

Candidate Name	Centre Number	Candidate Number

WELSH JOINT EDUCATION COMMITTEE
General Certificate of Secondary Education



CYD-BWYLLGOR ADDYSG CYMRU
Tystysgrif Gyffredinol Addysg Uwchradd

178/02

INFORMATION AND COMMUNICATION TECHNOLOGY

PAPER 2

(Foundation Tier – Grades G to C)

A.M. WEDNESDAY, 6 June 2007

(1 Hour)

Examiner's Use Only	
Total Mark	

INSTRUCTIONS TO CANDIDATES

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. Where the space is not sufficient for your answer, continue the answer at the back of the book, taking care to number the continuation correctly.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.

No certificate will be awarded to a candidate detected in any unfair practice during the examination.

Answer **all** questions.

1. Place a tick (✓) in the correct column to show whether **each** device is used for **Input** or **Output**. [6]

<i>Device</i>	<i>Input</i>	<i>Output</i>
Mouse		
Monitor		
Printer		
Scanner		
Speaker		
Digital camera		

2. **ROM** and **RAM** are two different types of memory found in computers such as the one shown below.



- (a) (i) What do the letters **ROM** stand for? [1]

.....

- (ii) What do the letters **RAM** stand for? [1]

.....

- (b) (i) What is **RAM** used for? [1]

.....

- (ii) Place a tick (✓) in the correct box below to show which **one** of these statements is true. [1]

	<i>True</i>
ROM is used to store data when the computer is switched off.	
ROM is software.	
ROM loses its data when the computer is switched off.	

(c) **Circle the largest** measurement of memory below. [1]

Gigabyte Megabyte Kilobyte

(d) Name **two** different types of **magnetic** backing storage devices used by computers. [2]

(i)

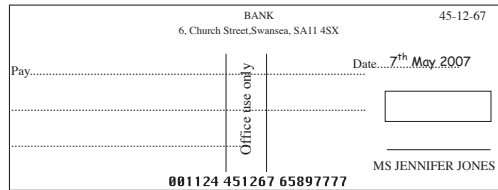
(ii)

(e) Name **one** type of **optical** backing storage device used by computers. [1]

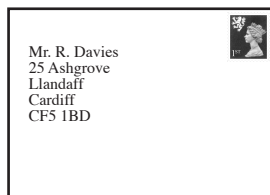
.....

3. Complete the following sentences using the list below.

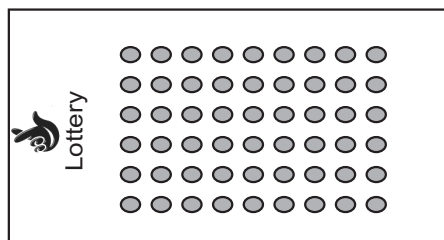
OMR OCR MICR



(i) Banks make great use of [1]



(ii) One use of is to read postcodes on letters. [1]



(iii) The National Lottery uses to capture data. [1]

4. The *Data Protection Act* (DPA) has eight basic principles.

(a) List **three** of these principles. [3]

(i)

(ii)

(iii)

(b) Give **one** right individuals have regarding data held about them on computer. [1]

.....

(c) Name **one** organisation that is exempt from the DPA. [1]

.....

5. LANs and WANs are two different types of computer network.

(a) (i) Write down what LAN stands for.

L **A** **Network.**

(ii) Write down what WAN stands for.

W **A** **Network.** [3]

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

(i)

(ii)

(c) Give **one** way of preventing unauthorised access to information on a network. [1]

.....

6. All computers have an *operating system*.

(a) Write down what is meant by the term *operating system*. [1]

.....

(b) Tick (✓) **two** boxes to show which tasks are carried out by an operating system. [2]

<i>Task</i>	<i>Tick (✓) two boxes</i>
Manages the memory of the computer.	
Controls the brightness of the monitor.	
Informs the user if the printer is out of paper.	
Controls the speed of the printer.	

(c) Complete the table by matching the following operating system to the tasks listed in the table.

An example has been done for you.

[2]

Multi-access

Real time processing

Batch processing

<i>Task</i>	<i>Operating System</i>
Control robots.	Real time processing
Many travel agents accessing a flight booking system at the same time.	
Produce gas bills.	

(d) Most computers have a Graphical User Interface (GUI).

List **two** features of a GUI.

[2]

(i)

(ii)

7. Below is part of the information held on a video shop's computer.

<i>Name of film</i>	<i>Type</i>	<i>Medium</i>	<i>ID</i>	<i>Rental Cost (£)</i>
Apollo	Sci Fi	DVD	3651	3.99
High Noon	Western	Tape	3742	4.99
I Robot	Sci Fi	DVD	3643	3.99
Notting Hill	Romantic	DVD	4644	3.99

(a) Write down the number of *fields* shown in the table above. [1]

.....

(b) Write down the number of *records* shown in the table above. [1]

.....

(c) A variety of data types are found in the table.

(i) Give the data type for *Rental Cost (£)*. [1]

.....

(ii) Give the data type for *Type*. [1]

.....

(iii) Give **two** examples of when the video shop owner would update the table. [2]

(I)

(II)

8. When data is input to a computer system the software checks to see if the data is reasonable. The process is called *validation*.

(a) Give **two** different types of validation checks. [2]

(i)

(ii)

(b) *Verification* is the name given for checking that data has been correctly copied from one medium (e.g. paper) to another medium (e.g. disk).

Give **two** methods of verification. [2]

(i)

(ii)

(c) When people join a club, they are asked for their date of birth (day, month, year) in a grid as shown below.

D	D	M	M	Y	Y

Place a tick (✓) against the date that would be *accepted* by the validation process.
Give a reason why the other **two** dates would be *rejected*.

[3]

<i>Date</i>	<i>Tick (✓) or reason for rejection</i>
14 12 60	
03 April 71	
11 45 81	

9. Embedded computer systems are used in a large number of devices.

(a) Explain what is meant by an *embedded computer system*. [2]

.....
.....

(b) Give **two** examples of devices/machines which contain embedded computer systems. [2]

(i)

(ii)

(c) Give **two** advantages of using robots in car manufacturing. [2]

(i)

(ii)

10. An airline has used a computerised seat booking system for many years.

(a) Give **two** benefits to the airline of using a computerised seat booking system. [2]

(i)

(ii)

(b) A Systems Analyst has been hired by the airline to update and improve the current system.

Give **two** tasks or activities the Systems Analyst would undertake at **each** of the following stages. 2 × [2]

Analysis

(i)

(ii)

Design

(i)

(ii)

