reasoned judgements and present conclusions.

Quality of candidates' responses

In marking the examination papers, examiners should be looking for a quality of response reflecting the level of maturity which may reasonably be expected of a 16-year-old which is the age at which the majority of candidates sit their GCSE examinations.

Flexibility in marking

Mark schemes are not intended to be totally prescriptive. No mark scheme can cover all the responses which candidates may produce. In the event of unanticipated answers, examiners are expected to use their professional judgement to assess the validity of answers. If an answer is particularly problematic, then examiners should seek the guidance of the Supervising Examiner.

Positive marking

Examiners are encouraged to be positive in their marking, giving appropriate credit for what candidates know, understand and can do rather than penalising candidates for errors or omissions. Examiners should make use of the whole of the available mark range for any particular question and be prepared to award full marks for a response which is as good as might reasonably be expected of a 16-year-old GCSE candidate.

Awarding zero marks

Marks should only be awarded for valid responses and no marks should be awarded for an answer which is completely incorrect or inappropriate.

Types of mark schemes

Mark schemes for tasks or questions which require candidates to respond in extended written form are marked on the basis of levels of response which take account of the quality of written communication.

Other questions which require only short answers are marked on a point for point basis with marks awarded for each valid piece of information provided.

Levels of response

Tasks and questions requiring candidates to respond in extended writing are marked in terms of levels of response. In deciding which level of response to award, examiners should look for the 'best fit' bearing in mind that weakness in one area may be compensated for by strength in another.

In deciding which mark within a particular level to award to any response, examiners are expected to use their professional judgement. The following guidance is provided to assist examiners.

- **Threshold performance:** Response which just merits inclusion in the level and should be awarded a mark at or near the bottom of the range.
- **Intermediate performance:** Response which clearly merits inclusion in the level and should be awarded a mark at or near the middle of the range.
- **High performance:** Response which fully satisfies the level description and should be awarded a mark at or near the top of the range.

Marking calculations

In marking answers involving calculations, examiners should apply the 'own figure rule' so that candidates are not penalised more than once for a computational error.

Quality of written communication

Quality of written communication is taken into account in assessing candidates' responses to all tasks and questions that require them to respond in extended written form. These tasks and questions are marked on the basis of levels of response. The description for each level of response includes reference to the quality of written communication.

For conciseness, quality of written communication is distinguished within levels of response as follows:

Level 1: Quality of written communication is limited.

Level 2: Quality of written communication is satisfactory.

Level 3: Quality of written communication is of a good standard.

In interpreting these level descriptions, examiners should refer to the more detailed guidance provided below:

Level 1 (Limited): The candidate makes only a limited attempt and use of an appropriate form and style of writing. The organisation of material may lack clarity and coherence. There is little use of specialist vocabulary. Presentation, spelling, punctuation and grammar may be such that intended meaning is not clear.

Level 2 (Satisfactory): The candidate makes a reasonable attempt and use of an appropriate form and style of writing, supported with appropriate use of diagrams as required. Relevant material is organised with some clarity and coherence. There is some use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar are sufficiently competent to make meaning evident.

Level 3 (Good): The candidate successfully selects and uses an appropriate form and style of writing, supported with effective use of diagrams where appropriate. Relevant material is organised with a good degree of clarity and coherence. There is good use of appropriate specialist vocabulary. Presentation, spelling, punctuation and grammar are of a sufficiently high standard to make meaning clear.

- 1 (a) B Random Access Memory is volatile [1]
- (b) D Comma Separated Value [1]
- (c) C Data is raw facts and figures without meaning or context [1]
- (d) A Internet Service Provider [1]
- (e) C Has a different value for each record [1]
- (f) A Write Once Read Many [1]
- (g) C Optical Character Recognition [1]

(h)

Process	Tick (✓)
Scanning a document so that the data can be edited	✓
Entering data directly onto a spreadsheet	
Using a GUI	
Converting handwritten postcodes on envelopes into electronic data	✓
Typing a document in a word processor	

[2]

AVAILABLE
MARKS

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2 Level 0 ([0])

Answer is not worthy of credit.

Level 1 ([1]–[2])

The candidate refers to one, two or three or describes one of the features of a multimedia presentation tool that make it suitable for designing presentations. The candidate makes limited use of spelling, punctuation and grammar. The meaning of the text is not always clear. The candidate displays a limited form and style appropriate to the question. The organisation of the answer is limited.

