

2 Communication – Part 2 — Answers

Answers

2.1 To uniquely identify a device on a network so data can be sent to it.

2.2 The internet is the global network (the hardware + TCP/IP); the World Wide Web is a *service* of linked pages that runs over it. (The web is part of the internet, not the whole of it.)

2.3 (a) a switch forwards a message only to the port of its destination device; (b) a router connects a LAN to another network (the internet) and forwards data between them.

2.4 It looks up the domain name and returns the matching IP address, so the browser can connect to the correct server.

2.5 Wired: faster / more reliable / more secure. Wireless: no cables / devices can move freely. (One of each.)

2.6 People can remember meaningful names (like `example.com`) instead of long strings of numbers; and if a server's IP address changes, the same name still works once the DNS is updated.

2.7 Advantage: customers can connect with no cables and move around freely. Risk: wireless signals are easier for others nearby to intercept, so data is less secure.