

1.3 EXCHANGING DATA · 1.3.3

Networks: characteristics, protocols & standards

Original practice questions · 33 marks · about 45 minutes · spec 1.3.3(a)

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: 5 marks

An office connects its computers together in a LAN.

(a) State what the abbreviation LAN stands for. [1]

(b) Give **three** advantages of connecting the computers together in a LAN. [3]

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(c) State one difference between a LAN and a WAN. [1]

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2 Total: 6 marks

This question is about network protocols.

(a) Explain what is meant by a network protocol. [2]

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(b) Explain why protocols are important on a network. [2]

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(c) Give the names of **two** protocols that may be used in a LAN. [2]

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.....

3

Total: 6 marks

This question is about network topologies.

(a) Describe the star topology. [2]

(b) Describe the mesh topology. [2]

(c) Explain one advantage of a mesh topology over a star topology. [2]

4

Total: 4 marks

(a) Explain what is meant by a *standard* in networking. [2]

(b) Explain why standards are important. [2]

A new office with several departments across one site needs a network so staff can share files and a central printer, and connect to the internet.

Discuss the network the office should set up. In your answer consider the type of network and topology, the role of protocols and standards, and justify your recommendations. **[12]**

END OF QUESTIONS