1.6 Network Security: 10-minute Pack

OCR J277 · Calculators not allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Explain the difference between phishing and pharming as methods of attacking a network user.

(Total for Question 1 is 3 marks)

2 State three separate offences created by the Computer Misuse Act (1990).

(Total for Question 2 is 3 marks)

3 A retailer's website becomes unavailable to customers after being targeted by a denial-of-service (DoS) attack.

(a) Describe what happens during a denial-of-service attack. **(2)**

(b) State one negative effect that a successful denial-of-service attack could have on the retailer's business. **(1)**

(Total for Question 3 is 3 marks)

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Question 1

Phishing involves sending fraudulent/fake communications (e.g. emails or texts) that appear to be from a legitimate source, to trick the user into revealing information or clicking a link (1) **B1**

Pharming redirects a user from a genuine website to a fake one (e.g. by altering DNS records or a hosts file) (1) **B1**

Pharming does not rely on the user being tricked into clicking anything and can happen without any deliberate action by the user, whereas phishing relies on deceiving the user into acting (1) **B1**

Answer: Phishing = fraudulent messages trick the user into acting; pharming = malicious redirection to a fake website, often without any action needed from the user.

Question 2

Any one of: unauthorised access to computer material **B1**

Any one of: unauthorised access with intent to commit or facilitate a further offence **B1**

Any one of: unauthorised modification of computer material; or unauthorised acts with intent to impair (or reckless as to impairing) the operation of a computer **B1**

Answer: Any three of: unauthorised access to data; unauthorised access with intent to commit a further offence; unauthorised modification of data; unauthorised acts impairing the operation of a computer.

Question 3

(a) An attacker floods a server/network with a very large number of (useless/fake) requests or traffic (1) **B1**

(a) This overwhelms the server's resources/bandwidth so it cannot respond to genuine/legitimate users (1) **B1**

(a) Answer: An attacker overwhelms a server with excessive traffic/requests so it cannot process genuine requests, taking the service offline for legitimate users.

(b) Any sensible effect, e.g. loss of sales/revenue while the site is down; damage to the company's reputation; customers unable to place orders; cost of restoring the service **B1**

(b) Answer: Loss of sales/revenue because customers cannot access the website to make purchases (or other valid effect).

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