GCSE

4331/01

INFORMATION AND COMMUNICATION TECHNOLOGY
UNIT 1: UNDERSTANDING ICT
(SHORT COURSE) INFORMATION AND COMMUNICATION TECHNOLOGY
UNIT 1: UNDERSTANDING ICT

A.M. FRIDAY, 1 June 2012

1½ hours

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. Where the space is not sufficient for your answer, use the continuation pages at the back of the book, 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.

1. A first attempt at producing a poster to advertise a school disco is shown below.

School Disco
23rd of September 2012
Doors open 7.00 pm
School Hall

Tickets   £6.00
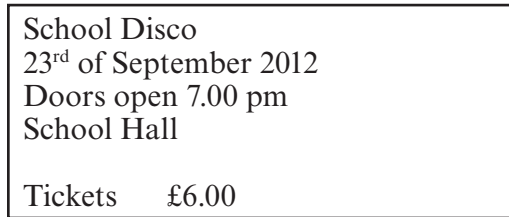
The poster was then improved as shown below.

School Disco
23rd of September 2012
Doors open 7.00 pm
School Hall

(a) **Tick (✓) five** of the boxes below to show the features that have been used to improve the poster. [5]

Features	Tick (✓)
BOLD FONT	1
ITALIC FONT	2
UNDERLINE	3
FONT STYLE	4
WORD ART	5
STRIKETHROUGH	6
CENTRE TEXT	7
CLIP ART	8

(b) Give **one** software feature that could be used to detect a spelling mistake. [1]

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2. **Tick (✓)** the appropriate box to indicate whether **each** description of an item is *data*, *information* or *knowledge*. [5]

Description of item	Data	Information	Knowledge
15, 14	1	2	3
The final score was Team A 15 points and Team B 14 points.	4	5	6
The final score was Team A 15 points and Team B 14 points. Team A had the most points and won.	7	8	9
30	10	11	12
30 mph	13	14	15

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3. Most computer users these days make use of email.

(a) **Tick (✓)** the boxes below to indicate which of the following statements about email are **True** or **False**. [5]

Statements	True	False
You can attach files to email.	1	2
You can send an email to different addresses at the same time.	3	4
Every email user requires an email address.	5	6
You can only send an email from a computer.	7	8
Webmail allows users to send and receive emails by visiting a website.	9	10

(b) What is the purpose of *bcc* in an email system? [1]

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(c) State **three** problems that can arise when using email. [3]

1. ....

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2. ....

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3. ....

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4. *(a)* **Tick (✓)** to indicate which of the following statements about *Bluetooth* technology are **True** or **False**. [3]

Statements	True	False
Bluetooth allows people to listen to music using wireless earphones.	1	2
Bluetooth is a method used to transfer data over very long distances.	3	4
Bluetooth allows you to backup your mobile phone onto your PC.	5	6

(b) Many people use Geographical Information Systems (GIS).
Give **one** advantage and **one** disadvantage of the use of GIS. [2]

Advantage ....

....

....

Disadvantage ....

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....

(c) State **one** advantage and **one** disadvantage of downloading music and videos from websites. [2]

Advantage ....

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Disadvantage ....

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5. The coach at a swimming club keeps details of all club members on a database. Part of the database is shown below.

Club Number	Name	Event	Gender	Training Slot	International Honours
1123	Smith P	Front crawl	M	1	N
1124	Fry T	Backstroke	F	1	Y
1125	Singh M	Butterfly	M	3	N
1128	Pollen B	Front crawl	M	2	N
1189	Rush A	Front crawl	F	3	N
1233	Chung G	Backstroke	F	5	N
1455	Knight V	Butterfly	M	6	N
1521	Lamb E	Backstroke	M	1	Y

(a) State how many records are shown in the above database. [1]

(b) (i) Identify the keyfield. .... [1]

(ii) Give the purpose of the keyfield. [1]

....

....