Level 2 ([3]–[4])

The candidate correctly describes two of the features of a multimedia presentation tool that make it suitable for designing presentations. The candidate makes satisfactory use of spelling, punctuation and grammar. The meaning of the text is usually clear. The candidate demonstrates a satisfactory form and style appropriate to the question. The organisation of the answer is satisfactory,

Level 3 ([5]–[6])

The candidate correctly describes fully three of the features of a multimedia presentation tool that make it suitable for designing presentations. The candidate makes good use of spelling, punctuation and grammar. The meaning of the text is always clear. The candidate demonstrates a good form and style appropriate to the question. The organisation of the answer is satisfactory.

Answers may include:

Making the presentation appealing through:
the use of animation/sound/transitions/video
consistency of design through
slide masters/templates
navigation features
hyperlinks/buttons/hotspots/timings
graphics/graphs/charts
create handouts/printouts

[6]

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MARKS

Statement	Tick (✓)
Tablet 1 will have Internet access without the need to log on to the wireless network.	
Tablet 2 will have Internet access without the need to log on to the wireless network.	✓
Tablet 1 will take better quality photographs than tablet 2.	✓
Tablet 2 will take better quality photographs than tablet 1.	

[2]

Purpose	Which Tablet?	Explain your choice of tablet below.
Playing online games	Tablet 1	Greater amount of RAM [1] Faster processor [1] Has 3G [1]
	Tablet 2 [1]	Therefore better performance when using Internet [1] Higher resolution screen [1] so better quality graphics [1] [2]
Storing HD movies	Tablet 1	Greater capacity/storage [1]
	Tablet 2 [1]	HD movies are large in size More movies can be stored [1] [2]

[6]

- (c) **Two** from:
 Temporary/Volatile Storage [1]
 Stores programs currently in use [1]
 Stores data currently in use/not yet saved [1] [2]

- (d) **Two** from:
 Can log onto the network from any location with Wi-Fi available [1]
 Can use Internet from any location [1]
 Can access files from any location [1]
 Can log on using any device within range [1] [2]

- (e) **Two** from:
 Usernames/Accounts [1]
 Passwords/Passcodes [1]
 Levels of access [1]
 Change passwords regularly [1]
 Password on Wifi [1] [2]

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- 4 (a) **Two** from:
 Hardware/software [1] which will prevent unauthorised access [1] to the LAN
 from across the Internet [1]
 Prevents hacking/viruses [1] filters data [2]
- (b) **Three** from:
 Data is scrambled/encoded at source [1]
 Data is unscrambled/decoded at destination [1]
 Data is meaningless in transition [1]/prevents hackers from intercepting
 data [1]
 A key/encryption key is required to encode the data [1]
 A key/decryption key is required to decode the data [1] [3]
- (c) **Two** from:
 Passwords should:
 be a combination of letters, numbers and other characters [1]
 have a minimum number of characters [1]
 be changed regularly [1]
 be kept confidential [1]
 Passwords should not:
 Be obvious, an example is abcd [1]
 be written down anywhere [1] [2]
- (d) **Two** from:
 stores data/files [1]
 stores all software/system software/operating system/programs [1]
 manages security on the network [1]
 communicates with all devices on the network [1]
 manages users' access to the Internet [1] [2]
- (e) **Two** from:
 All files from the file server are copied [1]
 Magnetic tape method/cloud storage/external disc, etc. [1] [2]

AVAILABLE
MARKS

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5 Level 0 ([0])

Answer is not worthy of credit.

Level 1 ([1]–[2])

The candidate refers to one or two headings in context.

The candidate makes limited use of spelling, punctuation and grammar. The meaning of the text is not always clear. The candidate displays a limited form and style appropriate to the question. The organisation of the answer is limited.

Level 2 ([3]–[4])

The candidate describes the two headings in context. The candidate makes satisfactory use of spelling, punctuation and grammar. The meaning of the text is usually clear. The candidate demonstrates a satisfactory form and style appropriate to the question. The organisation of the answer is satisfactory.

Level 3 ([5]–[6])

The candidate describes fully the two headings in context. The candidate makes good use of spelling, punctuation and grammar. The meaning of the text is always clear. The candidate demonstrates a good form and style appropriate to the question. The organisation of the answer is satisfactory.

