

1.3.1. Networks - Exam questions

Questions

Scan here for more resources
or visit [savemyexams.com](https://www.savemyexams.com)



Total Marks

/77

1 (a) The specification of two CPUs is shown in **Fig. 1**.

Computer 1	Computer 2
Clock Speed: 1 GHz	Clock Speed: 1.4 GHz
Cache size: 2 MB	Cache size: 2 MB
Number of Cores: 4	Number of Cores: 2

Fig. 1

When running a 3D flight simulator, **Computer 1 is likely to run faster than Computer 2.**

Using the information in Fig. 1, **identify one reason** for this.

..... (1 mark)

(b) Identify two other parts of a computer that are not in **Fig. 1**, which could **improve the performance** of the computers.

..... (2 marks)

2 A law company currently use a **Local Area Network (LAN)** linked to a **Wide Area Network (WAN)**.

Define what is meant by a **Wide Area Network**.

..... (1 mark)

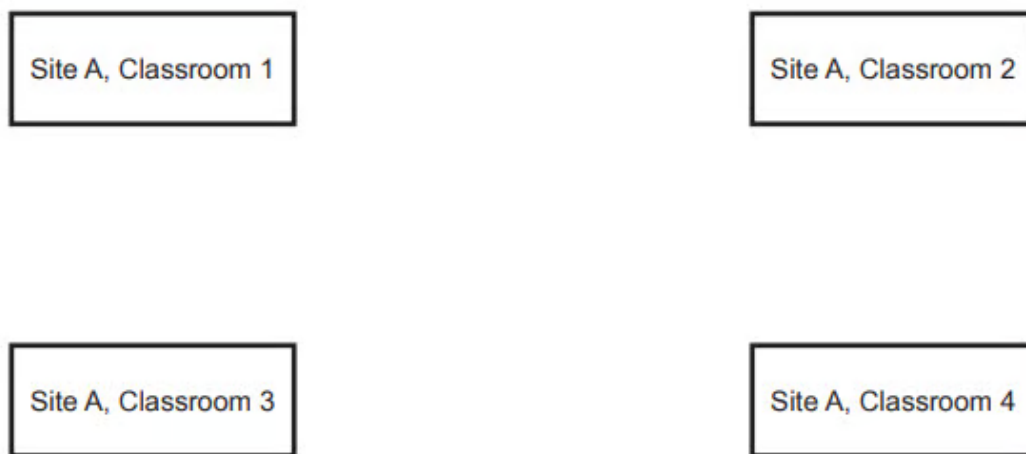
3 (a) A university has buildings in two sites that are 5 miles apart.

Describe the **difference** between a **LAN** and a **WAN**.

(2 marks)

- (b) Site A has 4 classrooms. Site B has 2 classrooms. The network on each site between the classrooms is a **star topology** using a **switch**. The two sites are connected over the Internet.

Complete the network diagram for **site A** of the University.



(2 marks)

- 4 Devices on a network do not currently have Internet access.

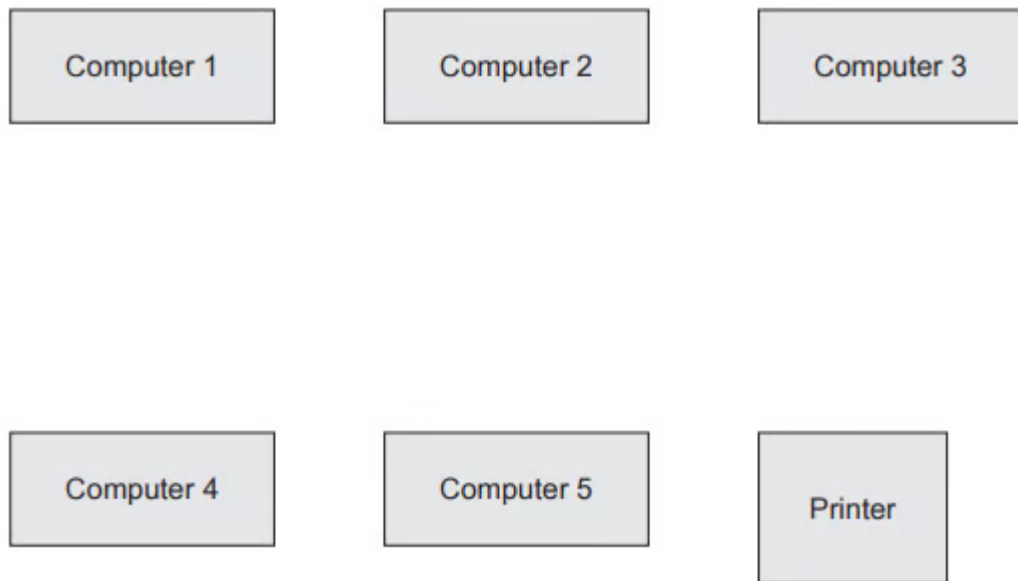
Identify one device that can be used to connect a **home network** to the **Internet**.

(1 mark)

- 5 Naomi's office has **five computers** connected into a Local Area Network (LAN). There is also **one printer** that all the devices can print to.

