MODULE G SECURITY · G4

Denial of service attacks

Original practice questions · 20 marks · ~25 minutes · OCR J277 spec 1.4.1

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 **20 marks**.

1

Total: 4 marks

(a) Tick (✓) **one** box in each row to show whether each statement about denial of service attacks is true or false. **[4]**

Statement	True	False
A denial of service attack tries to stop genuine users from accessing a website or network.		
A denial of service attack floods a server with more requests than it can handle.		
An attacker must know a user's password to carry out a denial of service attack.		
The main aim of a denial of service attack is usually to copy the data stored on the server.		

2 **Total: 7 marks**

A ferry company sells tickets on its booking website, which runs on the company's web server. One evening the website becomes so slow that most customers cannot load the booking page. The company finds that its web server is the target of a denial of service attack.

(a) Describe how the denial of service attack is being used against the booking website. **[3]**

(b) State **two** effects the attack could have on customers who want to book tickets. **[2]**

1

2

(c) No data was stolen during the attack. Explain how the attack could still cost the ferry company money. **[2]**

3 **Total: 2 marks**

(a) Give **two** reasons why a person might carry out a denial of service attack on an organisation. **[2]**

1

2

4 **Total: 4 marks**

A week later, a second denial of service attack on the ferry company's web server comes from thousands of devices in different countries at the same time. Most of the owners of these devices do not know that their devices are taking part.

(a) Explain how the devices could be taking part in the attack without their owners knowing. **[2]**

(b) Explain why this attack is harder for the company to stop than an attack that comes from one computer. **[2]**

5 **Total: 3 marks**

After the attacks, a manager at the ferry company says: "The attackers must have broken into our web server, so we have to assume that every customer's data has been stolen."

(a) Explain why the manager may **not** be correct. **[3]**

Total for this worksheet: 20 marks