Candidate Name	Centre Number	Candidate Number

WELSH JOINT EDUCATION COMMITTEE

General Certificate of Secondary Education

CYD-BWYLLGOR ADDYSG CYMRU

Tystysgrif Gyffredinol Addysg Uwchradd

178/03*265/02

GCSE INFORMATION AND COMMUNICATION TECHNOLOGY PAPER 1

GCSE (SHORT COURSE) INFORMATION AND COMMUNICATION TECHNOLOGY

(Higher Tier – Grades D to A*)

P.M. TUESDAY, 22 May 2007

(1 hour 30 minutes)

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. The organiser of charity fun run has produced the first draft of a poster to advertise the event.

Newplaced School
Charity Fun Run

Starts
11 a.m.
Newplaced Leisure Centre

He uses some of the features of his DTP (Desktop Publishing) software to improve the poster. This improved poster is shown below.

(a) Give **two** features of the DTP software used to improve the poster. [2]

....

(b) Give **two** *other different types* of documents which could help with the organisation of the fun run. Identify a *different* purpose for **each** of the documents. [4]

Document 1 .....

Purpose .....

Document 2 .....

Purpose .....

2. Data is input into a computer using optical mark readers (OMR) and optical character readers (OCR).

Give a suitable example of the use of:

(a) OMR ..... [1]

(b) OCR ..... [1]

3. A garage uses a spreadsheet to calculate a customer's bill. Part of this spreadsheet is shown below.

	A	B	C	D	E	F
1	**Car**	**Extra Labour hours**	**Cost of Extra Labour**	**Cost of Standard Service**	**Costs of Extra Parts**	**Total Bill**
2	Volvo	10	£50	£250	£50	£350.00
3	Ford	2	£10	£175	£28	£213.00
4	Land Rover	5	£25	£245	£120	£390.00
5	Mazda	5	£25	£120	£55	£200.00
6	Peugeot	10	£50	£100	£35	£185.00
7	Mercedes	10	£50	£350	£200	£600.00

(a) Which of the following formulas could be used to give the Total Bill in Cell F2? [1]

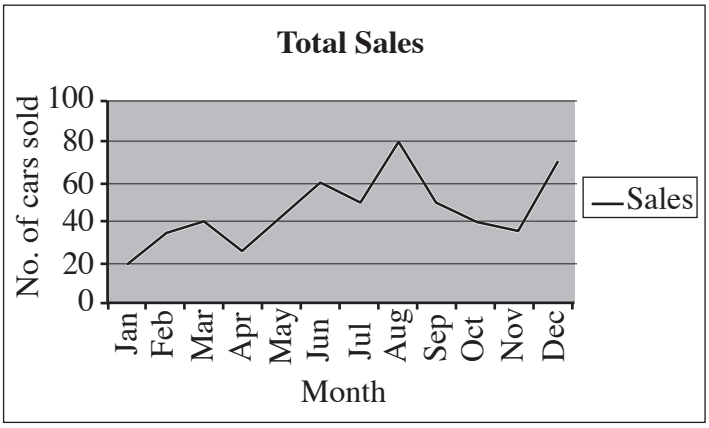
A =SUM (C2:E2)
B =B2+C2+D2+E2
C =C2+D2+E2
D =SUM (A2:E2)

.....

(b) Give a suitable formula for working out the *Cost of Extra Labour* in Cell C2. [1]

.....

(c) The manager uses another spreadsheet to produce the graph of Total Sales shown below.



State what *type* of graph this is. ..... [1]

(d) The garage owner uses a simulation model.

Describe, *using an example*, how a simulation model could help in running the garage. [2]

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(e) Give **one** *disadvantage* of using a simulation model. [1]

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4. *(a)* Banks offer customers services such as Automatic Teller Machines (ATMs).

(i) Give **two** advantages of ATMs *for customers*. [2]

Advantage 1 .....

.....

Advantage 2 .....

.....

(ii) Give **three** *different* services available at an ATM. [3]

Two examples have been done for you.

- *withdrawing cash,*
- *printing a mini-statement.*

Service 1 .....

Service 2 .....

Service 3 .....

(iii) Give **one** banking service which can only be obtained in a bank, not at an ATM. [1]

.....

(b) Banks also offer online (Internet) banking.
Give **two** advantages of online banking *for customers*. [2]
Do not repeat your answers in 4 *(a)* (i).

Advantage 1 .....

.....

Advantage 2 .....

.....

5. A furniture store keeps details of its customers and their orders in a database, part of which is shown below.

Customer Number	Name	Item code	Size	Cost	Delivery
67876	R. Evans	786	Large	£200	Y
54765	H. Smith	779	Small	£45	N
95632	A. Khaliq	667	Large	£805	Y
84543	D. Jones	896	Large	£567	Y

(a) Give the names of **two** *keyfields* shown in this database.

