MODULE G SECURITY · G7

Preventing attacks 1: firewalls and anti-malware

Original practice questions · 21 marks · ~25 minutes · OCR J277 spec 1.4.2

Name _____ Date _____

Instructions. Answer all questions in the spaces provided. The marks for each part are shown in brackets [ ]. The total for this worksheet is **21 marks**.

1

Total: 4 marks

(a) Tick (✓) **one** box in each row to show whether each statement describes a firewall or anti-malware software. **[4]**

Statement	Firewall	Anti-malware software
Checks data coming into and going out of a network against a set of rules		
Compares files with a database of known malware		
Moves an infected file into quarantine so that it cannot run		
Can block all traffic that comes from a particular IP address		

2 **Total: 5 marks**

A regional bus company has an office network of 30 computers and a server that stores its timetables and staff records. The network is connected to the internet. The company installs a firewall between its network and the internet.

(a) Describe how the firewall limits unauthorised access to the company's network. **[3]**

(b) Give **two** examples of rules that the company could set on its firewall. **[2]**

1

2

3 **Total: 3 marks**

(a) Apart from unauthorised access, identify **one** other form of attack that the bus company's firewall may limit. Explain how the firewall limits this attack. **[3]**

Form of attack

How the firewall limits it

4 **Total: 5 marks**

The bus company also installs anti-malware software on every computer in the office.

(a) Describe how the anti-malware software protects a computer from malware. **[3]**

(b) The anti-malware software downloads new updates every day. **[2]**
Explain why the anti-malware software needs to be updated regularly.

5 **Total: 4 marks**

An office worker at the bus company plugs a USB memory stick into their computer. One of the files on the memory stick contains malware.

(a) Explain why the firewall will **not** stop this malware reaching the computer, **and** how the anti-malware software could limit this attack. **[4]**

Total for this worksheet: 21 marks