MODULE G SECURITY · G8

Preventing attacks 2: user access levels and passwords

Original practice questions · 20 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 **20 marks**. The company, staff and passwords on this sheet are made up.

An engineering company keeps its product designs, customer orders and staff pay records on a file server. Every employee logs in to the network with a username and a password.

1

Total: 4 marks

(a) Tick (✓) **one** box in each row to show whether each statement describes user access levels, passwords, or both. **[4]**

Statement	User access levels	Passwords	Both
Different users are given different permissions, for example read-only or read/write			
A secret string of characters is entered with a username to log in			
Helps to stop people getting to data they are not authorised to access			
Is harder to crack in a brute-force attack when it is long and uses a mix of character types			

2 **Total: 6 marks**

A sales manager at the company uses the password **Rover1987**. Rover is the name of her dog and 1987 is the year she was born.

(a) State **two** reasons why this is a weak password. **[2]**

1

2

(b) Explain how using strong passwords limits a brute-force attack. **[2]**

(c) The network locks a user's account after five incorrect password attempts. Explain how this limits a brute-force attack. **[2]**

3 **Total: 2 marks**

Some employees have received phone calls from a caller pretending to work in the company's IT department.

(a) Give **two** rules employees should follow so that their passwords are not given away to an attacker. **[2]**

1

2

4 **Total: 4 marks**

The company uses user access levels. An office administrator needs to look up dates in the product design files, but must not change them. The administrator does not need the staff pay records.

(a) State the access level the office administrator should be given to the product design files. **[1]**

(b) An attacker logs in to the network using the office administrator's username and password. Explain how user access levels limit what the attacker can do. **[3]**

5 **Total: 4 marks**

A director says: "Everyone has a strong password, so we do not need user access levels."

(a) Explain why the company should still use user access levels as well as strong passwords. **[4]**

Total for this worksheet: 20 marks