Answers may include:

Accuracy

- stock ordering is accurate
- exact amount of money transferred/no change errors/financial accuracy
- stock records are updated immediately therefore information will be up to date
- items are scanned using till therefore less human error
- check digit ensures data is entered correctly
- analysis of customer spending habits

Services

- itemised receipt produced
- customers do not have to carry cash
- customers can use self service tills easily
- less queues at tills as customers are processed quickly
- the company is less likely to run out of stock as EFTPOS informs stock control [6]

**AVAILABLE
MARKS**

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Formula	Tick (✓)
=SUM(J3:J10)	✓
=SUM(G11:H11)	
=SUM(D3:D11)	

[1]

(b) F3+D3/SUM(F3,D3)

[1]

IF Statement	Tick (✓)
=IF(E3<=15,500,E3*50)	
=IF(E3<=15,5,E3*0.50)	✓
=IF(E3<=15,5,E3*50)	

[1]

(ii) =IF(E3<=15,~~\$D\$14~~ [1], E3*~~\$D\$15~~ [1])

[2]

(iii) The charges for delivery can be changed [1] without impacting on the formula [1] (within the IF statement)

when replicated/copied values/cell references remain the same [1] [2]

IF statement showing FALSE in cell I5	IF statement showing 0 in cell I5
=IF(H5="Y",G5*0.05)	=IF(H5="Y",G5*0.05,G5*0)

[1]

(e) Max/Maximum

[1]

(f) **Two** from:

The effects of changing the delivery charges/rates of discount [1]
+ impact [1]

What if scenarios/predictions/data modelling [1]

[2]

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AVAILABLE
MARKS

7 Level 0 ([0])

Answer is not worthy of credit.

Level 1 ([1]–[2])

The candidate refers to one or two effects of technology on employment or describes one effect. The candidate makes limited use of spelling, punctuation and grammar. The meaning of the text is not always clear. The candidate displays a limited form and style appropriate to the question. The organisation of the answer is limited.

Level 2 ([3]–[4])

The candidate describes two effects of technology on employment. The candidate makes satisfactory use of spelling, punctuation and grammar. The meaning of the text is usually clear. The candidate demonstrates a satisfactory form and style appropriate to the question. The organisation of the answer is satisfactory.

Level 3 ([5]–[6])

The candidate describes fully two effects of technology on employment. The candidate makes good use of spelling, punctuation and grammar. The meaning of the text is always clear. The candidate demonstrates a good form and style appropriate to the question. The organisation of the answer is good.

Answers may include:

- Reference to job displacement
- the need for re-skilling/training
- the creation of new roles/jobs/job opportunities
- loss of traditional jobs/roles
- teleworking and associated benefits/issues

[6]

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AVAILABLE
MARKS

8 (a) (i) 7 [1]

(ii) 6 [1]

(iii)

Fieldname	Data Type
REGISTRATION	Text/Alphanumeric/string
PRICE	Currency
MILEAGE	Integer/number/numeric

[3]

(b)

REGISTRATION ▼
TKZ1289
AXZ3456
FGZ4976

[3]

(c) Sort/ordered/a description of the sort/ordered by year/ordered by price [1]
Group [1] [2]

(d) Two from:
1:1 [1] or one to one
1:many [1] or one to many
Many:many [1] [2]

AVAILABLE
MARKS

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9 Level 0 ([0])

Answer is not worthy of credit.

Level 1 ([1]–[2])

The candidate correctly describes one advantage of using a VLE for education. The candidate makes limited use of spelling, punctuation and grammar. The meaning of the text is not always clear. The candidate displays a limited form and style appropriate to the question. The organisation of the answer is limited.

Level 2 ([3]–[4])

The candidate correctly describes two advantages of using a VLE for education. The candidate makes satisfactory use of spelling, punctuation and grammar. The meaning of the text is usually clear. The candidate demonstrates a satisfactory form and style appropriate to the question. The organisation of the answer is satisfactory.

Level 3 ([5]–[6])

The candidate correctly describes three advantages of using a VLE for education. The candidate makes good use of spelling, punctuation and grammar. The meaning of the text is always clear. The candidate demonstrates a good form and style appropriate to the question. The organisation of the answer is good.

Answers may include:

Advantages

1. Students can log on at anytime (24/7)/anywhere
2. Communication tools can facilitate lessons, e.g. synchronous chat, bulletin boards, forums, email, teacher feedback
3. Students can download learning materials and upload homeworks/coursework

Note 3 areas

1. 24/7/anywhere
2. Communication to include all of the above
3. Accessing (including upload/download/tests)learning materials [6]

AVAILABLE
MARKS

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Definition	Term
A tool provided within a software package to help users complete a task	WIZARD
A type of computer memory which cannot be written to	ROM
A type of slide which defines the layout of all the other slides in a presentation	MASTER
A validation check used to ensure that data has been entered by the user	PRESENCE
A data type used when the data can have only two values	BOOLEAN
The ability to transfer files from one system to another	DATA PORTABILITY
A set of program instructions executed using a single command	MACRO
Placing a chart from a spreadsheet into a word processing document so that the chart will change when the spreadsheet data changes	LINKING OBJECTS
A measure of rate at which data travels along a communication line	BANDWIDTH

[9]

Total

AVAILABLE MARKS
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