

Surname	Centre Number	Candidate Number
Other Names		0



GCSE

4331/01

INFORMATION AND COMMUNICATION TECHNOLOGY

**UNIT 1: Understanding ICT
(Short Course) INFORMATION AND COMMUNICATION TECHNOLOGY**

UNIT 1: Understanding ICT

A.M. WEDNESDAY, 14 May 2014

1 hour 30 minutes

Suitable for Modified Language Candidates

For Examiner's use only		
	Maximum Mark	Mark Awarded
Total	80	

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INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen. Do not use pencil or gel pen. Do not use correction fluid.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions.

Write your answers in the spaces provided in this booklet.

If you run out of space, use the continuation pages at the back of the booklet, taking care to number the question(s) correctly.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.

Quality of written communication will be assessed in question **11**.



Answer all questions.

1. Are these items data, information or knowledge? Tick (✓) the correct boxes below. [3]

Item	Data	Information	Knowledge
12.9 minutes, 15.3 minutes, 7.4 minutes	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>
12.9, 15.3, 7.4	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
The competitor who ran the race in 7.4 minutes was the winner	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>

2. A computer can connect to the Internet using *broadband* or *dial-up*.

(a) Is the statement true for broadband or dial-up? Tick (✓) the correct boxes below. [3]

Statement	Broadband	Dial-up
This connection allows high speed file downloading.	1 <input type="checkbox"/>	2 <input type="checkbox"/>
This connection does not allow you to use the house phone at the same time as being connected to the Internet.	3 <input type="checkbox"/>	4 <input type="checkbox"/>
You have to connect each time you use the Internet.	5 <input type="checkbox"/>	6 <input type="checkbox"/>

(b) Wi-Fi is a way of connecting devices.

Give **one advantage** and **one disadvantage** of using Wi-Fi. [2]

Advantage

.....

Disadvantage

.....



(c) State **one** improvement that new developments in mobile phone services, e.g. 4G technology, could bring to users. [1]

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3. (a) Other than a laptop, state a device that can be used for email. [1]

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(b) What is the name of the method of sending an email to more than one person at the same time without the original recipient knowing? [1]

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(c) Give **three other different** advantages of email. **Do not** use being able to use email on many devices. **Do not** use sending an email to more than one person at the same time. [3]

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(d) Give **three different** disadvantages of using email. **Do not** use getting a virus and hacking. [3]

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4. Which of the following statements about *Geographical Information Systems (GIS)* are **True** or **False**? Tick (✓) the boxes below. [4]

Statement	True	False
GIS can help you find the shortest route from A to B.	1 <input type="checkbox"/>	2 <input type="checkbox"/>
GIS do not need to be updated.	3 <input type="checkbox"/>	4 <input type="checkbox"/>
If you are lost, GIS can locate where you are.	5 <input type="checkbox"/>	6 <input type="checkbox"/>
GIS only work in Europe.	7 <input type="checkbox"/>	8 <input type="checkbox"/>

5. A school keeps details of all members of the Student Council in a database. Part of this database is shown below.

Student ID Code	Name	Gender	Year Group	Role
AD1663	Tennant N	M	10	Prefect
AD1607	Pepper T	M	10	House Captain
AD1707	Lewis S	F	11	House Captain
AD1717	Hassan N	M	11	Prefect
AD1729	Davies K	F	11	House Captain
AD1820	Squires A	F	12	Deputy Head Girl
AD1817	Thomas G	M	12	Deputy Head Boy
AD1933	Jones D	F	13	Head Girl
AD1927	Saddiq M	M	13	Head Boy

- (a) Identify the *key field*.

[1]

- (b) State the purpose of the key field.

[1]

- (c) The teacher sorts the database in *descending* order by the **Name** field.

Give the name that would appear at the top of the list.

