

1.3 EXCHANGING DATA · 1.3.3

Network hardware, client–server & peer-to-peer

Original practice questions · 32 marks · about 45 minutes · spec 1.3.3(d)(e)

Instructions. Answer all questions. The number of marks is shown in brackets []. Quality of written communication is assessed in the extended-response question.

1**Total: 6 marks**

An office is setting up a wired LAN connecting several computers and a printer.

- (a) Explain the purpose of a network switch. [3]

- (b) State what is stored on a Network Interface Card (NIC) that identifies a device on the LAN. [1]

- (c) State one type of transmission medium that could be used to connect the devices. [1]

- (d) State the purpose of a wireless access point (WAP). [1]

2**Total: 5 marks**

This question is about network devices.

- (a) Explain the difference between a switch and a router. [2]

- (b) Explain the difference between a router and a gateway. [2]

- (c) State one disadvantage of using a hub instead of a switch. [1]

3

Total: 6 marks

A company is choosing between a client–server and a peer-to-peer network.

(a) Describe what is meant by the term *client–server*. [3]

(b) Give **two** advantages of a client–server network compared to peer-to-peer. [2]

(c) State one situation in which a peer-to-peer network would be more suitable. [1]

4

Total: 3 marks

(a) State what is meant by the term *server*. [1]

(b) Explain one disadvantage of a client–server network. [2]

A growing design company has 30 staff across one building. They share large files, need secure logins, central backups, and a shared printer, but want to keep costs reasonable.

Discuss whether the company should use a client–server or peer-to-peer network, and the hardware they will need to build it. Justify your recommendation.

[12]

END OF QUESTIONS