

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, 7 June 2006

(1 Hour)

Examiner's Use Only	
<b>Total Mark</b>	

**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.

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>
Printer		
Microphone		
Mouse		
Digital camera		
Graph plotter		
Monitor		

2. An advertisement for a computer includes the following:

256 Mb RAM  
400 Gb Hard Disc  
CD/DVD Drive  
1.44 Mb Floppy Disc

- (a) Give **two** *magnetic* backing storage devices used by this computer. [2]

- (i) .....
- (ii) .....

- (b) (i) Name **one** *optical* device which this computer uses. [1]

.....

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

	<i>True</i>
Optical discs are not damaged by magnets.	
Optical discs are not damaged by bending.	
Optical discs have more memory than most hard discs.	

(c) (i) RAM stands for R ..... A ..... M ..... [1]

(ii) Place a tick (✓) in the correct boxes below to show which **two** of these statements are true. [2]

	<i>True</i>
RAM is memory.	
RAM is software.	
RAM is used to store data when the computer is switched off.	
RAM is used to store data when the computer is being used.	

(iii) The RAM in this computer can be upgraded to 512 Mb.  
Give **one** advantage of upgrading the RAM to 512 Mb. [1]

.....

3. A school has a computerised library system.

(a) Name **two** ways in which book data can be entered into a computer. [2]

(i) .....

(ii) .....

(b) Give **two** advantages of a computerised library system, over a manual system. [2]

(i) .....

(ii) .....

4. Computer systems are networked when they are linked together.

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

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

(b) Another type of network is a WAN.

(i) Write down what WAN stands for:

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

(ii) Give **one** example of a WAN. [1]

.....

(c) A computer network can be arranged as a *star network*.  
In the space below, draw and label a diagram of a *star network*. Show the position of the  
fileserver, workstations and printer on your diagram. [4]

(d) Other than a star network, name **one** other type of computer network topology. [1]

.....

(e) Give **two** methods of protecting data on a network. [2]

(i) .....

(ii) .....

5. (a) Tick (✓) the correct column to show whether **each** of the following statements about an operating system is true or false. [3]

	<i>True</i>	<i>False</i>
An operating system is an example of hardware.		
An operating system is software that controls the computer.		
A computer will not work unless the operating system is present.		

- (b) For **each** of the following, state a suitable operating system from the list below.

**batch processing                      real time transaction                      real time processing**

- (i) Controlling a nuclear reactor. [1]

.....

- (ii) Booking cinema seats. [1]

.....

- (iii) Payroll. [1]

.....

6. The *Data Protection Act* (DPA) was introduced to protect personal data being stored on computers. It has eight principles.

- (a) Write down **three** of these principles. [3]

(i) .....

(ii) .....

(iii) .....

- (b) Place a tick (✓) in the correct box to show which of the following data are **exempt** under the Data Protection Act. [2]

Data which is to be used for:

(i) household or personal use;

(ii) statistical records;

(iii) school records;

(iv) customer records.

7. Describe **two** crimes that could be dealt with by the Computer Misuse Act. 2 × [2]  
*An example has been done for you.*

Using a stolen credit card to buy goods online.

Crime 1: .....

Crime 2: .....

8. Powerful mainframe computers are used for weather forecasting.

- (a) Give **one** reason why powerful mainframes rather than personal computers are used for weather forecasting. [1]

.....

- (b) Name **three** different types of sensors used to collect data for weather forecasting. [3]

(i) .....

(ii) .....

(iii) .....

9. A systems analyst has been employed to design a new computerised payroll system.

(a) List the **four** main stages the systems analyst will undertake to produce a new computerised system. [4]

(i) .....

(ii) .....

(iii) .....

(iv) .....

(b) Other than *name* and *address*, list **four** fields which could be included in an employee's **payroll** record. One of these must be the *keyfield*. [4]

(i) **Keyfield:** .....

(ii) .....

(iii) .....

(iv) .....

10. All computers have a user interface.  
One such interface is a Graphical User Interface (GUI). [4]

(a) List **four** features of a GUI.

(i) .....

(ii) .....

(iii) .....

(iv) .....

(b) Name **one** *other* type of user interface. [1]

.....

**For continuation only.**

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