Different protocols are used in the 4-layer TCP/IP model.

Complete the table by providing **one** item in each empty space.

(4)

Layer	Protocol
Application	
	TCP
Internet	
	Ethernet

A checksum works at the transport layer of TCP / IP.

Describe how a checksum is used to identify packets that have been corrupted during transmission.

(3)

Describe **one** difference between the POP3 and IMAP email protocols.

(2)

The transport layer of network protocols splits data into packets before sending it.
All the packets are received correctly.

Data is split up into packets for transmission over a network.

Identify the item included in a packet header.

(1)

A   Data being sent   **B**   Decryption key   **C**   Media restriction indicator   **D**   Packet number

Identify the reason why all computers need a unique IP address.

(1)

A   Enables a firewall to protect devices   **B**   Identifies devices on a network
C   Increases the speed of transmission   **D**   Reduces reliance on the transport layer

State the name of **THREE** email protocols.

(3)

Data is split up into packets for transmission over a network.

(i) Each device on a network has a unique identifier that is used when sending or receiving packets of data.

State the name of the unique identifier.

(1)

(ii) Identify the item included between the header and the footer in a data packet.

(1)

A   Data being sent **B**   Destination address **C**   Packet number **D**   Public key

Routers send packets that contain data around the internet.

State **two other** items found in a packet.   (2)