

Surname	Centre Number	Candidate Number
Other Names		0



GCSE

4333/01

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

P.M. WEDNESDAY, 12 June 2013

1½ hours

Examiner only

Total Marks	
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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**.







J U N 1 3 4 3 3 3 0 1 0 1

Answer all questions.

1. Complete the following table by **naming** each device and **ticking (✓)** the correct box to show whether the device is used for either *Input* or *Output*. [6]

The first row has been completed for you.

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



2. ICT systems use different *Human-Computer Interfaces* (HCI).

(a) (i) State the type of *HCI* shown below.

[1]



HCI:

(ii) Give **four** features of this type of *HCI*.

[4]

Feature 1:

Feature 2:

Feature 3:

Feature 4:

(b) State **two** other *different* types of HCI and give **one** *different advantage* of **each**.

[4]

HCI Type 1:

Advantage:

HCI Type 2:

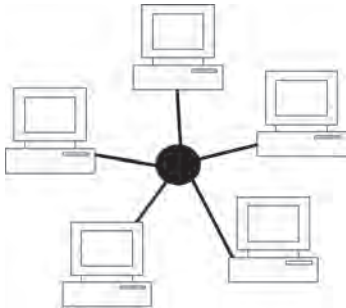
Advantage:



3. (a) Name the topologies of the networks shown below.

[3]

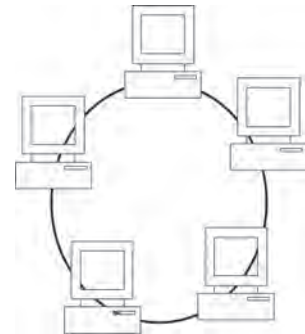
Topology:



Topology:



Topology:



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

Describe the purpose of **each** of the following devices.

[3]

(i) Switch

.....
.....

(ii) Gateway

.....
.....

(iii) Bridge

.....
.....



(c) Computer network systems have many advantages and disadvantages over standalone computers.

(i) Give **two** *advantages* of a network over standalone computers. [2]

Advantage 1:

.....

.....

Advantage 2:

.....

.....

(ii) Give **one** *disadvantage* of a network over standalone computers. [1]

.....

.....

.....

(d) (i) Many organisations use an *Intranet*. State what is meant by an *Intranet*. [1]

.....

.....

(ii) Many organisations use an *Extranet*. State what is meant by an *Extranet*. [1]

.....

.....

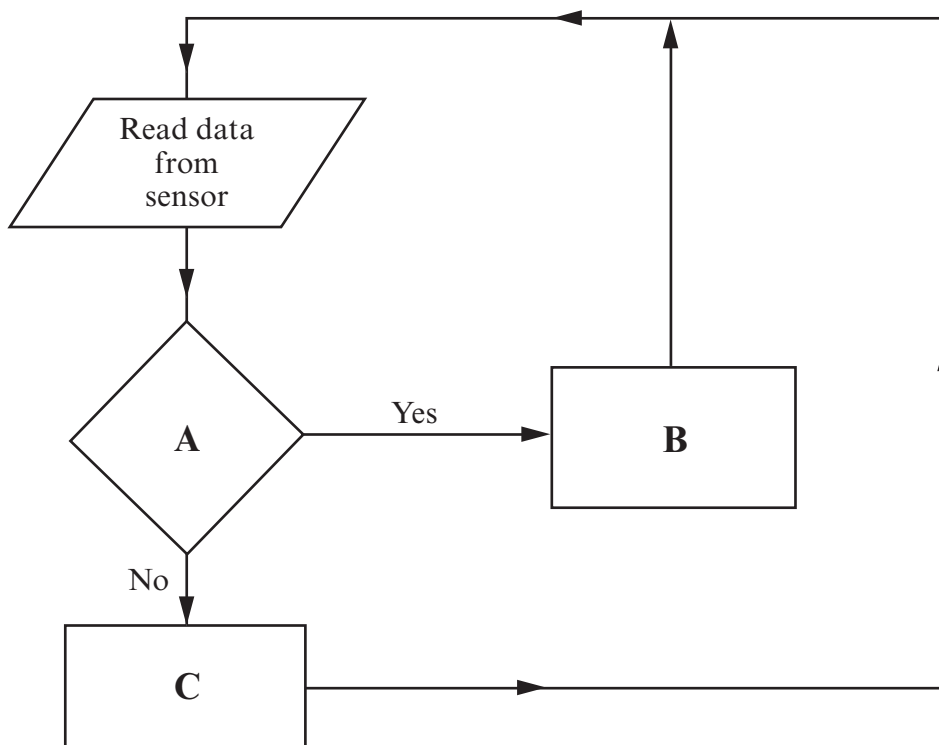
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4. (a) Tick (✓) the correct boxes to show which of the following are *advantages* or *disadvantages* of computerised data logging. [4]

