



### Topic: 1.2.3 Internet principles of operation

#### May/June 2007 P1 (7010)

17 Geography students have access to course materials on their college website. A web browser is used to access these materials. Describe three features of a web browser which would be suitable for this application. [3]

#### Oct/Nov 2007 P1 (7010)

6 Thular is doing his IGCSE coursework on the school's local network. He would like to continue this work on his computer at home. Name and describe two methods that he could use to do this. [4]

7 A company has decided to publish its Science books on the Internet rather than produce a series of paper-based books. Give three reasons why a company might choose to do this. [3]

#### May/June 2008 P1 (7010)

8 A student decides to use an Internet search engine at home to help her work on her Geography project. She types in:

COUNTRIES EXPORTS 2007

and gets over 11 million results.

(a) She wanted to know which South American countries exported coffee in 2007. How could her search be refined to reduce the number of results? [1]

(b) Give one advantage of searching for information on the Internet rather than using books. [1]

(c) Many people have fears about searching for information on the Internet. Give two reasons for these fears. [2]

(d) The student wishes to use files stored on her home computer when she is back in class using one of the school's computers. How could she do this? [1]

13 A media retail company has decided to sell CDs and DVDs using an Internet only shop.

(a) Describe three features you might expect to see on the shop's website. [3]

(b) Give two advantages to customers of shopping using the Internet. [2]

#### Oct/Nov 2008 P1 (7010)

1 Explain, using examples where appropriate, the meaning of these computer terms.

(b) search engine [2]

(e) download [2]

7 Many people now bank through the Internet rather than using banks located in towns.

(a) Give one advantage to a bank that offers Internet banking. [1]

(b) Give one disadvantage to a bank that offers Internet banking. [1]

(c) Give two advantages to customers of using Internet banking. [2]

(d) Give two disadvantages to customers of using Internet banking. [2]





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#### May/June 2009 P1 (7010)

8 An electronics company employs five people to answer technical queries over the telephone. The company has decided to develop a new system so customer queries are answered using a website rather than by telephone.

- (a) Describe two ways this change would affect the five employees. [2]
- (b) Describe one advantage to the company of introducing this system. [1]
- (c) Describe two advantages to the customer of using this system. [2]

#### Oct/Nov 2010 P11/12 (7010)

6 A telephone company produces paper-based directories. It has decided to offer directory information to customers via a website.

- (a) Give one advantage to the telephone company in doing this. [1]
- (b) What two advantages does this new system offer the customer? [2]
- (c) Give one disadvantage to the customer of having their details available on the Internet. [1]
- (d) Describe one problem with the existing paper-based system that would not be solved using the electronic version. [1]

#### Oct/Nov 2010 P13 (7010)

5 Most laptop computers have networking capability.

- (a) Describe two other desirable features you would look for when choosing a laptop computer. [2]
- (b) Describe two advantages of using broadband to connect to the Internet rather than using dial-up. [4]
- 12 (a) A student is trying to find out information about cloud computers. How could he use the Internet to find this information? [2]
- (b) Give two advantages of using the Internet to find information. [2]
- (c) Give two disadvantages of using the Internet to find information. [2]

#### May/June 2011 P11 (7010)

2 A user decides to use an Internet search engine to help locate a hotel.

- (a) What is a search engine? [1]
- (b) Give two possible problems the user might encounter when using a search engine. [2]
- (c) The search engine found the website of a suitable hotel. Give three features you would expect to see on a hotel website. [3]

#### Oct/Nov 2011 P11/12 (7010)

10 A company's technical services are now available on the Internet as well as using call centres.

- (a) Give two advantages to the customer of using call centres. [2]





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- (b) Give two advantages to the customer of using technical services on the Internet. [2]  
(c) Describe two effects on company staff of replacing the call centres with Internet services. [2]

**Oct/Nov 2011 P13 (7010)**

- 6  
(d) Hacking is one security issue associated with the Internet and emails. State two other security issues. [2]

**May/June 2012 P11 (7010)**

7 A large hotel has a website. The website offers the following facilities:

- a virtual tour of the hotel
- an interactive map
- the ability to book rooms online

(a) Give two features you would expect to find in each facility.

virtual tour

interactive map

room booking online

[6]

(b) Describe one other feature you would expect to see on the hotel's website. [1]

**Oct/Nov 2012 P11 (7010)**

6 State three different methods that allow people to communicate using the Internet.

In each case, give a different benefit for the stated method. [6]

**Oct/Nov 2012 P12 (7010)**

1 For advertising at a trade fair, a company has a choice of computer facilities. One option is a stand-alone computer with multimedia facilities. The other option is a computer with Internet access to the company's website.

Discuss the benefits and drawbacks of each method. [4]





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#### May/June 2013 P12 (7010)

5 Five definitions are given on the left hand side of the diagram below. Five computer terms are shown on the right.

By drawing arrows, connect each definition to the correct computer term.

website that allows virtual communication; user joins a site and invites friends who, in turn, invite their own friends	chat room
technology that allows telephone calls to be made using computer networks, such as the Internet	social networking
online "place" where a group of people get together and discuss a number of topics	tagging
software that allows any user to freely create and edit a web page using their own web browser	VoIP
marking, saving and archiving certain websites or items (such as photos); for example, it allows users to track and organise favourite websites or photos	wiki

[4]

10 A company uses an intranet which can also communicate with the outside world through the Internet.

(a) The system uses modems.

