

Surname	Centre Number	Candidate Number
Other Names		0



**GCSE**

4333/01



**INFORMATION AND  
COMMUNICATION TECHNOLOGY  
UNIT 3: ICT in Organisations**

A.M. TUESDAY, 20 January 2015

1 hour 30 minutes

For Examiner's use only		
	Maximum Mark	Mark Awarded
<b>Total</b>	<b>80</b>	

**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 **12**.






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Answer all questions.

1. Complete the following table by **naming** the devices and place a **tick (✓)** in the correct boxes to show whether they are suitable for either *Input* or *Output*. [4]

The first row has been completed for you.

	Device	Input	Output
	<i>Printer</i>	1 <input type="checkbox"/>	2 <input checked="" type="checkbox"/>
		3 <input type="checkbox"/>	4 <input type="checkbox"/>
		5 <input type="checkbox"/>	6 <input type="checkbox"/>

2. Multimedia software is used in ICT.

- (a) Complete the following sentences about sound and music, using only the terms given below.

**MP3      WAV      Sound card      MIDI      CD      Notator**

- (i) A ..... is software that converts music entered into a computer using a ..... device into traditional musical notation. [2]
- (ii) A music file stored in ..... format would take longer to download than the same file stored in ..... format. [2]

Images: Thinkstock.com



(b) Tick (✓) the correct boxes to show whether each of the following statements about digital images are **True** or **False**. [3]

STATEMENT	TRUE	FALSE
An image stored as a bitmap graphic takes up less memory than the same image stored as a vector graphic.	1 <input type="checkbox"/>	2 <input type="checkbox"/>
Vector graphics use points, lines, curves, and shapes stored as mathematical equations.	3 <input type="checkbox"/>	4 <input type="checkbox"/>
When a bitmap graphic is enlarged it loses quality.	5 <input type="checkbox"/>	6 <input type="checkbox"/>

(c) Name **two** digital imaging tools or techniques that could be used when creating a **still** digital image. [2]

1: .....

.....

2: .....

.....

3. Give **one advantage** and **one disadvantage** of using data compression techniques. [2]

**Advantage:** .....

.....

**Disadvantage:** .....

.....

.....

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4. Different components are used in a computer network.

(a) Describe the purpose of each of the following devices. [3]

(i) **Router:** .....

.....

.....

(ii) **Gateway:** .....

.....

.....

(iii) **Bridge:** .....

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.....

(b) Explain the process of *packet switching*. [3]

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5. (a) Animators use different techniques.

(i) **Name** the technique that could be used to generate the in-between frames of a key frame animation. [1]



(ii) **Name** the technique that could be used by an animator to track the frame-by-frame motion of an object. [1]



(iii) Describe the term *rotoscoping*. [2]

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.....

.....

(b) State what is meant by *persistence of vision*. [1]

.....

.....

.....

(c) Describe what is meant by a *story board*. [2]

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.....

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6. A small company has created a website to advertise its products and services.

- (a) **Tick (✓)** the correct boxes in the table below to show which **two** of the following the company needs, to allow access to their website on the internet. [2]

**Tick (✓) only two**

Virtual learning environment	1
URL	2
EFT	3
Hosting	4

- (b) **Circle** a programming language from the list below that could be used to create a website. [1]

**GUI                  HTML                  LAN                  ROM**

- (c) The website uses the following **three** features. In the table below, state what is meant by each of the following terms. [3]

Term	Meaning
Bookmark	
Homepage	
Leader board	

- (d) Describe what is meant by the term *golden triangle*. [2]

.....

.....

.....



(e) The website contains product descriptions and pictures of products.

*Other than those mentioned in (c), give **three** other different types of services or facilities that could appear on the website.* [3]

.....

.....

.....

.....

(f) *Other than a desktop computer, give **two** devices customers could use to access the website and see the products.* [2]

.....

.....

.....



7. (a) Describe what is meant by the term *operating system*. [2]

.....

.....

.....

(b) Tick (✓) the correct boxes to show whether **each** of the following statements about an *operating system* is **True** or **False**. [3]

STATEMENT	TRUE	FALSE
An operating system is responsible for booting (starting) up a computer.	1 <input type="checkbox"/>	2 <input type="checkbox"/>
An operating system manages input and output devices.	3 <input type="checkbox"/>	4 <input type="checkbox"/>
An operating system ensures that data is written to the backing store.	5 <input type="checkbox"/>	6 <input type="checkbox"/>

(c) For **each** of the following examples, state the most suitable type of processing method. [3]

(i) Processing meter readings in a billing system.

.....

(ii) Booking tickets online for a football match.

.....

(iii) Controlling the temperature of a greenhouse.

.....





8. *Point of Sale (PoS)* systems are used in supermarkets for automatic stock control. The following processes are used to control stock levels.

	Process
<b>A</b>	Number of items bought are deducted from number in stock.
<b>B</b>	If the re-order level is reached then the computer automatically re-orders more stock.
<b>C</b>	Product's barcode is scanned.
<b>D</b>	Lookup product in database and display price on-screen.
<b>E</b>	The current number in stock is compared with the re-order level.

Using the letters **A, B, C, D** and **E only**, state the correct order in which the processes above occur in automatic stock control systems. [5]

1st:

2nd:

3rd:

4th:

5th:



9. Different *verification* and *validation* techniques are used to check data.

(a) State what is meant by the following terms. [2]

(i) **Validation:** .....

.....

(ii) **Verification:** .....

.....

(b) State how the following verification checks are carried out. [2]

(i) Parity check.

.....

.....

.....

(ii) Double-keying.

.....

.....

.....



- (c) A company keeps its payroll data in a spreadsheet. Part of the spreadsheet is shown below.

	A	B	C
<b>1</b>	<b>Employee Code</b>	<b>Rate of pay</b>	<b>Hours worked per week</b>
<b>2</b>	001	£7.20	35
<b>3</b>	002	£7.50	27
<b>4</b>	003	£8.40	37
<b>5</b>	004	£8.20	40
<b>6</b>	005	£7.70	36
<b>7</b>			
<b>8</b>	<b>15</b>	<b>Validation Check A</b>	
<b>9</b>	<b>5</b>	<b>Validation Check B</b>	

Name the type of validation techniques used.

[2]

- (i) **Validation Check A (Cell A8):** .....
- (ii) **Validation Check B (Cell A9):** .....



10. ICT is used in many different applications.

(a) Give the *key field* for each of the following applications. [2]

**Banking at an ATM:** .....

.....  
.....

**Payroll:** .....

.....  
.....

(b) *Other than using a keyboard*, give **one distinctly different** data input method for each application.

**Banking at an ATM:** ..... [1]

.....  
.....  
.....

**Payroll:** ..... [1]

.....  
.....  
.....

(c) State **two** items of information that are output from a *payroll* application. [2]

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