The Internet and Packet Switching

Task 1: The Internet - Recap

| Statement	True	False
The Internet is part of the World Wide Web		
Each household in the UK, connected to the internet, has a unique IP address		
The IP address of a laptop will change as you travel to different places		
Every networked device in the world has a unique MAC (Media Access Control) address		
To use the Internet, you must be connected to a router, either by cable or using a wireless connection		

Task 2 – Star and Mesh Topologies

Draw and label diagrams for the 2 topologies

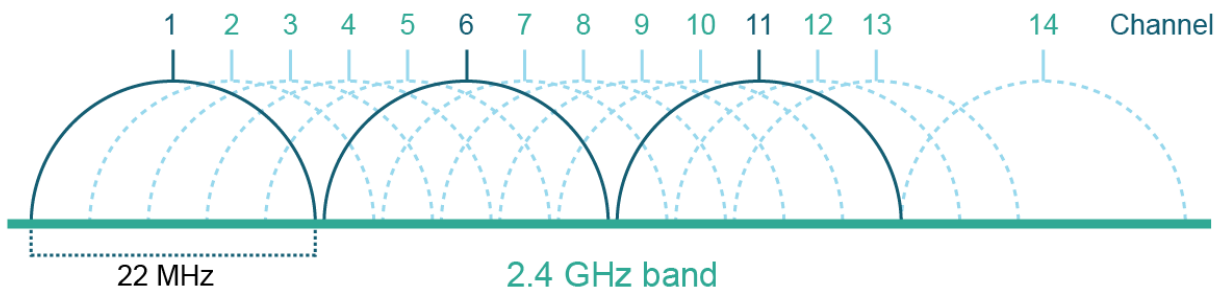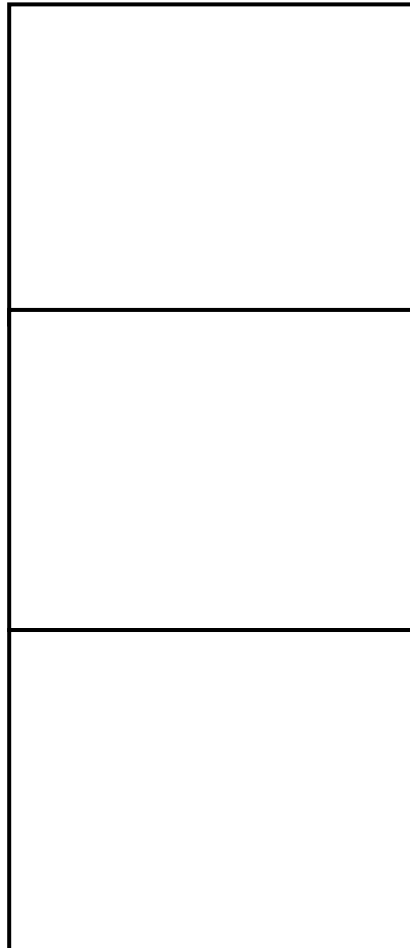| Star	Mesh
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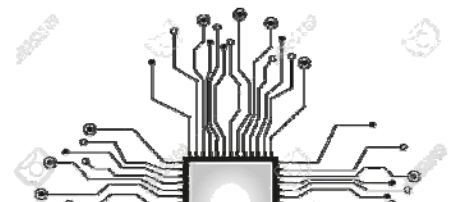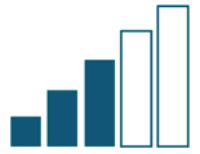
Ethernet

Frequency and Channels

Task 4 – Packet Switching

Packet = *data sent between networks is split into smaller sized chunks called packets.*

Contents of a Packet

Explain with the aid of a diagram the concept of a **packet switching network**.

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Task 5 – Protocols

Protocol Name	Full Name	What does it do?	When would I use it?
TCP/IP	Transmission Control Protocol/Internet Protocol	Defines how data is sent and transmitted and received over the internet. Defines four 'layers' for the transmission of data.	
	Hyper Text Transfer Protocol		
	Hyper Text Transfer Protocol Secure		When accessing a webpage/website where you may want to encrypt data – e.g. a Bank website.
	File Transfer Protocol	Allows the transfer of files between computers	
POP			
		Another email protocol that us used to retrieve email from mail servers. This is a more recent protocol compared to POP.	
SMTP			

Task 6 - Layers

Layer Name	Protocols in this layer	Protocol Examples
☐		**IP**
↓		
☐		**TCP**
↓		
☐		**Ethernet**
↓		
☐		**FTP**