cea

Rewarding Learning

General Certificate of Secondary Education

2009

Information and Communication Technology

Short Course

Higher Tier

[G5302]

G5302

TUESDAY 19 MAY, AFTERNOON

For Examiner's use only	
Question Number	Marks
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
QWC	
Total Marks	

TIME

1 hour 30 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.
Write your answers in the spaces provided in this question paper.
Answer **all fourteen** questions.

INFORMATION FOR CANDIDATES

The total mark for this paper is 140, including a maximum of 7 marks for quality of written communication.
Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

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Answer all fourteen questions

For question 1 insert the appropriate letter in the space provided.

1 **(a)** Select the **most appropriate** input device for free-hand drawing on a graphics package.

    A Mouse

    B Keyboard

    C Light Pen

    D Hand-held scanner

                                     Answer _____ [1]

  (b) Select the **most appropriate** output device for creating a hardcopy of a receipt at a supermarket till.

    A Printer

    B LCD

    C Plotter

    D VDU

                                       Answer _____ [1]

  (c) Select the **most appropriate** storage device for storing pictures on a mobile phone.

    A SIM Card

    B Network Card

    C Memory Card

    D Graphics Card

                                       Answer _____ [1]

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(d) Select **one** task that cannot be carried out when banking online.

    A   Depositing money

    B   Ordering a new cheque book

    C   Paying bills

    D   Cancelling direct debits

<div align="right">Answer _____ [1]</div>

(e) Select **one** advantage of storing graphics in bitmap format.

    A   Images are built up in layers

    B   Image quality is good

    C   Images can be edited at pixel level

    D   Images take up very little storage space

<div align="right">Answer _____ [1]</div>

(f) A web browser:

    A   Allows users to enlarge text, cannot be used without being connected to the Internet, allows users to enter URLs.

    B   Allows users to enlarge text, can be used without being connected to the Internet, allows users to enter URLs.

    C   Does not allow users to enlarge text, can be used without being connected to the Internet, allows users to enter URLs.

    D   Does not allow users to enlarge text, cannot be used without being connected to the Internet, does not allow users to enter URLs.

<div align="right">Answer _____ [1]</div>

(g) To perform a mail merge means:

    A   To merge data from a database onto a letter and produce personalised letters.

    B   To merge text from two letters to produce personalised letters.

    C   To use a database to send a personalised letter to a group of people.

    D   To send a personalised letter.

Answer _____ [1]

(h) An **ATM**:

    A   Is an Automatic Teller Machine and can be used to top up some mobile phones.

    B   Is an Automatic Teller Machine and can be used to open a bank account.

    C   Is an Automatic Technical Machine and can be used to top up some mobile phones.

    D   Is an Automatic Technical Machine and can be used to open a bank account.

Answer _____ [1]

(i) The operating system of a computer:

    A   Is hardware which manages the communication between the user and the computer system.

    B   Is software which manages the communication between the user and the computer system.

    C   Is hardware which creates programs for use by the user and the computer system.

    D   Is software which creates programs for use by the user and the computer system.

Answer _____ [1]

(j) The **csv** file format allows:

A   A photograph to be stored and imported into a graphics package.

B   Text to be stored and imported into a database.

C   Music to be stored and imported into an mp3 player.

D   Video to be stored and imported into an mp4 player.

Answer _____ [1]

2 Computers are now used to control many types of systems such as central heating in buildings and traffic light systems. These control systems make use of **sensors** and **feedback loops**. An **interface** is also used to help process the data.

   (a) List **one** sensor which could be used in the traffic lights system.

   _____[1]

   (b) Explain the purpose of a **sensor** in any control system.

   _____

   _____

   _____[2]

   (c) What is the role of the **interface** in any control system?

   _____

   _____

   _____[2]

   (d) What is the purpose of **feedback** in the central heating control system?

   _____

   _____[1]

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(Questions continue overleaf)

3 Mark is an ICT trainer. He wishes to use a computer to help him to create training material.

(a) From the list below select the **most appropriate** file format for each output to be produced by Mark. (Use each file format **only once**.)

mp3   **bmp**   **doc**   **tiff**   **gif**   **avi**   **xls**

Output	File Format
Printed copies of instructions for using spreadsheets	
Sound files of his voice giving instructions on using a database	
Video tutorials on using the wordprocessor	

[3]

Mark has decided to set up a website to sell his training material.

