

Surname	Centre Number	Candidate Number
Other Names		0



**New GCSE**

4331/01

**INFORMATION AND  
COMMUNICATION TECHNOLOGY**

**UNIT 1: UNDERSTANDING ICT**

**(SHORT COURSE) INFORMATION AND  
COMMUNICATION TECHNOLOGY**

**UNIT 1: UNDERSTANDING ICT**

A.M. FRIDAY, 24 June 2011

1½ hours

Examiner's Use Only	
Total Mark	

**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 in the question-and-answer booklet you may use continuation sheets. Number the questions clearly and put your sheets in this question-and-answer booklet.

**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 **12**.



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CJ\*(S11-4331-01)

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*Answer **all** questions in the spaces provided.*

1. A school is designing a poster to advertise a sponsored walk.

The draft poster is shown below.

SPONSORED WALK FOR SCHOOL MINI BUS  
Starts at 10.00 a.m. on Saturday 11<sup>th</sup> June 2011

The draft is improved and the new poster is shown below.



- (a) From the list below, tick (✓) **four** features of *Desk Top Publishing* (DTP) software used on this new poster.

Feature	Tick (✓)
Video	<input type="checkbox"/>
Clip art	<input type="checkbox"/>
Border art	<input type="checkbox"/>
Italic	<input type="checkbox"/>
Centre text	<input type="checkbox"/>
Underline	<input type="checkbox"/>
Bullet points	<input type="checkbox"/>
Mailmerge	<input type="checkbox"/>

[4]



- (b) (i) Tick (✓) the feature of DTP software that could be used to find a similar meaning for a word.

Feature	Tick (✓) one box only
Thesaurus	<input type="checkbox"/>
Word count	<input type="checkbox"/>
Language	<input type="checkbox"/>

[1]

- (ii) Name the feature of DTP software that could be used to detect spelling errors.

[1]

- (c) Other than DTP state **two** types of software that could be used by the school in organising the sponsored walk. Give an example of how each could be used.

Type of software 1 .....

Example of use .....

.....

Type of software 2 .....

Example of use .....

.....

[4]

2. Tick (✓) the correct box to show which of these items is *data*, *information* or *knowledge*.

Items	Data	Information	Knowledge
34, 35	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34 seconds, 35 seconds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The competitor who swam the race in 34 seconds is the winner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[3]



0 3

3. The mobile phones shown below have certain features, some of which are shown in the tables.



Camera	10 megapixels
Music	MP3 Player
Connectivity	WiFi, Bluetooth
Memory card	Flash memory up to 4GB



Camera	5 megapixels
Music	MP3 Player
Connectivity	WiFi
Memory card	Flash memory up to 4GB

- (a) (i) Give **one** advantage of the camera with 10 megapixels (**phone A**) over the camera with 5 megapixels (**phone B**).

.....

.....

[1]

- (ii) Give **one** disadvantage of the camera with 10 megapixels (**phone A**) over the camera with 5 megapixels (**phone B**).

.....

.....

[1]

- (b) State **one** feature of these phones which will allow access to the internet.

.....

[1]



- (c) Many mobile phones have geographical information systems (GIS) linked to satellite navigation systems as one of their features. Explain **two** benefits to the user of GIS on the mobile phone.

Benefit 1 .....

.....

Benefit 2 .....

.....

[2]

- (d) Briefly describe how the phone user can make use of *Bluetooth connectivity*.

.....

.....

[1]



4. A teacher has created a spreadsheet to help him to arrange a trip for pupils. Part of the spreadsheet is shown below.

	A	B	C	D	E	F	G
1	Number of Pupils	Cost of Bus	Entrance Fee	Insurance	Total Cost	Income	Profit/Loss
2	0	750	0	0	750	0	-750
3	5	750	200	50	1000	500	-500
4	10	750	400	100	1250	1000	-250
5	15	750	600	150	1500	1500	0
6	20	750	800	200	1750	2000	250
7	25	750	1000	250	2000	2500	500
8	30	750	1200	300	2250	3000	750
9	35	750	1400	350	2500	3500	1000
10	40	750	1600	400	2750	4000	1250
11	45	750	1800	450	3000	4500	1500

(a) State the data in cell D3.  [1]

(b) Give the least number of pupils who need to go on the trip to avoid making a loss.

[1]

(c) Which of the following formulas could be used to give the **Total Cost** in cell E3?

- A =B3+C3+D3  
 B =SUM(B3:D3)  
 C =SUM(B3-D3)  
 D =AVG(B3:D3)

[1]

(d) Give a suitable formula for working out the *Profit/Loss* in cell G4.

[1]



(e) Give **two** specific advantages of using a spreadsheet to work out the Profit/Loss.

1. ....

.....

2. ....

.....

