

2.1 Input Devices and Their Uses

Syllabus 2026 - 2028

WHAT YOU NEED TO KNOW

- Characteristics, uses, advantages and disadvantages of: keyboard, numeric keypad, pointing devices, remote control, joystick or driving wheel, touch screen (as an input device), scanners, camera, microphone, sensors and light pen

An **input device** sends data or instructions into a computer so they can be processed.

Keyboards and pointing devices

Device	Characteristics and uses	Advantages	Disadvantages
Keyboard	A set of keys used to type letters, numbers and commands. Used for typing documents, entering data and commands.	Fast for typing text; familiar to most people; accurate for entering data	Slow for people who cannot touch type; can cause repetitive strain injury; takes up space
Numeric keypad	A small set of number keys. Used at ATMs, in chip and PIN readers, door entry systems, and for fast number entry in spreadsheets and tills.	Fast for entering numbers only; small and portable; easy to use	Keys are small, so mistakes are easy; only suitable for numbers; hard to enter text
Pointing devices (mouse, trackpad, trackerball)	Move a pointer on screen and select items by clicking. Used to operate a GUI, draw and select.	Easy and quick to select items; fast for graphics work; easy to learn	Need a flat surface (mouse); can be hard for users with limited hand control; trackpads are less accurate; can cause strain
Remote control	Controls a device from a distance using infrared, Bluetooth or Wi-Fi. Used for TVs, projectors, air conditioners, and toys.	Control from a distance; useful for those with limited movement; convenient	Signal can be blocked (infrared); batteries needed; easy to lose; limited range
Joystick / driving wheel	A stick or wheel moves a cursor or object. Used in games, simulators, and for controlling machines or wheelchairs.	Gives a more realistic feel; easy to control direction; fun to use	More difficult to control precisely than a mouse; needs space; usually specialised
Light pen	A pen-shaped device that senses light from the screen. Used for drawing and selecting on screens, and in CAD.	Accurate for selecting points; takes less desk space; easy for drawing	Only works with certain screens; outdated, rarely used; can be damaged; arm can tire

Touch screen, scanners and camera

Device	Characteristics and uses	Advantages	Disadvantages
Touch screen (input)	The user touches the screen to select items. Used on phones, tablets, ATMs, point-of-sale tills and information kiosks.	Fast and easy to use; no extra input device needed; suits public places	Screen gets dirty and scratched; can be inaccurate; arm tiring on upright screens; not suited to typing long text

Device	Characteristics and uses	Advantages	Disadvantages
Scanner	Converts printed text and images into digital form. Used to digitise documents and photos, and with OCR.	Quick way to copy documents; makes digital copies that last; can edit scanned text with OCR	Quality depends on resolution; large files for high-resolution scans; OCR can make errors; flatbed scanners take up space
Digital camera	Captures still or moving images as digital data. Used for photos, video, video calls and security.	Instant results; images easy to edit and share; no film needed	Large files need storage; quality depends on resolution; needs power; photos can be altered

Microphone and sensors

Device	Characteristics and uses	Advantages	Disadvantages
Microphone	Converts sound into digital data. Used for voice calls, voice recognition and commands, recording, and online meetings.	Hands-free input; fast for dictation; useful for users who cannot type	Picks up background noise; speech recognition can make mistakes; recordings need large storage
Sensors	Measure physical quantities, such as temperature, light, pressure, moisture, sound, pH, motion or humidity, and send readings to the computer. Used in weather stations, burglar alarms, greenhouses and control systems.	Readings are accurate and continuous; can work 24 hours a day; can be placed in dangerous or remote places; no human needed	Need calibrating and can go wrong; analogue readings must be converted; can give false readings; need a power source

EXAM TIP

When asked for an advantage or disadvantage, make it specific to the device. 'Fast' or 'easy' alone will not get the mark. Say **why**, for example 'a numeric keypad is faster for entering only numbers because the keys are grouped together'.

Key terms

Term	Meaning
Input device	Sends data into a computer.
Keyboard	A set of keys for entering text, numbers and commands.
Numeric keypad	A small keypad of number keys.
Pointing device	A device that moves a pointer on screen, for example a mouse.
Touch screen	A screen that detects touch to select items.
Scanner	Converts printed material into digital form.
Microphone	Converts sound into digital data.
Sensor	Measures a physical quantity and sends readings to the computer.
Light pen	A pen device that senses light from a screen.
Resolution	The amount of detail in an image.