1. Nov/2021/Paper_11/No.8

A school is setting up a network within one of its buildings.

(a) State whether the network will be a LAN (local area network) or a WAN (wide area network). Justify your choice.

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..... [3]

(b) One classroom in the building has 30 computers. The computers need to be connected to the network. Each computer has a network interface card (NIC).

Identify **two** possible devices that can be used to physically connect the 30 computers to the rest of the network.

1 .....

2 .....

[2]

(c) The school has several laptops. Each laptop has a Wireless Network Interface Card (WNIC).

Describe the functions of a Wireless Network Interface Card.

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..... [4]

2. Nov/2021/Paper_12/No.3b

Andy likes to play computer games.

(a) Andy uses several input devices to play the games. These include a keyboard and a microphone.

Describe the principal operation of a microphone.

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..... [3]

(b) Andy plays some of the computer games over the internet. He has several devices that connect wirelessly to the router in his house.

(i) Identify the topology of Andy's home network. Justify your choice.

Topology .....

Justification .....

.....

[2]

(ii) The router has a wireless access point (WAP) to allow the devices to connect wirelessly.

Identify **three** functions of the router in Andy's network.

1 .....

.....

2 .....

.....

3 .....

.....

[3]

3. Nov/2021/Paper_13/No.8

A school is setting up a network within one of its buildings.

(a) State whether the network will be a LAN (local area network) or a WAN (wide area network). Justify your choice.

.....

.....

.....

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..... [3]

(b) One classroom in the building has 30 computers. The computers need to be connected to the network. Each computer has a network interface card (NIC).

Identify **two** possible devices that can be used to physically connect the 30 computers to the rest of the network.

1 .....

2 .....

[2]

(c) The school has several laptops. Each laptop has a Wireless Network Interface Card (WNIC).

Describe the functions of a Wireless Network Interface Card.

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..... [4]

4. June/2021/Paper_11/No.4

Melinda and her friends set up a peer-to-peer network between their computers to share data.

(a) Describe the key features of a peer-to-peer network.

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..... [2]

(b) Describe **two** drawbacks to Melinda and her friends of using a peer-to-peer network.

1 .....

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2 .....

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[4]

(c) Melinda connects her laptop to the internet through her router.

(i) Tick (✓) **one** box in each row to identify whether the task is performed by the router or not.

Task	Performed by router	Not performed by router
Receives packets from devices		
Finds the IP address of a Uniform Resource Locator (URL)		
Directs each packet to all devices attached to it		
Stores the IP and/or MAC address of all devices attached to it		

[2]

5. June/2021/Paper_12/No.5c,d

Seth uses a computer for work.

(a) Complete the following descriptions of internal components of a computer by writing the missing terms.

The ..... transmits the signals to coordinate events based on the electronic pulses of the ..... .

The ..... carries data to the components, while the ..... carries the address where data needs to be written to or read from.

The ..... performs mathematical operations and logical comparisons.

[5]

(b) Describe the ways in which the following factors can affect the performance of his laptop computer.

Number of cores

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.....

.....

.....

Clock speed

.....

.....

.....

.....

[4]

(c) Seth accesses both software and data using cloud computing.

(i) Give **two** benefits of storing data using cloud computing.

1 .....

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2 .....

.....

[2]

(ii) Give **two** drawbacks of Seth using cloud computing.

1 .....

.....

2 .....

.....

[2]

(d) Draw **one** line from each term to its **most appropriate** description.

Term	Description
	It is only visible to devices within the Local Area Network (LAN)
Public IP address	It increments by 1 each time the device connects to the internet
Private IP address	A new one is reallocated each time a device connects to the internet
Dynamic IP address	It can only be allocated to a router
Static IP address	It is visible to any device on the internet
	It does not change each time a device connects to the internet

[4]