A2.4

Network security

CHAPTER ASSIGNMENT · 15 MARKS

Name _____ Class _____ No. _____ Date _____

Answer every question in the space given. Show your working. You may use the chapter page to help you.

Questions from the Guru Jazzy chapter page, for classroom use.

Exam-style questions

1. Discuss whether a firewall alone is enough to protect a company network. [3]

2. Distinguish between symmetric and asymmetric encryption. [3]

3. Describe how NAT contributes to network security. [2]

4. Explain how a web browser can trust a bank’s website. [4]

5. Explain how a digital signature proves a document has not been changed. [3]

Chapter quiz

Q1 What does a firewall check on each packet?

A	B	C	D
Addresses and ports against rules	The spelling of the content	The user's age	The cable type

Q2 What does stateful inspection add?

A	B	C	D
It tracks active connections	It encrypts all data	It speeds up Wi-Fi	It stores backups

Q3 Which threat will a firewall handle worst?

A	B	C	D
A malicious insider	A blocked port	Traffic from a banned address	Unknown incoming scans

Q4 How does NAT help security?

A	B	C	D
It hides internal addresses	It scans for viruses	It encrypts passwords	It blocks phishing

Q5 Symmetric encryption uses...

A	B	C	D
The same key to encrypt and decrypt	No key	A public and a private key	A certificate only

Q6 Alice wants to send Bob a secret. Which key should she encrypt with?

A	B	C	D
Bob's public key	Bob's private key	Alice's public key	No key

Q7 Who issues a certificate for a website?

A	B	C	D
A certificate authority	The user	The router	A DNS server

Q8 A digital signature is the...

A	B	C	D
Hash encrypted with the sender's private key	Name typed at the end	Public key alone	Password

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Q9 What does Diffie-Hellman let two people do?

A	B	C	D
Agree a shared secret over a public channel	Delete data	Find a website	Assign IP addresses

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Q10 Which attack uses thousands of compromised devices?

A	B	C	D
DDoS	Phishing	XSS	Zero-day

Q11 Why is a zero-day so dangerous?

A	B	C	D
No patch exists yet	It only runs at midnight	It needs no computer	It is always visible

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Q12 An IDS differs from an IPS because it...

A	B	C	D
Only alerts	Blocks traffic	Replaces firewalls	Encrypts data

Q13 Password and fingerprint together are...

A	B	C	D
Multifactor authentication	Two passwords	A VPN	Encryption

End of assignment · Check your answers against the chapter at gurujazzy.com/subjects/ib-computer-science/a2-4-network-security/