[1]



(d) Give the name for the formatted output from a database. [1]

(e) The school would like to add a *home telephone number* field to the database. Name the data type that would be appropriate for this new field. [1]

(f) The **Gender** field is encoded. State **two advantages** of encoding data. [2]

Advantage 1

Advantage 2

(g) Complete the table below to show how to find all students who are House Captains in Year 11. [2]

Field Name	Operator	Search Criteria
	=	

AND

Field Name	Operator	Search Criteria
	=	

(h) Name a validation technique which could be used on the **Student ID Code** field. Describe how this could be applied. [2]

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6. A family keeps a spreadsheet to organise its finances, as shown below.

	A	B	C	D	E	F	G	H
1	Monthly Income	£1,750						
2								
3	Month	Phone	Food	Electricity	Water	Heating	Total Costs	Balance
4	January	£30	£380	£50	£45	£175	£680	£1,070
5	February	£33	£360	£50	£45	£220	£708	£1,042
6	March	£40	£410	£50	£45	£255	£800	£950
7	April	£25	£375	£50	£45	£150	£645	£1,105
8	May	£77	£400	£50	£45	£45	£617	£1,133
9	June	£77	£450	£50	£45	£38	£660	£1,090
10	July	£55	£400	£50	£45	£20	£570	£1,180
11	August	£55	£425	£50	£45	£20	£595	£1,155
12	September	£55	£400	£50	£45	£75	£625	£1,125
13	October	£55	£430	£50	£45	£120	£700	£1,050
14	November	£55	£400	£50	£45	£177	£727	£1,023
15	December	£86	£500	£60	£45	£254	£945	£805

(a) Give the data in cell **A9**.

[1]

(b) Look at the following formulas. Which one could be used to find the **Total Costs** in cell **G6**? Put the letter of that formula in the box. [1]

A =A6+B6+C6+D6+E6

B =SUM(B6:F6)

C =SUM(B7:F7)

D =B6+C6+D6+E6+F6+G6

(c) The formula for working out the **Balance** in Cell **H13** is =**\$B\$1**-G13. State the type of cell reference used in **\$B\$1**. Explain why this type of referencing is used to calculate the **Balance** in column H. [2]

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(d) Which month does the family have the least amount of money left over? [1]

[Empty box for answer]

(e) 'What if' investigations are an advantage of using a spreadsheet. Describe a 'what if' investigation which could be applied to this spreadsheet. What would the result of this investigation be? [2]

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7. Describe how **each** of the sensors listed below could be used in the home and/or garden. **Each** example must be *distinctly different*. [4]

(i) Temperature Sensor

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(ii) Light Sensor

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(iii) Movement Sensor

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(iv) Pressure Sensor

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8. *Online shopping* is used by many people.

(a) Give **three advantages** of online shopping. [3]

Advantage 1:

Advantage 2:

Advantage 3:

(b) Give **two different** methods of finding products on an online shopping website. [2]

Method 1

Method 2

9. (a) *Management Information Systems (MIS)* are widely used in schools.

(i) Give a use for an MIS in a school. [1]

.....

(ii) Give **one advantage** and **one disadvantage** of the use of an MIS in a school. [2]

Advantage

.....

Disadvantage

.....

(b) There are many different *input devices* and *software* which can support students with disabilities.

(i) Give **three different** specialist input devices which can support students with disabilities. [3]

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.....

(ii) Name **one** type of software and describe how it can support learners with disabilities. [2]

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10. Many people use ICT for home entertainment.

(a) (i) Name **two input devices** and **one output device** used in computer gaming. [3]

INPUT DEVICE 1

INPUT DEVICE 2

OUTPUT DEVICE 1

(ii) Describe **two different** benefits of computer gaming. [2]

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(iii) Describe **two different** health issues associated with computer gaming. [2]

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only

A large rectangular area with a solid top and bottom border and a dotted line border on the left and right sides. The interior is filled with horizontal dotted lines, providing a space for writing.



1 1

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Area with horizontal dotted lines for writing.

END OF PAPER



1 3