	Advantage	Disadvantage
Accurate readings	1 <input type="checkbox"/>	2 <input type="checkbox"/>
Initial cost of the data logging equipment	3 <input type="checkbox"/>	4 <input type="checkbox"/>
Data can be collected automatically	5 <input type="checkbox"/>	6 <input type="checkbox"/>
Can be used in dangerous situations	7 <input type="checkbox"/>	8 <input type="checkbox"/>

- (b) The diagram below shows a general ICT control system.



Name an ICT control (feedback) system of your choice and answer the following questions based on your choice.

ICT Control System:

(i) Name a *sensor* and an *output device* used in your chosen control system. [2]

Sensor:

Output device:

(ii) Complete the following table for the ICT control system of your choice, giving a suitable process for the letters **A**, **B** and **C** labelled in the diagram opposite. [3]

A	
B	
C	



5. *Expert systems* are widely used in medicine.

(a) State **one** purpose of an expert system in medicine. [1]

.....
.....

(b) Give **two advantages** of using an expert system in medicine. [2]

Advantage 1:

.....
.....

Advantage 2:

.....
.....

(c) Give **one disadvantage** of using an expert system in medicine. [1]

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



6. *Robots* are widely used by organisations.

(a) Name **three** tasks that could be carried out by robots. [3]

Task 1:

.....

Task 2:

.....

Task 3:

.....

(b) Give **two** *advantages* of using robots instead of humans. [2]

Advantage 1:

.....

.....

Advantage 2:

.....

.....

(c) Give **one** *disadvantage* of using robots instead of humans. [1]

.....

.....

.....

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7. All computers have an *Operating System*.

(a) Describe what is meant by the term '*Operating System*'. [2]

.....
.....

(b) Give **three** functions of an *Operating System*. [3]

Function 1:

.....
.....

Function 2:

.....
.....

Function 3:

.....
.....



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8. *Smash Hits* is a brand new online store that sells DVDs, Blu-ray, games and music downloads. The company has just launched its new website. The *home page* can be seen below.



- (a) State what is meant by a *Home Page*. [1]

- (b) The size of the banner labelled **A** above is 728×90 pixels and it is placed in a premium location at the top of the webpage.

State the name given to this type of banner. [1]

- (c) Match the labels **B**, **C** and **D** shown in the webpage above with the website features listed below. [3]

Website feature	Letter
Hyperlink	<input type="checkbox"/>
Web Icons	<input type="checkbox"/>
Search Box	<input type="checkbox"/>



(d) *Smash Hits* have paid to have a sponsored link to their website appear in the *Golden Triangle*.

(i) Describe what is meant by the term *Golden Triangle*. [2]

.....

.....

.....

(ii) Give **one** reason why *Smash Hits* want to ensure that a link to their website appears within the *Golden Triangle*. [1]

.....

.....



9. A *bitmap graphic* of the *Smash Hits* logo is shown below.



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

(b) Tick (✓) the correct boxes to show which of the following are *standard tools* that could be used when producing a **still digital image**. [3]

Standard tools	Tick (✓)
Transition	1 <input type="checkbox"/>
Cloning	2 <input type="checkbox"/>
Tweening	3 <input type="checkbox"/>
Layering	4 <input type="checkbox"/>
Distortion	5 <input type="checkbox"/>
Pivot tables	6 <input type="checkbox"/>

(c) Describe what is meant by a *Bitmap Graphic*. [1]

(d) State a problem with enlarging bitmap graphics and suggest a different graphic type that will overcome this problem. [2]

Problem:

Suggested graphic type:



(e) When *Smash Hits* publish their logo on a web page, the image is *optimised*.

State what is meant by *optimisation of images* for the web and give **one advantage** of optimising images. [2]

.....

.....

.....

.....

10. *Smash Hits* also sell music downloads.

(a) Name a suitable *file format* for downloading music from the Internet. [1]

.....

.....

(b) Give **one advantage** of using this format. [1]

.....

.....

.....

(c) Give **one disadvantage** of using this format. [1]

.....

.....

.....



11. The *Smash Hits* website uses an *e-commerce (online shopping)* system.

Discuss the **advantages** and **disadvantages** of an *e-commerce system* to the *Customer* and to *Smash Hits*. [10]

Dotted lines for writing the answer.



Examiner
only

Area with horizontal dotted lines for writing.

END OF PAPER



