Surname		Centre Number	Candidate Number
Other Names			0

WJEC CBAC

GCSE

4331/01

INFORMATION AND COMMUNICATION TECHNOLOGY

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

A.M. THURSDAY, 16 January 2014

1 hour 30 minutes

Suitable for Modified Language Candidates

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

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. A school is holding a sponsored bike ride.

The first draft of a poster has been created.

SPONSORED BIKE RIDE

School Field

February 7th 2014

3 pm

(a) Give **four** features of Desktop Publishing (DTP) software that could be used to improve the document above. [4]

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(b) Which application is the most suitable for each use? **Tick** (✓) the correct box. [3]

Use	Application		
	Spreadsheet	**Database**	**Presentation**
Keeping details of all students who are cycling.	1	2	3
Keeping a total of sponsorship money donated.	4	5	6
Advertising the sponsored bike ride in the school reception area	7	8	9

(c) Name the technique used which automatically puts names and addresses into the letter below. [1]

> <<Title>>
> <<Forename>> <<Surname>>
> <<Street>>
> <<Address>>
> <<Postcode>>
>
> Dear <<Title>> <<Surname>>
>
> We are holding a sponsored bike ride event
> on February 7th 2014 at 3 pm.
>
> All money raised will go towards school funds.

Technique ....

2. Which of these items is *data*, *information* or *knowledge*? **Tick** (✓) the correct box. [3]

Description of item	Data	Information	Knowledge
The swimmer who swam the race in 27 seconds was the fastest and won the race.	1	2	3
27 seconds.	4	5	6
27, 35, 55.	7	8	9

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3. Give **two** advantages and **two** disadvantages of using *Geographical Information Systems (GIS)* for navigation. [4]

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4. ICT is used for email.

(a) Describe what is meant by email *(electronic mail)*. [1]

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(b) Describe **one** advantage of sending a group email. [1]

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(c) Give **two** pieces of advice that users should follow to protect their computer from infection by a virus when receiving email. [2]

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5. The Music department keeps a record of all students who attend music lessons. This is done on a computer database.

Part of this database is shown below.

Student ID Number	Name	Date of Birth	Gender	Instrument	Grade
227	Jones V	18/05/1996	M	Piano	2
137	Tuck T	28/08/1999	M	Violin	3
771	Lewis S	25/09/2001	F	Guitar	4
025	Hassan F	12/12/2001	M	Piano	4
133	Davies K	22/07/1999	F	Piano	5
139	Grant Z	30/09/2000	F	Drums	1
033	Smith T	27/10/2000	M	Violin	3
117	Khan N	01/05/1999	F	Flute	3
129	Webb S	28/08/1999	M	Violin	5

(a) The **key field** is *Student ID Number*. State the purpose of the key field. [1]

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(b) The music teacher sorts the *Grade* column into **ascending** order.

Give the name which would appear at the top of the list. [1]

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(c)   (i)   State how many students would be found with the following search:

Instrument = "Violin" [   ]   [1]

(ii)   Complete the table below to show how to find all students who play the piano or are on grade 5.   [2]

Field Name	Operator	Search Criteria
	=	

<div align="center">OR</div>

Field Name	Operator	Search Criteria
	=	

(d)   *Give* a *sensible* validation technique that could be used on the *Date of Birth* field. **Do not use range check for your answer.**   [1]

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....

(e)   The Music department would like to add a *Music Fees Paid?* field to the database. **Tick (✓)** which data type would be appropriate for this new field.   [1]

Data Type   **Tick (✓) one box only**

Autonumber   [1]

Boolean   [2]

Date   [3]

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6. A teacher has created a spreadsheet to record daily temperatures over a three week period. Part of the spreadsheet is shown below.

		A	B	C	D
	1		Temperature (°C)		
	2	Day	Week 1	Week 2	Week 3
	3	Monday	14	28	23
	4	Tuesday	13	29	21
	5	Wednesday	12	27	16
	6	Thursday	16	28	15
	7	Friday	14	26	20
	8				
	9	Average	13.8	27.6	19

(a) Give the data in cell **A7**. [1]

(b) Give a suitable formula for working out the **Average** in Cell **B9**. [1]

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(c) State the name of the technique used to join cells **B1**, **C1** and **D1** together to prevent the label overflowing. [1]

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(d) The teacher uses a chart to show students the average weekly temperature as shown below.