The LAN is set up as a **mesh topology**

Draw connections to show one way that the **devices could be connected** using a **mesh topology**.



(2 marks)

- 6** An office has a LAN (Local Area Network). The office has **four employees** who **each have a laptop**.

The office also has **one server** and **one networked printer**.

The office is set up as a **star network** with **a switch at the centre**.

All devices are connected to the network using cables.

Draw the devices and connections in the office **star network**.

All devices must be clearly labelled.

(3 marks)

- 7** A user enters a uniform resource locator (**URL**) into a **web browser** on one of the computers in the house.

A system is then used **to find the IP address** of the **web server** associated with the URL.

Name the system which matches **URLs** to **IP addresses** on the web.

..... (1 mark)

8 (a) A library has a **LAN** (Local Area Network).

The LAN allows access by both wired and wireless devices. Users have reported that the **network sometimes runs very slowly**.

Explain why the **number of devices using the network at the same time** can **affect the performance** of the network.

.....

.....

..... (3 marks)

(b) **Identify one other factor** that can **affect the performance** of the network

..... (1 mark)

9 (a) Explain two advantages to a law company of **storing their data** in the **Cloud**.

.....

.....

.....

..... (4 marks)

(b) Explain two disadvantages to a law company of **storing their data** in the **Cloud**.

.....

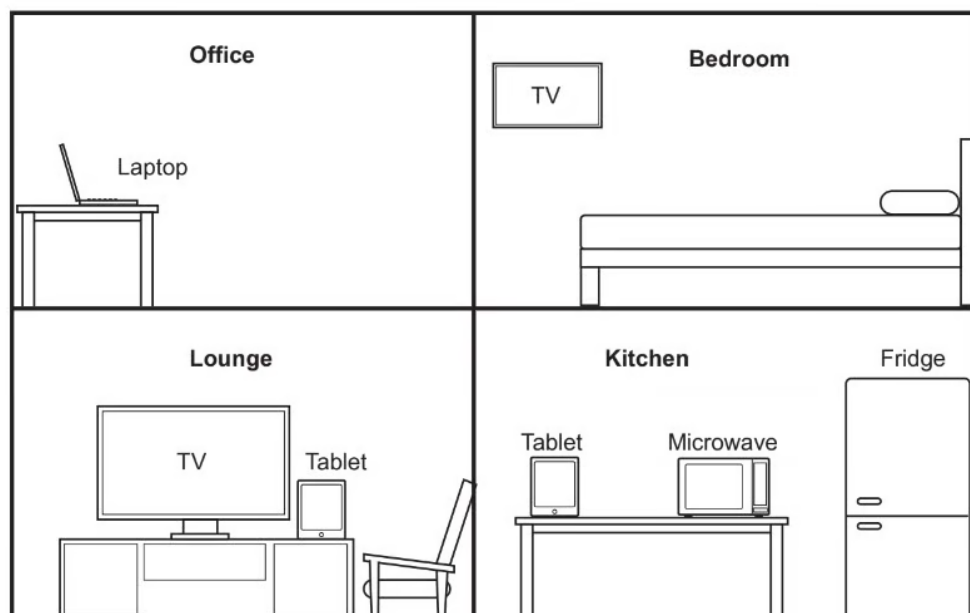
.....

.....

..... (4 marks)

10 Hope has a network in her house. The main devices are shown in the diagram.

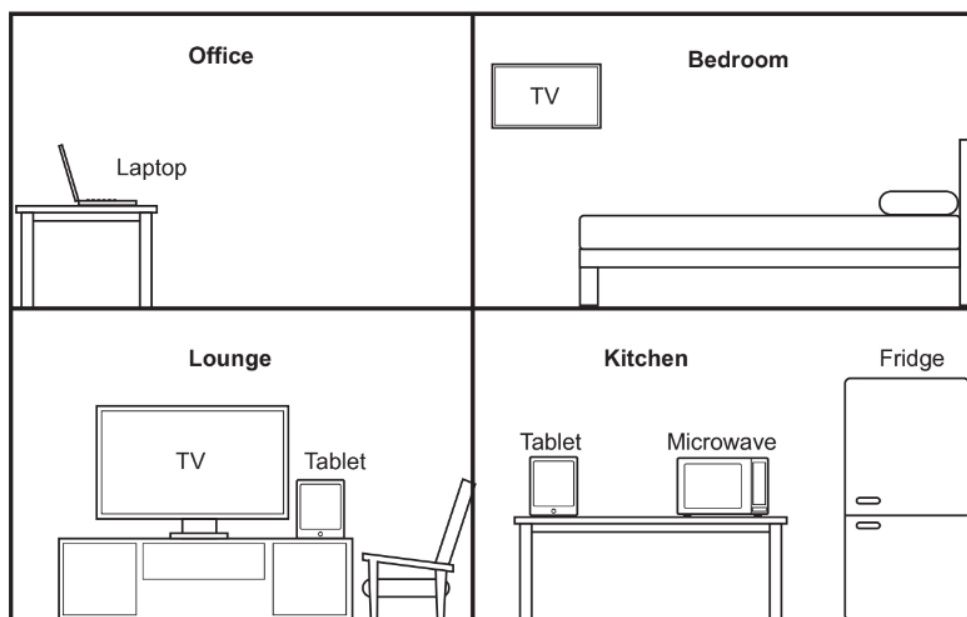
State whether Hope's network is a **LAN** or a **WAN**.