What is the purpose of a modem?

[1]

#### May/June 2014 P11 (7010)

6 A company has eight warehouses throughout Europe. It has decided to introduce online sales and has launched a website.

Customers can now buy online instead of physically going to the warehouse.

(a) Give two benefits to the customer.

[2]

(b) Give two benefits to the company.

[2]

(c) Give three potential effects on the staff who presently work for the company.

[3]

(d) Give two features you would expect to see on the company's website.

[2]





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**May/June 2014 P12 (7010)**

2 A customer books a flight to Brazil using an online travel agency.

(a) Describe the steps taken by the customer and by the agency when booking the flight online. [3]

4 A student used the Internet to help with his Chemistry project. He typed the following into a search engine:

transition + elements

(a) The first two search results listed were:

Chemistry of the transition elements

The elements of transition during computer animation

Considering these two examples, describe one problem when using search engines. [1]

(b) This search gave the student over 480 000 results ("hits").

Many of these results were not relevant.

How could the student obtain more relevant results? [1]

(c) Other than security issues, describe one undesirable feature of using the Internet when looking for information. [1]

(d) Describe one benefit of using the Internet to find information. [1]

8 In each case below, state which Internet term is being described.

(a) Malicious software installed on a user's hard drive or a web server; the software re-directs the user to a fake website without their consent or knowledge. [1]

(b) Personal Internet journals where a writer enters text about a certain topic; anyone can comment on the topic. [1]

(c) Websites designed to promote the building of online communities who share the same interests; usually free of charge; users can add friends, post messages to each other and update personal profiles. [1]





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#### May/June 2015 P11 (2210)

4 Choose **six** correct terms from the following list to complete the spaces in the paragraphs below:

- encryption
- file name
- firewall
- HTML tags/text
- IP address
- protocol
- proxy server
- SSL certificate
- web server name

A user enters a URL. The web browser breaks up the URL into **three** components:

- 1 .....
- 2 .....
- 3 .....

The web server returns the selected web page.

The web browser reads the ..... from the selected page and shows the correctly formatted page on the user's screen.

A ..... is used between the user's computer and the network to examine the data traffic to make sure it meets certain criteria.

To speed up the access to the web pages next time, a ..... is used between the computer and web server; this device uses a cache to store the website home page after it has been accessed for the first time. **[6]**

#### Oct/Nov 2015 P12 (2210)

4 (c) 1A – 16 – C5 – 22 – FF – FF is an example of a MAC address.

- (i) Identify what the first six and last six hexadecimal digits represent. **[2]**
- (ii) State why MAC addresses are used. **[1]**

6 (a) Explain what is meant by HTML. **[3]**

(b) HTML uses both structure and presentation.

Describe what is meant by the two terms. **[2]**

(c) Explain the function of a web browser. **[3]**

#### May/June 2016 P11 (2210)

2 Hexadecimal codes are used in MAC addresses.

(a) State what is meant by the term MAC. **[1]**

(b) Explain what the hexadecimal code in a MAC address represents. **[3]**

#### May/June 2016 P12 (2210)

11 Describe the use of structure and presentation in a HTML document **[4]**





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#### Oct/Nov 2016 P12 (2210)

10 (a) Describe what is meant by HTML. [3]

(b) The following URL is typed in:

`http://www.cie.org.uk/ComputerSciencePapers`

This URL is composed of three parts.

State the part of this URL that is the:

File name .....

Protocol .....

Web server name .....

[3]

#### Oct/Nov 2016 P13 (2210)

10 (c) At the end of the flight, all of the data are sent to the aeroplane engine manufacturer using the Internet.

The computer in the aeroplane has a MAC address and an IP address.

State what is meant by these two terms. [2]

(d) When sending this data, security is very important. Data are sent over the Internet using

Transport Layer Security (TLS) protocol. [2]

#### May/June 2017 P12 (2210)

11 A company sells smartphones over the Internet.

Explain how the information stored on the company's website is requested by the customer, sent to the customer's computer and displayed on the screen. [7]

#### Oct/Nov 2017 P12(2210)

10 (a) Describe what is meant by Transport Layer Security (TLS). [3]

(b) Name **three** different applications of TLS. [3]

#### Oct/Nov 2017 P13(2210)

3 (a) An example of a Uniform Resource Locator (URL) is:

`http://www.cie.org.uk/index.htm`

Part 1                      Part 2                      Part 3

Identify the **three** parts that make up this URL. [3]

(b) Describe what is meant by an Internet Protocol (IP) address. [4]





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May/June 2018 P11 (2210)

10 (b) The URL for the music company's website is:

`https://www.rockict.net/index.htm`

Part 1                      Part 2

(i) Identify what **Part 1** and **Part 2** represent in this URL.

[2]

(ii) Describe what is meant by **https**.

[2]

