



1.3.3 Internet Structure

1. The internet can be considered an example of a WAN.

a) Describe what is meant by the term 'WAN'.

[2 marks]

The internet uses a set of protocols referred to as the TCP/IP stack. The TCP/IP stack consists of four different layers, each with its own set of protocols.

b) Explain why protocols are important on a network.

[2 marks]

c) Explain what is meant by the term 'TCP/IP stack'.

[3 marks]

d) Explain **one** advantage of using layers in the protocol TCP/IP.

[2 marks]

2. Saba uses an encrypted messaging program to communicate with her friends. The computer uses the TCP/IP stack.

a) Explain what happens at the application layer of the TCP/IP stack when using this program.

[5 marks]

b) Explain what happens at the link layer of the TCP/IP stack when using this program.

[2 marks]





3. Sneaky Sneaks is a company that makes trainers and has decided to sell its products online. Its website is put on its servers which are given a public IP address. It also purchases the domain name sneakysneaks.co.uk.

- a) Explain the automated process that takes place that allows customers to access the site when they enter the domain name into their browser.

[4 marks]

4. Zuhair wants to create a Local Area Network (LAN) for himself and his family, in his home.

- a) Describe what is meant by a LAN.

[2 marks]

- b) TCP/IP use packet switching.

Explain what is meant by packet switching.

[4 marks]

5. After several failed login attempts a user's IP address is logged in a database.

- a) Describe what is meant by an IP Address.

[2 marks]

- b) TCP/IP use packet switching.

Explain why the programmers have chosen to store the user's IP address.

[2 marks]

