Surname		Centre Number	Candidate Number
Other Names			0

wjec cbac

GCSE

4333/01

INFORMATION AND COMMUNICATION TECHNOLOGY
UNIT 3: ICT in Organisations

THURSDAY, 25 MAY 2017 – AFTERNOON

1 hour 30 minutes

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 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**.

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*Answer **all** questions.*

1. Name **four** *ICT devices* and **tick (✓)** the correct box to show whether the device is suitable for either *Input* or *Output*. [8]

ICT Device	Input	Output
....	☐	☐
....	☐	☐
....	☐	☐
....	☐	☐

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Turn over.

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010003

2. *(a)* Draw a diagram for each of the following network topologies.

    (i)   Star [1]

    (ii) Ring [1]

    (iii) Name and draw a diagram of a different network topology and label any hardware. [4]

       Name: ....

(b) State what **LAN** and **WAN** stand for:

LAN: .... [1]

WAN: .... [1]

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(c) (i) Give **three** *advantages* of networked computers over standalone computers. [3]

Advantage 1: ....

....

....

Advantage 2: ....

....

....

Advantage 3: ....

....

....

(ii) Give **two** *disadvantages* of networked computers over standalone computers. [2]

Disadvantage 1: ....

....

....

Disadvantage 2: ....

....

....

(d) Explain how data is transmitted using packet switching. [3]

....

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3. A salesperson uses multimedia to create presentations to help sell products.

(a) Complete the following sentence to describe what is meant by the phrase *multimedia*.

Use each word only once. [3]

<div align="center">

Hardware   **Video**   **Clipart**

Animation   **Software**   **Screen**

</div>

Multimedia is using .... to electronically combine text, still

images, ..., audio, ... and

interactive components, to create presentations.

(b) Give **two** *different* types of interactive components which could be used in multimedia presentations. [2]

Type 1: ....

Type 2: ....

(c) Give **one** *disadvantage* of using multimedia components to create presentations. [1]

....

....

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4. There are many different animation techniques used by animators.

(a) Describe how the animation techniques *tweening* and *rotoscoping* work.
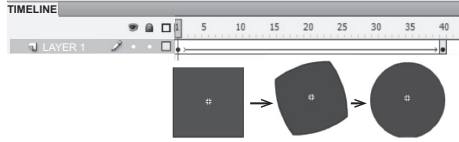
Tweening [3]

....

....

....

....

....

....

Rotoscoping [2]

....

....

....

....

....

....

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(b) Describe what will happen if you increase or decrease the frame rate too much in an animation. [2]

Increase: ....

....

....

....

Decrease: ....

....

....

....

(c) State the name given to the animation technique where multiple images blend into a single image to create the illusion that objects are moving. [1]

....

(4333-01) **Turn over.**

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5. Access to a building is controlled using an automatic car park barrier. Cars can only enter the car park if the system allows them to do so.

```
┌─────────────┐      ┌──────────────┐      ┌──────────────┐
│   Device    │ ───▶ │ Barrier Control│ ───▶ │              │
│             │      │              │      │ Output Device │
│  Or Sensor  │      │   Program    │      │              │
└─────────────┘      └──────────────┘      └──────────────┘
       ▲                                           │
       └───────────────────────────────────────────┘
```
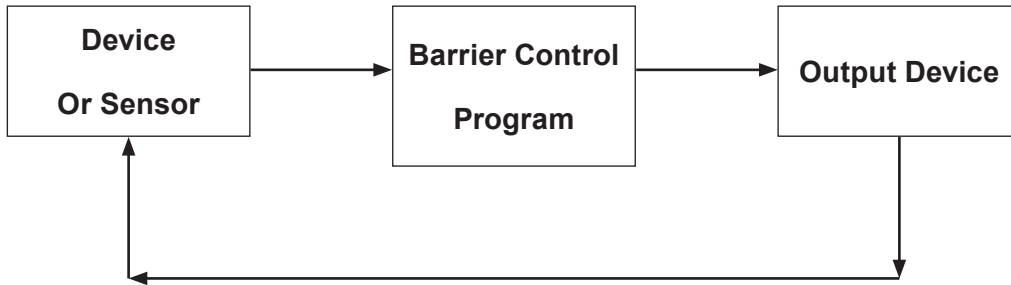
(a) Give a suitable device or sensor which could be used for input in this control system. [1]

....

(b) Give a suitable output device which could be used in this control system.   [1]

....

(c) Describe how the devices or sensor you have named above are used in this automatic car park barrier system.   [3]

....

....

....

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....

....

(d) Some ICT control systems use 'feedback'. Explain what is meant by feedback in a control system.   [1]

....

....

....

....

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6. Physical methods and software methods are used to secure data in a computer system.

Give **two** physical and **two** software methods of securing data. [4]

Physical method 1: ....

....

....

Physical method 2: ....

....

....

Software method 1: ....

....

....

Software method 2: ....

....

....

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7. Different types of *Human-Computer Interfaces (HCI)* are used in ICT systems.

Give **two** *different* advantages and **one** *different* disadvantage for each of the following HCIs.

Biometrics [3]

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Graphical user interface [3]

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Command line interface [3]

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(4333-01) **Turn over.**

8. Two of the most widely used image formats are JPEG and GIF.

(a) Give **two** advantages of storing an image as a JPEG. [2]

Advantage 1: ....

....

....

Advantage 2: ....

....

....

(b) Give **two** *different* advantages of storing an image as a GIF. [2]

Advantage 1: ....

....

....

Advantage 2: ....

....

....

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9. Health and safety regulations in the workplace ensure employees are able to use their ICT equipment safely and avoid injury.

Give **four** safety measures an employer should put in place to safeguard their employees when using ICT equipment. [4]

Safety measure 1: ....

....

....

Safety measure 2: ....

....

....

Safety measure 3: ....

....

....

Safety measure 4: ....

....

....

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10. Jonah's design company are considering allowing their employees to telework.

Give **four** advantages that teleworking gives Jonah's *company*. [4]

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11. Describe a payroll application that you have studied.

Your answer should refer to:
- how data is captured
- the most suitable processing method and why it is the most suitable
- the documents output
- the two types of files used by the payroll application
- the same fields used in both files and one additional field
- a suitable back-up system for the payroll application. [11 QWC]

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

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Question number	Additional page, if required. Write the question number(s) in the left-hand margin.	Examiner only

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