Justify your choice.

(3 marks)

11 Hope has a network in her house. The main devices are shown in the diagram.



Explain why Hope's network uses a **peer-to-peer model** and not a **client-server model**.

(3 marks)

12 **Describe** the **role of the switch** in an office network.

(2 marks)

- 13 (a)** The office introduces a WAP (**Wireless Access Point**) to allow network access to wireless devices.

The office manager has noticed that the **performance of the network has recently decreased**.

Describe how **introducing wireless** access could have **slowed down the network**.

.....

..... (2 marks)

- (b)** **Identify two** other factors that can **affect the performance** of a network.

.....

..... (2 marks)

- 14** A **house** has computers in each room and a central router.

Every room allows both **Ethernet** and **WiFi** connections to the **router**.

Identify if the house network is a **LAN** (local area network) or a **WAN** (wide area network).

Justify your choice.

.....

.....

..... (3 marks)

- 15 (a)** **Describe** the **purpose of the router** in a home network.

.....

..... (2 marks)

- (b)** **Identify two additional** items of **network hardware**, apart from cables and a router, that may be used within the house network.

(2 marks)

- 16 (a)** One office in the airport has five computers connected to one switch. There are two printers in the office that can be accessed by all computers.

The computers are connected using a star topology.

Draw a diagram to show how the five computers, switch and two printers are connected in a star topology

(3 marks)

- (b) Give** one benefit and one drawback of the office using a star topology instead of a mesh topology.

.....
..... **(2 marks)**

- (c) Describe** the role of the switch in the star topology.

.....
.....
..... **(3 marks)**

- 17** A network has several routers.

Identify three tasks carried out by a **router**.

.....
.....
..... **(3 marks)**

- 18** Give **two reasons** why a bakery may use a **star network** topology for their LAN.

Reason 1	
Reason 2	

(2 marks)

19 Site B has a **higher network performance** than site A.

Explain how each of the following can **contribute to the performance** of a network.

- Wifi frequency
- Interference
- Number of concurrent users
- Type of network traffic

(4 marks)

20 Hope's files are stored on the cloud.

Describe the benefits and drawbacks to Hope of **storing her files** on the **cloud**.

.....
.....
..... (6 marks)

- 21 Computer 1 enters the **URL** www.ocr.org.uk into a web browser. This is then converted into the **IP address** of the webserver that hosts the website.

Explain how the **URL** www.ocr.org.uk is **converted** into the **IP address**

.....
.....
..... (3 marks)

- 22 The IP address 192.149.119.226 is linked to the website with a URL of <https://www.ocr.org.uk>

When <https://www.ocr.org.uk> is entered into a browser, the website homepage is loaded.

Describe the **relationship between** the website **URL** (<https://www.ocr.org.uk>), the **IP address** and the **webserver**.

.....
.....
..... (5 marks)

1.3.1. Networks - Exam questions

Related notes

Revision Notes are crafted by expert teachers and examiners, aligned with exam specifications, and cover every essential topic for your exam. Use this handy index to quickly find the resources you need related to this test.



Scan for Revision Note

Related to the following questions:

1. The specification of two CPUs is shown in Fig. 1. Fig. 1 When...



Scan for Revision Note

Related to the following questions:

2. A law company currently use a Local Area Network (LAN) lin...
3. A university has buildings in two sites that are 5 miles apart...
10. Hope has a network in her house. The main devices are sh...
14. A house has computers in each room and a central router....



Scan for Revision Note

Related to the following questions:

3. A university has buildings in two sites that are 5 miles apart...
5. Naomi's office has five computers connected into a Local Ar...
6. An office has a LAN (Local Area Network). The office has fou...
16. One office in the airport has five computers connected to ...
18. Give two reasons why a bakery may use a star network to...



Scan for Revision Note

Related to the following questions:

- 4. Devices on a network do not currently have Internet access...
- 12. Describe the role of the switch in an office network.
- 15. Describe the purpose of the router in a home network.
- 16. One office in the airport has five computers connected to ...
- 17. A network has several routers. Identify three tasks carried ...



Scan for Revision Note

Related to the following questions:

- 7. A user enters a uniform resource locator (URL) into a web b...
- 9. Explain two advantages to a law company of storing their d...
- 20. Hope's files are stored on the cloud. Describe the benefits ...
- 21. Computer 1 enters the URL www.ocr.org.uk into a web br...
- 22. The IP address 192.149.119.226 is linked to the website wi...



Scan for Revision Note

Related to the following questions:

- 8. A library has a LAN (Local Area Network). The LAN allows ac...
- 13. The office introduces a WAP (Wireless Access Point) to allo...
- 19. Site B has a higher network performance than site A. Expl...



Scan for Revision Note

Related to the following questions:

- 11. Hope has a network in her house. The main devices are sh...