

# 1.4 Types of Computer

Syllabus 2026 - 2028

## WHAT YOU NEED TO KNOW

- Characteristics and uses of a desktop computer
- Characteristics and uses of mobile computers: laptop, smartphone, tablet and phablet
- Uses: office and business management, education, gaming, entertainment and remotely controlled devices
- Advantages and disadvantages of the different types, including portability and expandability

## Desktop computer

A desktop computer is a general-purpose computer designed to stay in one place on a desk. It usually has a separate base unit (or all-in-one unit), monitor, keyboard and mouse, and it is powered from the mains.

- **Characteristics:** not portable, separate input and output devices, mains powered, usually more powerful than a mobile computer of the same price, has space inside for extra components
- **Office and business management:** word processing, spreadsheets, databases, accounting and email
- **Education:** computer rooms in schools, research and learning software
- **Gaming and entertainment:** powerful graphics cards and large screens for games, films and music

| Advantages                                                                        | Disadvantages                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------|
| + More powerful for the price, so they handle demanding tasks well                | - Not portable, so they can only be used where they are installed |
| + Easy to expand and upgrade: extra RAM, storage and graphics cards can be fitted | - Needs a power supply and takes up desk space                    |
| + Easier and cheaper to repair, because parts can be swapped                      | - Many separate parts and cables                                  |
| + Larger screen and full-size keyboard are more comfortable and reduce strain     | - Needs a separate keyboard, mouse and monitor in most cases      |
| + Better cooling, so they can run for long periods                                |                                                                   |

## Mobile computers

Mobile computers are designed to be carried and used in different places. They usually have a battery, wireless connectivity such as Wi-Fi, Bluetooth and mobile data, and the input and output built into the device.

| Type              | Characteristics                                                                                                             | Typical uses                                                                                  |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| <b>Laptop</b>     | Folding computer with a built-in screen, keyboard and trackpad, battery and Wi-Fi. Almost as capable as a desktop.          | Office work, school and college work, programming, gaming, travelling                         |
| <b>Smartphone</b> | Pocket-sized phone with a touch screen, apps, camera, GPS and mobile data. The most portable.                               | Calls and messages, apps, photos, navigation, gaming, social media, remote control of devices |
| <b>Tablet</b>     | Larger touch-screen device (about 7 to 12 inches) with no physical keyboard, light and portable. Often does not make calls. | Reading, education, drawing, video and games, light office work                               |
| <b>Phablet</b>    | A large smartphone, between a phone and a tablet in size (about 5.5 to 7 inches), that makes calls.                         | Video, browsing, reading and gaming on a bigger screen without carrying a tablet              |

## Uses of mobile computers

- **Office and business management:** email, documents, meetings and video calls while travelling

- **Education:** e-learning, e-books, note taking and research in class or at home
- **Gaming and entertainment:** games, streaming films and music, taking photos and videos
- **Remotely controlled devices:** smartphones and tablets act as a controller, for example for drones, home heating and lighting, security cameras and smart devices

## Advantages and disadvantages of mobile computers

| Advantages                                                      | Disadvantages                                                                                |
|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| + <b>Portable:</b> can be used almost anywhere, small and light | - <b>Limited expandability:</b> parts are often fixed and cannot be upgraded                 |
| + Battery powered, so they work without a mains socket          | - Battery life is limited and the battery needs recharging                                   |
| + Wireless connection to the internet and other devices         | - Smaller screens and keyboards are less comfortable, and typing is slower on a touch screen |
| + Everything is built in, so there are fewer cables and parts   | - Less powerful for the price, and can overheat                                              |
| + Take up little space                                          | - Easy to lose or steal, and more expensive to repair                                        |

## Comparing the computer types

|                            | Desktop            | Laptop                | Tablet       | Smartphone   |
|----------------------------|--------------------|-----------------------|--------------|--------------|
| <b>Portability</b>         | None               | Good                  | Very good    | Excellent    |
| <b>Expandability</b>       | High               | Low                   | Very low     | Very low     |
| <b>Power for the price</b> | Highest            | High                  | Medium       | Medium       |
| <b>Screen size</b>         | Large              | Medium                | Medium       | Small        |
| <b>Input</b>               | Keyboard and mouse | Keyboard and trackpad | Touch screen | Touch screen |

### EXAM TIP

When a question mentions **portability** or **expandability**, name them directly. Desktops win on expandability, mobile computers win on portability. Say 'it can be carried' or 'extra RAM can be added', not just 'it is better'.

## Key terms

| Term                    | Meaning                                                          |
|-------------------------|------------------------------------------------------------------|
| <b>Desktop computer</b> | A non-portable general-purpose computer used at a desk.          |
| <b>Mobile computer</b>  | A computer designed to be carried and used in different places.  |
| <b>Laptop</b>           | Portable computer with built-in screen, keyboard and battery.    |
| <b>Smartphone</b>       | Pocket-sized touch-screen phone that runs apps.                  |
| <b>Tablet</b>           | Touch-screen portable computer, larger than a phone.             |
| <b>Phablet</b>          | A large smartphone, between a phone and a tablet in size.        |
| <b>Portability</b>      | How easily a device can be carried and used in different places. |
| <b>Expandability</b>    | How easily components can be added or upgraded.                  |
| <b>Remote control</b>   | Using one device to control another from a distance.             |