

6-A-Day – Computer Science GCSE (p1.6-2016)

<p>Q1</p>	<p>1 mark for LAN 1 mark per bullet for justification to max 2</p> <ul style="list-style-type: none"> • Small distance/geographical area by example e.g. same building/house • Connected by own hardware/infrastructure // not connecting through Internet // no hired/third-party infrastructure // dedicated connection 	<p>3 AO2 1a (2) AO2 1b (1)</p>	<p>Do not allow – in a local area, local needs to be quantified in some way. No marks for WAN.</p>																		
<p>Q2</p>	<p>1 mark per row</p> <table border="1" data-bbox="261 539 930 846"> <thead> <tr> <th>Description</th> <th>Ethernet</th> <th>Wifi</th> </tr> </thead> <tbody> <tr> <td>A wired connection</td> <td>✓</td> <td></td> </tr> <tr> <td>More likely to be affected by interference</td> <td></td> <td>✓</td> </tr> <tr> <td>Data can be transmitted at a faster speed</td> <td>✓</td> <td></td> </tr> <tr> <td>Wireless transmission</td> <td></td> <td>✓</td> </tr> <tr> <td>Shorter transmission range before data is lost</td> <td></td> <td>✓</td> </tr> </tbody> </table>	Description	Ethernet	Wifi	A wired connection	✓		More likely to be affected by interference		✓	Data can be transmitted at a faster speed	✓		Wireless transmission		✓	Shorter transmission range before data is lost		✓	<p>5 AO1 1a (5)</p>	<p>0 mark for row with >1 tick</p>
Description	Ethernet	Wifi																			
A wired connection	✓																				
More likely to be affected by interference		✓																			
Data can be transmitted at a faster speed	✓																				
Wireless transmission		✓																			
Shorter transmission range before data is lost		✓																			
<p>Q3</p>	<p>1 mark per bullet to max 2</p> <ul style="list-style-type: none"> • Directs packets/data to destination // directs packets/data in a network • Receives packets/data from the network/Internet • Forwards packets/data to other computers on the network/Internet • Connects (different) networks together // e.g. joins home network to Internet • Has (public) IP address for LAN • Designates (private) IP addresses to network nodes 	<p>2 AO1 1a (1) AO1 1b (1)</p>	<p>Controls flow of data as BOD for bullet 1. Bullet 1 needs to refer to the router directing the destination e.g. it is making a decision/choice on where to send it. Bullet 4 - it has to be referring to the connection between the Internet and home network, or forwarding of data between them. Just referring to accessing Internet is not enough. Do not allow information for data/packets</p>																		
<p>Q4</p>	<p>1 mark per item to max 2 e.g.</p> <ul style="list-style-type: none"> • Network Interface card / NIC • Wireless access point / WAP • Wireless network interface card / WNIC / wi-fi card • Bridge • Switch • Hub • Repeater // wireless extender/booster • Server 	<p>2 AO1 1a (2)</p>	<p>Accept modem, power line adapter, Ethernet jack Must be an item of network hardware</p>																		
<p>Q5</p>	<p>Domain Name Server // DNS.</p>	<p>1 AO1 1a (1)</p>	<p>Allow Server/service/system</p>																		
<p>Q6</p>	<p>1 mark for each letter in the correct place 1 The request is put into packets 2 E 3 The packets are sent across the network 4 D 5 A 6 If they have not arrived: 7 A timeout is sent to request the packets are resent 8 If they have arrived: 9 B 10 C</p>	<p>5 AO1 1b (5)</p>																			