(b) Give **two** advantages to Mark to encourage him to do this.

1. _____

_____

2. _____

_____ [2]

Mark will need hardware and software to connect to the Internet.

(c) From the list he has written below, select using a tick (✓) the **three** items he will **not require** to access the Internet and web pages.

Equipment	Tick (✓)
Wordprocessor	
Browser	
MODEM	
HTML files	
Broadband link	
Spreadsheet	

[3]

Mark will transfer files onto the Internet.

(d) List **one** protocol which will support this.

_____[1]

(e) Give **one** piece of advice to Mark to ensure that his website loads quickly when a customer is viewing it.

_____

_____[1]

Mark decides to sell his products on **DVD** from a stand in the local shopping centre.

(f) Expand the acronym **DVD**.

_____[1]

[Turn over

4   A local solicitors' office has installed a new **LAN** (Local Area Network).
The LAN has 30 computers, a server and up to 10 wireless laptops can
connect to it. The LAN also provides Internet access for the solicitors.

(a) (i) Give **two** advantages of having a network in the solicitors' office.

1. _____

_____

2. _____

_____[2]

Networks are expensive.

(ii) Give **one** other disadvantage of installing a network in the office.

_____

_____[1]

(iii) List **three** functions of the **server** on a network.

1. _____

2. _____

3. _____[3]

(b) Give **two** ways in which the solicitors would use Internet access **to
assist them with their work**.

1. _____

_____

2. _____

_____[2]

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One of the solicitors wants to use her wireless handheld computer when visiting clients.

(c) What is the correct name of the protocol which will support this activity?

(Tick **one** answer **only**)

Protocol	Tick (✓)
Wireless Additional Protocol	
Wireless Application Protocol	
Wire Application Protocol	
Wire Additional Protocol	

[1]

It has been suggested that the solicitors in the office make use of **video conferencing** to meet with solicitors in other countries.

(d) (i) What is **video conferencing**?

_____

_____[1]

The office manager knows that a computer and a communications link are required for video conferencing.

(ii) List **three** other devices which would be required to provide this facility in the office.

1. _____

2. _____

3. _____[3]

[Turn over

(iii) Explain to the office manager how the **bandwidth** of the communications link will affect the video conferencing.

_____

_____

_____[2]

(iv) Give **two** advantages to the solicitors of using video conferencing rather than email and telephone conversations to talk to solicitors in other countries.

1. _____

_____

2. _____

_____[2]

The company have had a **fax machine** for many years.

(e) Give **one use** for the fax machine where email is unlikely to be used in the solicitors' office.

_____[1]

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5 A company, GAMESTATION LTD, which develops games software, cannot find people with the correct skills in the local area. They have decided to offer **teleworking** contracts.

(a) (i) What is **teleworking**?

_____

_____

_____[2]

(ii) Give **two** ways in which teleworking could help a company in this situation.

1. _____

_____

2. _____

_____[2]

(b) GAMESTATION LTD are going to place an advert on the Internet which will highlight the advantages of teleworking to employees.

(i) List **two** advantages **to employees** of teleworking.

1. _____

_____

2. _____

_____[2]

(ii) Give **two** disadvantages **to the company** of teleworking.

1. _____

_____

2. _____

_____[2]

[Turn over

GAMESTATION LTD are developing a driving simulation game for the PC. It has high quality graphics and 14 levels. Players can select from 150 cars.

(c) What advice would you give players about the **RAM** and **Monitor** on their PC?

RAM: _____

_____

_____[2]

Monitor: _____

_____

_____[2]

GAMESTATION LTD have decided to make the game available online. Players must fill out the online form below before they can play.

GAMESTATION LTD ONLINE REGISTRATION

First Name	
Surname	
House Number	
Street	
Town	
Postcode	
Date of Birth	
Gender	⚪ Male ⚪ Female
Email	

Submit

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Parents have complained that the form contains personal data.

(d) (i) Which law must GAMESTATION LTD uphold when managing personal data?