.... [2]

(b) Give the name of **one** *'Boolean'* field shown in this database. ..... [1]

(c) Give **two** *other* fields which could sensibly be used as part of this customer orders database.

*Do **not** include other name, address or telephone fields.* [2]

....

(d) Give a suitable validation method for the *Size* field and describe how it could reduce errors. [2]

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(e) The store offers free delivery for all orders *greater than* £200.

How many customers shown above would receive free delivery? ..... [1]

(f) The warehouse manager wants to find details of all large goods to be delivered.
Complete the tables below to show how he can obtain this information from the database.[3]

Fieldname	*Operator*	*Search criteria*
.....	.....	.....

AND

Fieldname	*Operator*	*Search criteria*
.....	.....	.....

(g) The manager uses this data to give him *information* about customers.

Tick (✓) the box to show which is a definition of *information*. [1]

	Tick (✓) one box only
Information is raw facts and figures.	
Information is processed data.	
Information is the news.	

6. A gardener grows valuable tropical flowers in his greenhouse. A computer controls the growing conditions in the greenhouse. For example, a temperature sensor turns on a heater if its gets too cold.

(a) Describe how the computer could be programmed to control **one other** growing condition in this greenhouse.

Sensor ..... [1]

Computer response ..... [2]

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.....

.....

(b) Give **two** advantages of using a computer to control growing conditions in a greenhouse. [2]

Advantage 1 .....

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.....

Advantage 2 .....

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(c) *Other than the cost of buying and maintaining the computer system*, give **one** disadvantage of using a computer to control growing conditions in a greenhouse. [1]

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7. A supermarket has a computerised stock control system.

A *master file* of stock is kept on the computer system.
Part of this file is shown below.

Stock Code	Stock description	No. in stock	Re-order Level
7856	Eggs	10	20
8987	Sugar	151	150
2202	Bottled water	200	180
2512	Tomato sauce	75	50

(a) State which item of stock will need to be re-ordered. ..... [1]

(b) Give **two** *essential* items of data found in the stock control *transaction file*. [2]

....

(c) Barcodes are used to enter data about products.

Give **two** items of data *encoded* in a barcode. [2]

Item 1 ..... **Item 2** .....

(d) Tick (✓) which **three** of the following are *advantages* of using Point of Sales (POS) systems in supermarkets. [3]

	Tick (✓) only three
Goods are always in stock.	
Faster service when buying goods.	
Goods are always cheaper.	
Fewer mistakes in charging customers.	
Itemised bill can be provided for the customer.	
Goods are fresher.	

(e) Describe how shops could use computerised shopping systems to attract new customers and retain their existing customers. [4]

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8. There are many dangers associated with using chat lines.

State **two** items of information that should **not** be given out on a chat line. [2]

Item 1 .....

Item 2 .....

9. A company employs designers who work from home.
These designers use many features of email *(electronic mail)* to contact the company.

(a) Give a definition of *email*. [1]

.....

.....

(b) The designers use *email attachments* and they also send *carbon copy* emails.

Define what is meant by these features and give a suitable example of how a designer might use them *in their work*.

(i) **Email attachment** [2]

Definition .....

.....

Example .....

.....

(ii) **Carbon copy emails** [2]

Definition .....

.....

Example .....

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10. A company selling books replaced its standalone computers with a computer network.

(a) The company has an *intranet*.

(i) State what is meant by an *intranet*. [1]

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(ii) Other than sending emails, give **one** example of how a salesman might make use of the *intranet*. [1]

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.....

(b) The book company also uses the Internet.

Other than email, give **two** *different* examples of how the company could use the Internet. [2]

Example 1 .....

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Example 2 .....

.....

(c) All new employees are told to follow strict guidelines for managing the use of passwords.

Give **three** rules which should be obeyed when using passwords. [3]

Rule 1 .....

Rule 2 .....

Rule 3 .....

(d) Give **two** crimes associated with the use of networks and describe how these crimes can be prevented.

Crime 1 ..... [1]

Prevention ..... [1]

.....

.....

Crime 2 ..... [1]

Prevention ..... [1]

.....

.....

11. Schools use computer systems and software to improve learning.

(a) Give the purpose of an *online thesaurus* and describe in detail how pupils could make use of this feature to improve the quality of their work. [2]

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(b) Pupils use ICT to help with schoolwork.

Describe, *using suitable examples*, **four** *different* ways a pupil could use ICT to help with their school work. [8]

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Examiner only
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Turn over.

For continuation only.