

5 An online company has a website that allows a user to buy products.

The user types in the uniform resource locator (URL) for the website and this is sent to a domain name server (DNS).

(a) Describe the role of the DNS.

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..... [2]

(b) The website asks a user to input their username and password to log into their account.

The company want to make their login system more secure.

Tick (✓) **one** box to show **one** other security method that could be added to make the login system more secure.

- A access levels
- B firewall
- C spyware
- D two-step verification

[1]

(c) The company uses a proxy server to keep the web server safe from distributed denial of service (DDoS) attacks.

(i) Complete and annotate a diagram to show how a DDoS attack is carried out on the web server.



[5]

(ii) Identify **two** tasks that can be performed by a proxy server that are **not** performed by a firewall.

1 .....

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2 .....

..... [2]

(d) The company uses cookies to allow users to keep items in a shopping cart. The items remain in the cart after the user closes their web browser.

(i) Tick (✓) **one** box to show the type of cookie that is used for this process.

- A dynamic
- B persistent
- C session
- D static

[1]

(ii) Give **three** other ways that the company can use cookies.

1 .....

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2 .....

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3 .....

..... [3]

(iii) Cookies are stored by a web browser.

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

1 .....

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2 .....

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