[2]



5. A local garage keeps details of all cars for sale in a computer database, part of which is shown below.

Registration number	Type	Colour	Engine size (cc)	Fuel	Price £
AZ54FGG	SALOON	RED	2200	D	8000
BD04GGG	SALOON	GREY	3000	D	5600
CF56NMB	4X4	SILVER	4200	D	13995
AS07NBV	ESTATE	BLACK	1600	P	23000
CS58FFG	4X4	SILVER	2500	D	35000
WQ02CVB	HATCH	BLUE	1800	P	2345
XC52FGH	ESTATE	GREEN	2000	P	3425
VV09TYU	SALOON	RED	2300	P	19899

(a) How many records are shown in this database?  [1]

(b) How many cars would be found by the following search?

Colour = "RED"

[1]

(c) The *Fuel* field contains the letter D or P. Describe **one** benefit of entering data in this way.

.....

.....

.....

[1]

(d) A customer wants to know if there are any '**GREY SALOON**' cars in stock. Complete the table below to show how the garage can obtain this information from the database.

Fieldname		Search criteria
	=	

**AND**

Fieldname		Search criteria
	=	

[2]



6. Computers are used for weather forecasting.

- (a) One method of displaying weather information is in a graph. Give **two other** different ways of displaying weather information on a computer.

(i) .....

(ii) ..... [2]

- (b) Other than the variety of ways to display the data, give **two** advantages of computer based weather forecasting systems.

(i) .....

(ii) ..... [2]

7. A library has an environmental monitoring system. Two different sensors are used to measure *temperature* and *humidity*.

If a sensor detects that the value measured is too high it sends a **1** to the computer, otherwise it sends a **0**.

Complete the following table by describing the conditions in the library when the following data is received from the sensors.

Temperature	Humidity	Description of conditions in library
0	0	
1	0	
1	1	

[3]



8. Online tutorials use ICT to help students to learn about a subject or topic.

(a) Learning games are one feature of online tutorials.

Name **two other** features found in online tutorials.

(i) .....

(ii) ..... [2]

(b) VLEs are used in schools and colleges.

(i) What does VLE stand for?

V ..... L ..... E ..... [1]

(ii) One use of a VLE is to allow teachers to set homework. Describe **two other** ways students or teachers can make use of a VLE.

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[2]



9. David Brown uses an online car insurance site to obtain a quote. When entering his details two messages pop up as shown below.

**Car insurance comparison service**

Please enter your details below

First name	David
Surname	Brown
Email	xxx@hotmail.com ?

Confirm email must match email

Confirm email	xyx@hotmail.com
---------------	-----------------

Must be real date (dd/mm/yyyy)

Date of birth	45 / 03 / 1978
---------------	----------------

**next**

- (a) (i) Tick (✓) to show whether the following are examples of verification or validation.

Error message	Verification	Validation
<i>Confirm email must match email</i>	1 <input type="checkbox"/>	3 <input type="checkbox"/>
<i>Must be a real date</i>	2 <input type="checkbox"/>	4 <input type="checkbox"/>

[2]

- (ii) Describe in detail the technique used to identify the error in the *Date of birth* field.

.....

.....

[2]

- (b) David receives his insurance quote by email.  
State one **advantage** and one **disadvantage** of using email to send out quotes.

**Advantage** .....

.....

**Disadvantage** .....

.....

[2]



10. Mary is a supporter of the local theatre and wants to buy tickets online from home.

- (a) Tick (✓) **three** of the items of data shown below which Mary would have to supply when buying tickets.

Item	Tick (✓)
NAME	<input type="checkbox"/> 1
HEIGHT	<input type="checkbox"/> 2
WEIGHT	<input type="checkbox"/> 3
DATE	<input type="checkbox"/> 4
GENDER	<input type="checkbox"/> 5
PAYMENT DETAILS	<input type="checkbox"/> 6

[3]

- (b) Describe **one** advantage of using an online booking system to the theatre and **one** advantage to Mary.

**Advantage to the theatre**

.....

.....

**Advantage to Mary**

.....

.....

[2]



11. A family access the internet using a network.

(a) Give **one** way the family could prevent unauthorised access to their network.

[1]

(b) Give **one** way the parents can protect their children from unsuitable sites.

[1]

(c) Give **two** reasons why the children should not share personal details with people they meet on the internet.

[2]

(d) The family shop online.

Give **two** advantages of shopping on line.

[2]

(e) The parents are worried about possible health hazards associated with using the computer for long periods of time.  
Describe these health hazards and how they could be reduced.



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[8]

12. Describe how *specialist devices* and *software* can be used to support people with disabilities. In your answer you should include:

- different learning devices
- voice software
- customised desktops.

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Handwriting practice lines consisting of 25 horizontal dotted lines.



**DO NOT WRITE  
ANY ANSWER ON  
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