

- 1 InterMovie is a service that allows users to stream movies over the Internet.

When users have played a movie it remains stored in a cache on the user's computer. This means that someone wanting to access the same film in future can stream it from other users rather than directly from the company's servers.

- (i) State what this network model is called.

-----[1]

- (ii) Explain why the company might have opted for this model.

-----[2]

2 Describe the following types of data transmission:

(i) Serial data transmission

[2]

(ii) Full duplex

[2]

3 An architect firm specialises in designing skyscrapers.

The computers in the architect firm's office are connected to a LAN which is connected to the Internet.

(i) The LAN is set up in a client-server network.

Give **one** advantage and **one** disadvantage to the architects' firm of a client-server set up rather than a peer to peer setup.

Advantage

.....

Disadvantage

e

.....

..... [2]

(ii) The LAN is connected to the Internet via a firewall. Describe the term 'firewall'.

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.....

..... [1]

(iii) State why the architects' firm would use a firewall.

.....

..... [1]

4 Zac has an accountancy business. He is moving into an office that has enough space for up to five members of staff. Zac would like to install a Local Area Network (LAN) to allow his staff to work together.

Zac has hired a company that will advise him on what type of LAN he should set up.

Discuss how Zac could set up a peer-to-peer network and a client-server network.

You should refer to the following in your answer:

- how the computers in each type are connected
- the benefits of each type
- the drawbacks of each type
- the suitability of each type.

[9]

The hotel's computer network uses a client-server model.

[3]

1. _____

2. _____

[2]

(b) The hotel’s network uses multiple switches.

Explain the purpose of a network switch.

[3]

(c) * The hotel is concerned about the security of its computer network.

Discuss the threats which potentially exist to the hotel’s computer network and how these threats could be eliminated or reduced.

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