_____[1]

GAMESTATION LTD have sold the data of member players to a company in the USA and a number of members have found that the data held about them is not correct.

(ii) State which **two** principles of the law have been broken by GAMESTATION LTD.

1. _____

_____

2. _____

_____[2]

(iii) Which **official** can the parents complain to if they wish to take action about the way in which GAMESTATION LTD manage their data?

_____[1]

GAMESTATION LTD have been advised to appoint a **Data Controller** to manage queries from **Data Subjects**.

(iv) Explain the **two** terms in bold.

Data Controller _____

_____

Data Subject _____

_____[2]

[Turn over

6 Holiday Villa Hotels have hotels in major cities in Europe. Reservations can be made online, by email, by telephone, or by faxing the central reservations.

Holiday Villa Hotels give special offers online.

(a) (i) Give **one other** advantage **to the customer** of booking a hotel online.

_____[1]

(ii) Give **one** disadvantage **to the company** of using an online booking system.

_____[1]

(iii) State **one** reason why a customer may choose to book by telephone.

_____[1]

As well as using the WWW (World Wide Web) and Internet for business, the company provide an **Intranet** for employees.

(b) (i) Tick (✔) which **three** of the following statements are true about the WWW and the Internet.

Statement	Tick (✔)
The WWW is the information stored on the Internet	
The Internet is a set of web addresses	
The Internet is a network of computers and communication links	
The WWW is a set of web addresses	
To access the WWW you need a web browser	

[3]

(ii) What is an **Intranet**?

_____

_____[1]

(iii) Describe **two** ways in which the company could use the Intranet **to benefit employees**.

1. _____

_____

2. _____

_____[2]

7 Barry runs a small printing company. He wants to store details about his clients in a database.

(a) Complete the following paragraph using the words provided.
Use each word only once.

REPORT RECORDS CRITERIA FORMS FIELDS TABLE

Data is stored in tables of _____. Each record is made up of

_____. A database package allows users to query data which

meet _____. _____ can be used to capture data

on screen. [4]

Barry wants to store the following details about his clients.

Details	
Title	Mr
Name	Barry Greene
Address	1 Long Road
Postcode	BT56 9II
Phone number	(020)-344-999
Date of first order	12/12/2008
Priority	Yes
Discount Rate	10%

(b) (i) Barry wants to sort the table. Suggest a field for **sorting** which will help Barry group deliveries to customers.

_____[1]

(ii) How could Barry use the **Discount Rate** field when processing orders?

_____[1]

(iii) What feature of a database would Barry use to select all of the **Priority** customers?

_____[1]

(iv) Barry's database does not include a **keyfield**. What is the purpose of a **keyfield**?

_____[1]

[Turn over

8 "Clarendon Limos" are a small Limousine hire company. They have four cars. Below is part of a spreadsheet with their car hire information for the month of November 2008.

	A	B	C	D	E	F	G
1	**Clarendon Limos – Income November 2008**						
2	**Car**	**Cost Per Hour**	**Number of Hours Hired**	**Total Income**	**Fuel Cost Per Hour**	**Total Fuel Cost**	**Total Profit for each Car**
3	**Yellow Hummer Vehicle**	£ 400.00	35	£ 14 000.00	£ 100.00	£ 3 500.00	£ 10 500.00
4	**Stretch Limousine**	£ 500.00	19	£ 9 500.00	£ 120.00	£ 2 280.00	£ 7 220.00
5	**Stretch Hummer Vehicle**	£ 550.00	9	£ 4 950.00	£ 115.00	£ 1 035.00	£ 3 915.00
6	**Pink Cadillac**	£ 700.00	10	£ 7 000.00	£ 140.00	£ 1 400.00	£ 5 600.00
7							
8						**Total Profit**	£ 27 235.00

(a) Cells **A8:F8** have been: (*circle the correct answer from the list below*)

      Cleared   **Merged**   **Pasted**   **Deleted**   [1]

