Surname	Centre Number	Candidate Number
Other Names		0

GCSE

4333/01

INFORMATION AND COMMUNICATION TECHNOLOGY

UNIT 3: ICT In Organisations

A.M. MONDAY, 21 January 2013

1½ hours

Examiner only

Total Marks	

4333
010001

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 page 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.**

© WJEC CBAC Ltd.

Examiner only

1. **Tick (✓)** the correct box to show whether the devices listed below are used for either *Input* or *Output*. [4]

	INPUT	OUTPUT
Mouse	1 ☐	5 ☐
Speaker	2 ☐	6 ☐
Monitor	3 ☐	7 ☐
Microphone	4 ☐	8 ☐

2. *(a)* Name **one** device that could be used to draw an image on a computer. [1]

.....

(b) Look at **Image A** and **Image B** below. Image A is a *bitmap graphic* and Image B is a *vector graphic*.

Image A

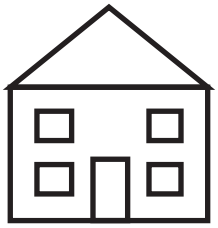


Image B

Tick (✓) the correct box to show whether each statement is true for a *bitmap* or a *vector graphic*. [4]

	BITMAP	VECTOR
Images are made up of pixels	1 ☐	5 ☐
Images can be scaled up without loss of quality	2 ☐	6 ☐
If small images are enlarged, they can become blurred	3 ☐	7 ☐
Maths is used to work out the position and size of an image	4 ☐	8 ☐

© WJEC CBAC Ltd.

Examiner only

(c) Images published on web pages should be optimised.

(i) **Tick (✓)** the **two** correct boxes to show how images could be optimised before publishing on a web page. [2]

	Tick (✓)
Reduce the quality of the image	1 ☐
Make the picture bigger	2 ☐
Reduce the number of colours	3 ☐
Reduce the number of words	4 ☐

(ii) Give **one** advantage of optimising images for publishing on a web page. [1]

.....

.....

4333 010003

© WJEC CBAC Ltd.

Examiner only

3. *(a)* Complete the table below by matching the animation techniques with the most suitable description. **Use each letter only once.** [4]

A Stop motion **B** Tweening **C** Rotoscoping **D** Onion skinning

Description		Letter
	Objects are traced over to produce a cartoon effect animation.	
	Each frame in an animation is produced whilst several frames before are visible to help the animator track the motion of an object.	
	Move an object a small amount between taking photographs of it.	
	The process of getting the computer to create the in-between frames to smooth out the animation.	

(b) Animators produce a *Storyboard* before creating the computerised animation. Describe what is meant by a *Storyboard*. [2]

.....

.....

.....

.....

.....

© WJEC CBAC Ltd.

Examiner only

4. There are many different types of computer networks.

(a) (i) One type of network is a **LAN**.
Write down what LAN stands for:

L ..... **A** ..... **N** ..... [1]

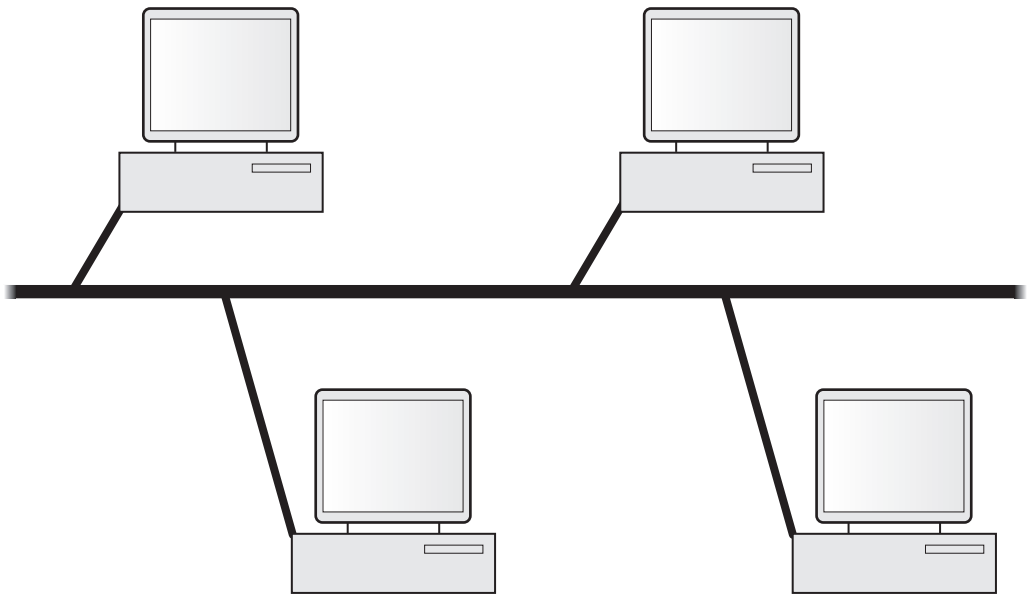
(ii) Another type of network is a **WAN**.
Write down what WAN stands for:

