A2.1

Network fundamentals

CHAPTER ASSIGNMENT · 20 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. Describe one difference between a LAN and a WAN. [2]

2. Discuss one benefit and two limitations of cloud computing for a small business. [3]

3. Explain why a video service caches popular films in local servers. [2]

4. Outline the role of a router, a switch and a modem in a home network. [3]

5. Compare TCP and UDP. [4]

6 Describe three features HTTPS adds to HTTP. [3]

7 Outline how a laptop gets an IP address when it joins a network. [3]

Chapter quiz

Q1 A phone, a watch and earbuds linked by Bluetooth form a...

A	B	C	D
PAN	LAN	WAN	VPN

Q2 What does a VPN add over the public internet?

A	B	C	D
An encrypted private tunnel	Faster physical cables	Free electricity	A new IP version

Q3 Which infrastructure handles data close to where it is produced?

A	B	C	D
Edge computing	Mobile phones	Spooling	A PAN

Q4 Which device forwards data inside a LAN using MAC addresses?

A	B	C	D
Modem	Switch	Gateway	Firewall

Q5 Which device connects your LAN to another network and picks a path?

A	B	C	D
Router	Network interface card	Monitor	Access point

Q6 A live video call would normally use...

A	B	C	D
UDP, because fresh data matters more than perfect data	TCP, because it never loses speed	DHCP	SMTP

Q7 What does a port number identify?

A	B	C	D
A building	An application on a host	A cable type	A user

Q8 What does “stateless” mean for HTTP?

A	B	C	D
No encryption	Each request is handled independently	It has no country	The server has no memory chips

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Q9 What is the correct DHCP order?

A	B	C	D
Discover, offer, request, acknowledge	Offer, discover, acknowledge, request	Request, offer, discover, acknowledge	Acknowledge, request, offer, discover

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Q10 At which TCP/IP layer does routing happen?

A	B	C	D
Application	Transport	Internet	Network interface

Q11 Where does HTTPS belong?

A	B	C	D
Application	Transport	Internet	Network interface

Q12 What does encapsulation mean?

A	B	C	D
Each layer wraps the data with its own header	Compressing a video	Locking a server room	Deleting headers

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End of assignment · Check your answers against the chapter at gurujazzy.com/subjects/ib-computer-science/a2-1-network-fundamentals/