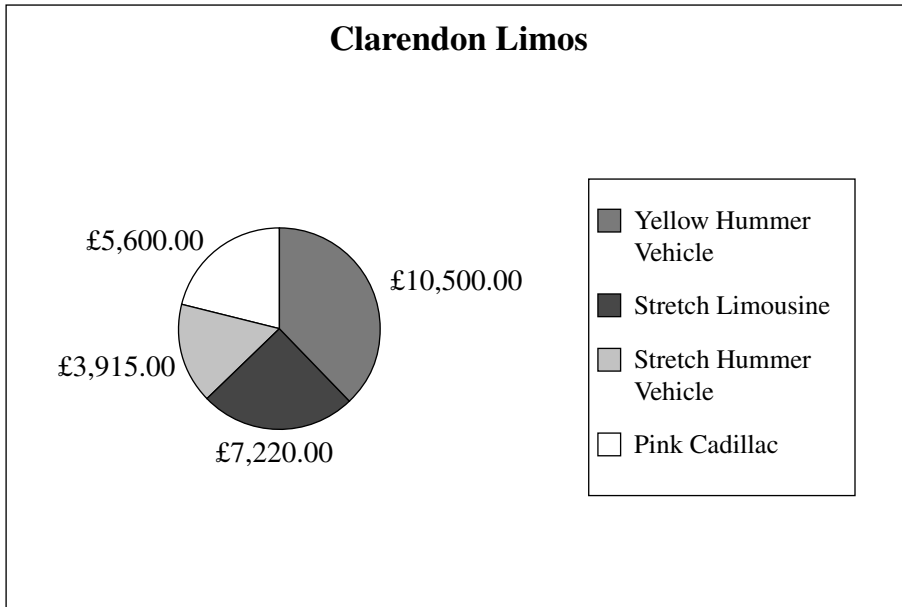**(b)** Using cell references, write down the **formula** used in each of the following cells.

    (i) D6 _____[1]

    (ii) G6 _____[1]

    (iii) G8 _____[1]

(c) The chart below has been produced from the spreadsheet data.

Clarendon Limos

£5,600.00

£10,500.00

£3,915.00

£7,220.00

Legend:
- Yellow Hummer Vehicle
- Stretch Limousine
- Stretch Hummer Vehicle
- Pink Cadillac

(i) List the **cell references** of the two cell ranges used to produce this chart.

Cell range 1: _____

Cell range 2: _____[2]

(ii) Give **one** advantage to Clarendon Limos of viewing information in chart form.

_____

_____[1]

(iii) Give **one** piece of information that Clarendon Limos can see by examining the chart.

_____

_____[1]

(iv) Apart from using colour, suggest **one** way in which the chart could be improved.

_____

_____[1]

[Turn over

(d) Clarendon Limos have decided to hire drivers and need to include the cost of drivers in the spreadsheet.

	A	B	C	D	E	F	G	H
1	Clarendon Limos – Income November 2008							
2	Car	Cost Per Hour	Number of Hours Hired	Total Income	Fuel Cost Per Hour	Total Fuel Cost	Driver Costs	Total Profit
3	Yellow Hummer Vehicle	£ 400.00	35	£14000.00	£ 100.00	£3500.00	£1050.00	£9450.00
4	Stretch Limousine	£ 500.00	19	£ 9500.00	£ 120.00	£2280.00	£ 570.00	£ 6650.00
5	Stretch Hummer Vehicle	£ 550.00	9	£ 4950.00	£ 115.00	£1035.00	£ 270.00	£ 3645.00
6	Pink Cadillac	£ 700.00	10	£ 7000.00	£ 140.00	£1400.00	£ 300.00	£ 5300.00
7								
8								£25045.00
9								
10								
11								
12								
13	Driver Costs Per Hour	£30.00						

(i) Write down the **formula** for cell **G6**.

G6: _____ [1]

John decides to use an **absolute cell reference** when calculating the **Driver Costs**.

(ii) What is an **absolute cell reference**?

_____

_____

_____ [2]

(iii) Which cell on the spreadsheet above should be included in the formula as an absolute cell reference?

_____ [1]

(iv) How could using an absolute cell reference keep John's work to a minimum when making changes to **this** spreadsheet?

_____

_____ [1]

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9 Arlene is word processing her Chemistry coursework.

She wishes to include her candidate number in a header and page numbers in a **footer**.

(a) What is a **footer**?

