



1.3.3 Internet Security

1. A company has many computers connected to a LAN which is connected to the internet.

The LAN is connected to the internet via a firewall.

- a) State what is meant by the term 'firewall'.

[1 mark]

- A piece of hardware or software that monitors packets going to and from a network

- b) State why the company would use a firewall.

[1 mark]

- To prevent unauthorized access to the network
- To restrict applications from accessing the internet
- To restrict which websites can be accessed from computers at the company
- To protect the company's data/intellectual property

2. A hotel is concerned about the security of its computer network. Discuss the threats which potentially exist to the hotel's computer network and how these threats could be eliminated or reduced.

[9 marks]

Knowledge

- Malware and viruses are software that can have a negative impact on computer systems
- Spyware and keyloggers can record information entered and send back to a third party
- Phishing attacks attempt to steal data by fraudulently appearing as legitimate emails asking for secure information
- Denial of Service Attacks can overload a computer system with traffic and effectively disable access for legitimate users

Application

- Hotel's systems could be disrupted by DDOS attacks so no external bookings able to be made.
- Phishing and spyware attacks may compromise visitor security and result in financial loss
- Malware, viruses could destroy hotel data
- Theft of customer data would be an issue under Data Protection Act / GDPR for which the hotel could be prosecuted





Evaluation

- Education for staff and customers is important to deal with recognising and dealing with threats
- Up to date software, limitations of use of devices such as USB sticks and restricted access to wireless networks can all limit risks.
- Use of Firewall to restrict traffic entering and leaving the network.
- Should be balanced against customer experience; will customers return if they have no access to It facilities?

