Answers

Task 1

When drawing system diagrams, it is useful to start by identifying all the devices, servers or hardware required by a scenario. Then connections types and further annotation can be added.

(a) List **10** different devices that might be added to a system diagram.
PC
Desktop
Laptop
Mobile / Smartphone
Tablet
Printer
Scanner
Digital Camera
Display
Smart TV
Smart assistant
Wireless headphones
Point of service / POS

(b) List **five** different types of server or network hardware that may be added to a
system diagram.
**Servers:**
Mail server
SMTP server
Web server
File server

**Network hardware**:
Router
Switch
Firewall
Modem
Wireless Access Point

(c) List **five** different types of connection type or specification.
Ethernet
Wi-Fi
Copper cable
Coaxial cable
Fibre optic cable
FTTC / Fibre to the cabinet
FTTP / Fibre to the premises / Full fibre
Dedicated line
Satellite
Mobile

Task 2

A small office has three employees who each work on desktop computers. The manager has a laptop which they use to securely connect to the office when they are away.

All employees need access to the Internet to check news updates and send email. The office computers also have access to an internal file server and printer.

(a) Draw a diagram to show the system.

(b) Include annotation to show connection types.



Diagrams may differ slightly to the one above – e.g. connection type from laptop
to smartphone may be Bluetooth, or the laptop may connect directly to the Internet
via Wi-Fi.

Task 3

A taxi company makes use of technology to link drivers to customers. Customers who want to use the service load a free app on their Smartphone.

When a customer wants a taxi, the app sends the request to the company’s web server.
The request details are then sent to the driver.

The web server will also send the card payment information to the card processor which will confirm the details.

(a) Draw a diagram to show the system.

(b) Include annotation to show connection types and data that is transferred.

Diagrams may differ from below. For example, a switch, router and firewall may all be placed between the Internet and the web server.