_____

_____[1]

After she has added her **page numbers** to the document she goes into the page setup and selects an option for different first page headers and footers.

(b) Give **one** reason why she might do this.

_____

_____[1]

Arlene has copied a graphic from the Internet. When it is clicked she is automatically taken to the original website.

(c) What must she do to prevent this from happening?

_____

_____[1]

When she runs the spellchecker, it highlights a lot of words that Arlene knows are spelt correctly.

(d) Give **one** reason why the spellchecker might still highlight these.

_____

_____[1]

(e) Give **one** example when the spellchecker may **not highlight** a word when it is spelt incorrectly.
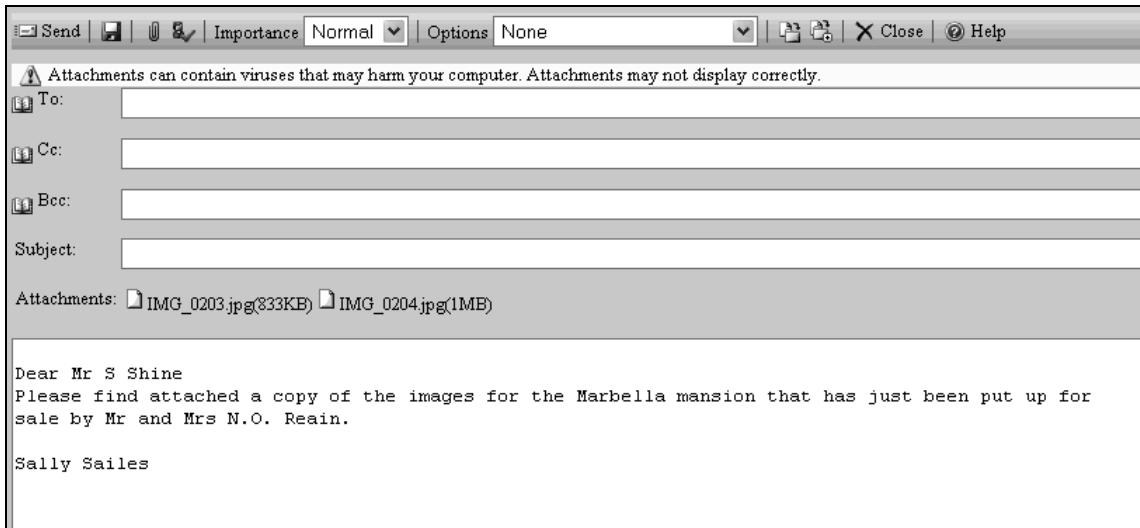
_____

_____[1]

[Turn over

10 **SunShine Properties** sell houses all around the world. One of their employees wants to send an email to their manager at manager@sunshineproperties.co.uk.

(a) Read and complete the following email to the manager so that:

(i) The employee is sending the email to the correct person and [1]

(ii) The person receiving the email knows what it relates to before they open it [1]

| Send | 🖫 | 🖉 🗗 | Importance Normal ✔ | Options None ✔ | 🖺 🖺 | ✕ Close | ⓘ Help |

⚠ Attachments can contain viruses that may harm your computer. Attachments may not display correctly.

To: _____

Cc: _____

Bcc: _____

Subject: _____

Attachments: 🗋 IMG_0203.jpg(833KB) 🗋 IMG_0204.jpg(1MB)

```
Dear Mr S Shine
Please find attached a copy of the images for the Marbella mansion that has just been put up for
sale by Mr and Mrs N.O. Rein.

Sally Sailes
```

The warning shown on the email tells the employee that **Attachments may not display correctly**.

(b) Give **one** reason why attachments may not display correctly when they are opened by the recipient.

_____

_____[1]

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The agent needs to send a copy of the email to Mr and Mrs Reain and the manager. The agent does not want Mr and Mrs Reain to see the email address for their manager.

(c) Write the manager's address in the correct place in the section of the email shown below.

📖 To:	nreain@hotmail.com
📖 Cc:	
📖 Bcc:	
Subject:	

[1]

(d) The employee wants to know when the email has been opened, but does not know whether she should select "Read receipt requested" or "Delivery receipt requested".