Average Temperature (°C)
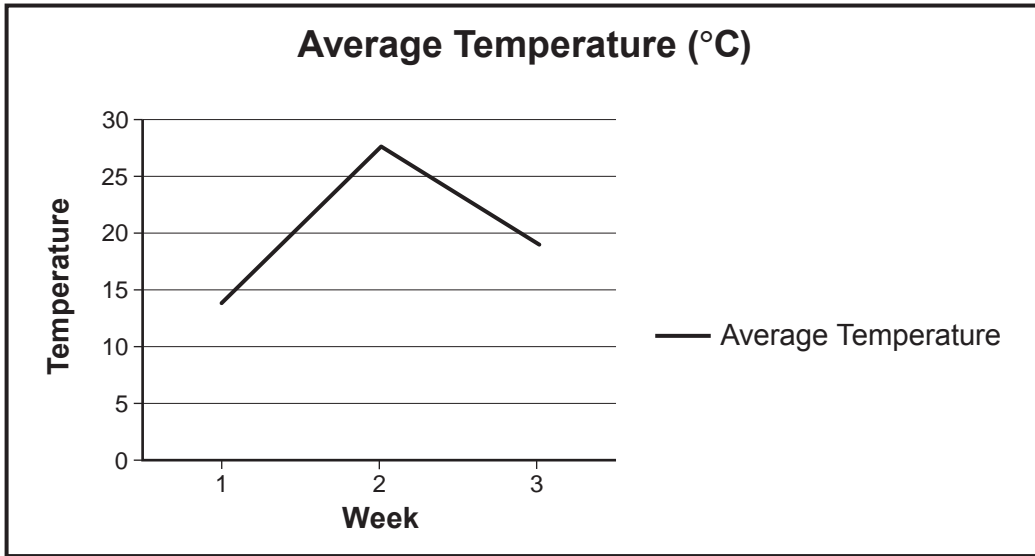
Tick (✓) the correct box below to identify the correct **chart type** shown. [1]

Type	Tick (✓)
Bar Chart	1
Line Chart	2
Pie Chart	3

(e) Give **two** specific advantages of using a spreadsheet to analyse the average weekly temperature. Do **not** use **creating graphs** in your answer. [2]

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7. ICT is widely used for home entertainment.

(a) Give **three** *different* ways that a photo can be manipulated using photo editing software.
[3]

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(b) (i) A webcam could be used to keep in touch with friends and family around the world. Give another example of how a webcam could be used. [1]

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(ii) Give a disadvantage of using a webcam. [1]

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(c) (i) State **two** items of information required to create a social networking account. [2]

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(ii) Social networking sites allow you to upload photographs. State **two** other *different* services of social networking. [2]

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(iii) Describe **two** disadvantages of social networking. [2]

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(d) Parents are concerned about the effects of using a computer for long periods of time on their children's health. Describe **two** *different* health concerns. For each give a method of prevention. [4]

1. **Health concern**: ....

   Prevention: ....

   ....

   ....

2. **Health concern**: ....

   Prevention: ....

   ....

   ....

8. A school makes use of ICT to support teaching and learning.

(a) A school makes use of a Virtual Learning Environment (VLE) to allow students to be assessed using tests. Describe **two** *other* ways students can make use of a VLE. [2]

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(b) Describe **three** *different* ways that a computer desktop can be customised to help students with disabilities. [3]

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(c) Describe an emerging technology that helps students learn. [2]

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9. You can now book holidays and concert tickets online.

(a) **Tick (✓) four** of the items of data shown below which you would have to supply when buying concert tickets. [4]

Item	Tick (✓)
Name	1
Place of Birth	2
Address	3
Date of Event	4
Payment Details	5
Height	6

(b) State an advantage to the customer of booking tickets online. [1]

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....

(c) When creating an account with a company you will be asked to verify the information you have entered is correct. State **two** *different* ways that the information can be verified. [2]

1. ....

2. ....

10. Control systems are used in schools.

(a) (i) Complete the table to show which sensor could be used to monitor each situation and what the output would be. **The first one has been done for you. Use a different sensor and output each time.** [4]

Situation	Sensor	Output
A teacher enters the school at night.	*Movement sensor*	*Light switches on*
A burglar enters the school.		
Keep the conditions in a room below 17°C.		

(ii) Give an example of how a humidity sensor could be used in a school. [1]

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(b) State an advantage to a school of using a control system. [1]

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11. E-commerce (Online shopping) is used by many people. Give **three** *different* methods of finding products **on** an e-commerce website. Describe advantages and disadvantages to the *customer* of online shopping. [13]

Remember that the quality of written communication will be assessed in this question.

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