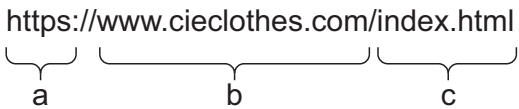


6 An online clothing company has a homepage at the uniform resource locator (URL) `https://www.cieclothes.com/index.html`

(a) Write down the **three** different parts of the URL shown by the labels a, b and c.



a b c [3]

(b) The web pages are stored on a web server. A proxy server is used to stop distributed denial of service (DDoS) attacks on the web server.

Describe how the proxy server can stop a DDoS attack reaching a web server.

.....

.....

.....

.....

.....

.....

.....

[3]

(c) Customers use the website to buy clothing from the company.

Complete the table with the missing terms and descriptions about retrieving and displaying web pages.

Term	Description
hypertext markup language (HTML)	
domain name server (DNS)	
.....	It is a numerical address used to locate the web server.
.....	It is a secure protocol that can be used to transmit data sent to and received from a web server.
.....	It is a piece of software that is used to display web pages.

[5]

- (d) The clothing company uses cookies to store customer details.

Complete the statements about cookies.

Use terms from the list. **Not** all terms need to be used. You should only use a term once.

asymmetric DNS dynamic persistent session
static symmetric user utility software web browser

Cookies are stored and managed by the

..... cookies are temporary files that are
created when a user visits a web page.

..... cookies are permanent files that are
created when a user visits a web page.

[3]

- 7 A student enters the uniform resource locator (URL) for a web page into their tablet computer.

- (a) State what is meant by a URL.

.....
..... [1]

- (b) Identify **two** different parts of a URL.

1
2 [2]

- (c) The student enters the URL into a piece of software that then displays the web page.

Identify the name of this software.

..... [1]

- (d) Draw and annotate a diagram to show how the web page is located and retrieved to be displayed on the student's tablet computer.

(e) The data for the web page is transmitted using the secure socket layer (SSL) protocol.

Complete the paragraph about the SSL protocol.

Use only terms from the list.

Not all terms need to be used. Some terms may be used more than once.

- encrypted file server hypertext markup language (HTML)
- hypertext transfer protocol (HTTP) operating system search engine
- unencrypted URL web browser web server

The asks the
to identify itself. The sends back its digital
certificate. The authenticates the digital certificate.
If it is authentic, data transmission begins.

[5]

4 Complete the table to give the missing term or description for the internet terms.

Internet term	Description
.....	the collection of web pages accessed using the internet
.....	the address given to a device when it connects to the internet
web browser	
.....	the hardware that stores a database of matching website and IP addresses
.....	a type of hardware that can be used to prevent a distributed denial of service (DDoS) attack
hacking	

[6]

6 (a) Complete the statements about cookies.

Use only terms from the list.

Not all terms need to be used. Some terms may be used more than once.

- | | | | |
|-------------|-------------|---------|------------------|
| binary | close | denary | expire |
| hexadecimal | image | malware | operating system |
| permanent | persistent | session | sound |
| temporary | web browser | | |

Cookies are small text files that are stored by a

..... cookies are text files
that are deleted when the is closed.

..... cookies are text files
that are stored on a user's secondary storage device until they are manually deleted or they
.....

[7]

(b) Give **three** examples of the use of cookies.

- 1
- 2
- 3

[3]

11 A company has a website. Users use the internet and the world wide web to access the website.

(a) Describe the difference between the internet and the world wide web.

.....
.....
.....
..... [2]

(b) The website has a uniform resource locator (URL). The URL has three different parts.

Identify the **three** different parts that are included in the URL.

- 1
- 2
- 3 [3]

(c) One function of a web browser is to provide an address bar for a user to enter a URL.

Give **three** other functions of a web browser.

- 1
- 2
- 3 [3]

4 A student enters a uniform resource locator (URL) into their web browser.

Draw and annotate a diagram to show the process from the user entering the URL to the web browser displaying the web page.

[5]

8 A computer is connected to a network and assigned an IPv4 address.

(a) Tick (✓) **one** box to show which device would assign the IPv4 address to the computer.

- | | | |
|----------|------------------------------|--------------------------|
| A | Domain name server (DNS) | ☐ |
| B | Network interface card (NIC) | ☐ |
| C | Router | ☐ |
| D | Web server | ☐ |

[1]

(b) Describe the characteristics of an IPv4 address.

.....

.....

.....

.....

.....

.....

.....

..... [4]