✉ Send	🖫	📎 ⓐ	Importance Normal ▾	Options None ▾	Close	ⓘ Help

None
Read receipt requested
Delivery receipt requested
Request Both

📖 To:	nreain@hotmail.com
📖 Cc:	
📖 Bcc:	

(i) Explain the difference between the two options.

_____

_____

_____

_____[2]

(ii) State which option she should select so that she knows that the email has been opened.

_____[1]

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[Turn over

BLANK PAGE

11 Mr J. Brown is opening a new corner shop. He wants an **EFTPOS** system in his store.

(a) Expand the acronym **EFTPOS**.

_____

_____[1]

(b) Explain to him the difference between **EPOS** and **EFTPOS**.

_____

_____[1]

(c) List **two** disadvantages to a store owner of **not** having EFTPOS in their store.

1. _____[1]

2. _____[1]

(d) Complete the following sentences by inserting the **most appropriate word** in the spaces provided. **Use a different word in each space.**

beep   database   description   price   scanner   assistant

Barcodes on products are read by a _____.   [1]

The barcode is used to search a _____ for the item.   [1]

When the product is found a _____ is output.   [1]

The price and _____ are added to an itemised receipt.   [1]

(e) *Apart from Product Code* list **one** item of data stored on a product barcode.

_____[1]

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[Turn over
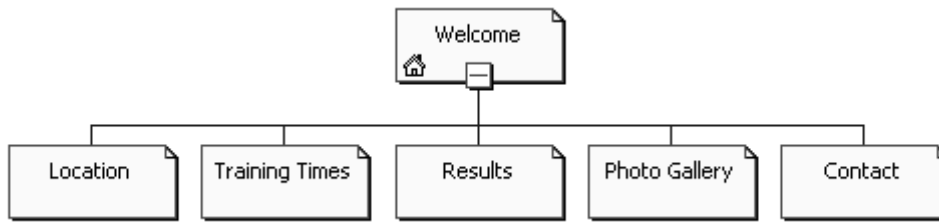
12 June designed a website for her son's sports club. The site she created has the following pages:

June is not sure what format she should use when she is saving the web pages.

(a) Tick (✓) **one** option below that is **not** an appropriate file format to use when saving web pages.

File Format	Tick (✓)
.htm	
.http	
.html	

[1]

When she has completed the website she tests it on **one** web browser only.

(b) Why is this not a good idea?

_____

_____[1]

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When she uploads the site and opens the Photo Gallery page she sees the image below instead of some of the pictures she expects.

(c) Give **one** reason why this might have happened.

_____

_____[1]

June wants to add video footage of a training session to the Welcome Page of the website.

(d) Give **one** disadvantage of adding videos to a web page.

_____

_____[1]

Anyone who wants more information from the club can either complete a form on the Contact Page or they can send the club secretary an email.

(e) Give **one** advantage to the club of using forms to collect details about enquiries instead of allowing people to email the secretary.

_____[1]

People who want to join the club must download a **pdf** application form from the website.

(f) Give **one** disadvantage of providing the application form in pdf format.

_____[1]

[Turn over

13 The calendar below has been produced using a template from Desktop Publishing software.

NOVEMBER 2008						
M	T	W	T	Fr	S	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

(a) What page orientation has been used?

_____[1]

(b) State **one** feature available within a Desktop Publisher which will make it easier for users to produce publications.

_____

_____[1]

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14 Using the terms in the list below, choose **one** term that best matches the definition in the left-hand column (not all words in the list will be used).

Virus	Pixel	HTTP	Hard Disk
CD-Rom	Analogue	Encryption	RSI
Resolution	Check Digit	Scanner	Protocol
Digital	ISP	Hacking	

Definition	Term
A program designed to damage a computer system.	
A digit added to the beginning or end of a number to verify that the number entered is an authentic code.	
A way of encoding data before transmitting it on a network.	
A company which provides the user with a connection to the Internet.	
A measure of the quality of an image.	
A device used to capture data by passing light over the image.	
An optical storage device.	
An injury which occurs as a result of using the same wrist muscles over and over again.	
A set of rules which govern the way in which data is transmitted on a network.	
A name used to describe data held as 1s and 0s.	

[10]

937-061-1