(c) The **Gender** field contains the letters M or F. Describe **one** benefit of encoding the data in this way. [2]

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(d) The coach wants to find the details of all female backstroke swimmers. Complete the table below to show how the coach can obtain this information from the database.   [2]

Fieldname		Search criteria
	=	

AND

Fieldname		Search criteria
	=	

(e) The coach sorts the Name field into alphabetical order. Give the Club Number which would appear at the top of the list.   [1]

(f) Other than faster sorting, describe **two** *other* advantages of keeping data on a computer database.   [2]

Advantage 1 ....

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Advantage 2 ....

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6. When booking holiday flights online you are asked to enter an email address twice, as shown below.

FLIGHTS	
Please enter your details below	
First name	David
Surname	Brown
Email address	brownd@email.com
Confirm Email Address	brownd@email.com
	NEXT

(a) **Circle** which of the following terms describe the process of re-entering an email address to check if it has been entered correctly. [1]

validation   **verification**   **visualisation**

(b) Many people prefer to book their flights online. Give **three** advantages of booking flights online. [3]

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(c) State why the error message below appeared and give a method of preventing the error. [2]

	Must be valid date (dd/mm/yyyy)		
Date of birth	34	12	1995

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7. *(a)* Describe how **each** of the sensors listed below could be used in school. **Each** example must be *distinctly different*. [4]

(i) Temperature Sensor ....

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(ii) Pressure Sensor ....

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(iii) Movement Sensor ....

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....

....

(iv) Light Sensor ....

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(b) State **three** *different* ways data collected from sensors can be displayed. [3]

(i) ....

(ii) ....

(iii) ....

8. A family use a spreadsheet to help them manage their household budget, as shown below.

	A	B	C	D	E	F	G
1	**Month**	**Income**	**Heating**	**Phone**	**Food**	**Total Costs**	**Balance**
2	**Jan**	£2100	£150	£50	£600	£800	£1300
3	**Feb**	£2100	£156	£44	£500	£700	£1400
4	**Mar**	£2100	£145	£55	£700	£900	£1200
5	**Apr**	£2100	£137	£63	£500	£700	£1400
6	**May**	£2100	£123	£77	£500	£700	£1400
7	**Jun**	£2100	£23	£77	£600	£700	£1400
8	**Jul**	£2100	£10	£90	£800	£900	£1200
9	**Aug**	£2100	£10	£90	£100	£200	£1900
10	**Sept**	£2100	£50	£50	£200	£300	£1800
11	**Oct**	£2100	£123	£77	£600	£800	£1300
12	**Nov**	£2100	£138	£62	£500	£700	£1400
13	**Dec**	£2100	£147	£53	£600	£800	£1300

(a) Give the data in cell A6. [1]

(b) Give the letter of one of the following formulas which could be used to give the **Total Costs** in cell **F6**. [1]

A = SUM(C6:E6)
B = B6+C6+D6+E6
C = SUM(B6+D6)
D = C6+D6+E6+F6

(c) Give a suitable formula for working out the *Balance* in Cell **G4**. [1]

= ....

(d) Suggest **two** *other* columns the family could have included that could have an effect on **Total Costs**. [2]

1. ....

2. ....

(e) Name **two** *different* advantages of using a spreadsheet to control budgets. [2]

Advantage 1. ....

Advantage 2. ....

9. *(a)* (i) Name **two** features of online tutorials. [2]

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(ii) Describe **two** advantages of online tutorials. [2]

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(b) Pupils with disabilities can choose from a range of input devices to enter data into a computer. Name **three** different specialist input devices available to pupils with disabilities. [3]

1...

2...

3...

10. Management Information Systems (MIS) have many uses in schools.

(a) Computer based registration such as Optical Mark Recognition (OMR) is a use of an MIS.
Give **two** *other* different types of computer based school registration systems. [2]

1...

2...

(b) Give **two** *other* uses of an MIS in schools. [2]

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11. ICT is widely used for home entertainment. State **four** different uses of ICT for home entertainment.

For **each** use give a *different* benefit and a *different* disadvantage. [12]

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Question number	Write the question numbers in the left-hand margin	Examiner only

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