W ..... **A** ..... **N** ..... [1]

(iii) **Tick (✓)** the correct box to show whether the statement about networks is *True* or *False*. [4]

	TRUE	FALSE
A network allows users to share printers	1	5
An intranet is restricted to the people within an organisation	2	6
An extranet is a private network that can be accessed by the customers of an organisation	3	7
Backups are not required with networks	4	8

(b) Name the topology of the network shown below. [1]



Topology .....

© WJEC CBAC Ltd.

Examiner only

(c) Many different components are used to create a computer network.

Complete the sentences using only words from the list given below. [2]

Bridge **Viaduct** **Repeater** **Switch**

(i) A ..... is a device that analyses each packet of data and sends it to the computer it was intended for.

(ii) A ..... is a device that connects a LAN to another LAN.

(d) Define what is meant by a *gateway*. [1]

.....

.....

(e) Describe how supermarkets use their POS systems for automatic stock control. [4]

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

© WJEC CBAC Ltd.

Examiner only

(f) *Other than sharing peripherals* give **two** advantages of network systems over standalone computers. [2]

.....

.....

.....

.....

.....

.....

5. *(a)* **Tick (✓)** the **three** correct boxes to show which file formats are used to store music files. [3]

	Tick (✓)
bmp	1 ☐
wav	2 ☐
mp3	3 ☐
docx	4 ☐
wma	5 ☐
html	6 ☐

(b) Complete the sentences using only words from the list given below. [2]

Encrypted **Digital** **Analogue** **Wave**

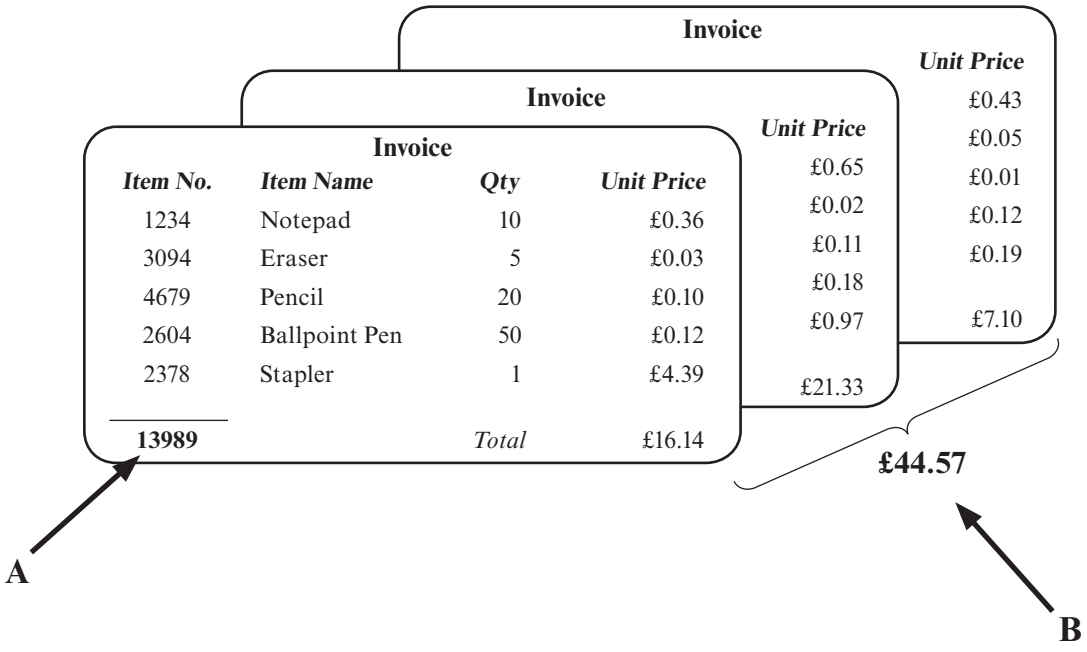
(i) Computers can only store and process ..... signals.

