

## Homework 3 Wireless networking

1. Charley is creating a wireless hotspot for customers of a local coffee shop.

a) Different hardware is required to set up and connect to a wireless network.

(i) State one piece of essential hardware that Charley will need in order to create the wireless signal for a customer to connect to. [1]

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(ii) State one essential piece of hardware that a customer would require in their computer to connect to the wireless network. [1]

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b) Charley can purchase 802.11 standard hardware to operate on either the 2.4Ghz or 5Ghz frequencies each operating with different channels.

(i) Explain what is meant by **channel** in this context. [1]

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(ii) Charley has chosen to use the 2.4GHz frequency. Give one advantage and one disadvantage to her customers of doing so. [2]

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c) Customers using the hotspot need to exercise caution in the data they send and receive from their computer.

(i) Give one reason why? [1]

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(ii) Suggest one way that network data can be made more secure. [1]

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2. Explain what is meant by the following terms:

[3]

Encryption:

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Ciphertext:

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Decryption:

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Total 10 Marks