(ii) Sound is an ..... signal which means it is constantly varying.

© WJEC CBAC Ltd.

Examiner only

6. A shop uses different validation techniques when processing invoices.



(a) State the purpose of *Validation*. [1]

.....

.....

.....

(b) The totals produced from **two** validation techniques have been labelled **A** and **B** above.

Name and describe the validation techniques used. [4]

Validation Technique A: .....

.....

.....

.....

.....

.....

© WJEC CBAC Ltd.

Examiner only

Validation Technique B: .....

.....

.....

.....

.....

.....

7. ICT is used to control and monitor activities that are part of our everyday lives.

(a) **Tick (✓)** the **two** correct boxes to show which activities are most likely to use sensors.[2]

	Tick (✓)
Closing automatic doors	1 ☐
Designing a web page	2 ☐
Producing a payslip	3 ☐
Changing traffic lights	4 ☐

(b) Give **two** advantages of using ICT for data logging. [2]

Advantage 1: .....

.....

.....

Advantage 2: .....

.....

.....

(c) Give **one** disadvantage of using ICT for data logging. [1]

.....

.....

© WJEC CBAC Ltd.

Examiner only

8. Modern computers normally use a *Graphical User Interface(GUI).*

(a) *Other than* Windows, Icons, Menus and Pointers give **two** different features of a GUI. [2]

.....

.....

.....

.....

.....

.....

(b) Different *Human Computer Interfaces (HCI)* are used with different applications. Name an application for each of the following types of HCI. [2]

HCI	Application
Touch sensitive	
Voice driven	

(c) State the name given to the *HCI* that only uses typed instructions. [1]

.....

(d) Another type of HCI uses *Biometrics.* Give **two** advantages of using Biometrics. [2]

Advantage 1: .....

.....

.....

Advantage 2: .....

.....

.....

© WJEC CBAC Ltd.

Examiner only

9. *(a)* The *Data Protection Act 1998 (DPA)* deals with personal data held on a computer.

(i) State **three** principles of the DPA. [3]

Principle 1: .....

.....

Principle 2: .....

.....

Principle 3: .....

.....

(ii) State **two** exemptions from the DPA. [2]

Exemption 1: .....

.....

Exemption 2: .....

.....

(b) The *Computer Misuse Act 1990 (CMA)* was created to secure computer material against unauthorised access or modification.

Tick (✓) the **two** correct boxes to show which of the following are **NOT** covered by the CMA. [2]

	Tick (✓)
Cyber bullying	1 ☐
Introducing viruses	2 ☐
Blackmailing	3 ☐
Hot desking	4 ☐

© WJEC CBAC Ltd.

Examiner only

10. ICT is used in the business applications listed below.

Tick (✓) your chosen business application.

	Tick (✓)
Banking	1
e-Commerce	2
Payroll	3

(a) Describe **one** example of *data collected* in your chosen application. [1]

.....

.....

(b) Describe how *data is input* in your chosen application. [1]

.....

.....

(c) Describe *what information is output* from your chosen application. [2]

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

© WJEC CBAC Ltd.

Examiner only

(d) State the *processing method* used and explain why it is the most appropriate for your chosen application. [2]

© WJEC CBAC Ltd.

Examiner only

11. The use of ICT has had an impact on the way people work. *Teleworking* is now becoming more and more prevalent.

(a) State what is meant by *teleworking*. [1]

(b) Give the *advantages* and *disadvantages* of teleworking for the Employee and the Employer. [10]

© WJEC CBAC Ltd.

Examiner only

END OF PAPER

© WJEC CBAC Ltd.

Question number	**Additional page, if required. Write the question numbers in the left-hand margin.**

Examiner only

© WJEC CBAC Ltd.