

1.1 PROCESSORS, INPUT/OUTPUT AND STORAGE · 1.1.3

Input & output devices

Choosing input and output devices for a problem, plus **sensors** and **actuators**. Spec 1.1.3(a).

01 Input devices

- Keyboard/ mouse** Text entry and pointing.

- Scanner/ camera** Capture images, documents.

- Barcode/ QR** Fast, accurate data entry.

- Microphone** Voice input.

- Sensor** Measures a quantity (temp, light, pressure).

02 Output devices

- Monitor** Visual output.

- Laser printer** Fast, high-volume.

- Inkjet / 3D** Cheap colour / physical objects.

- Speaker** Audio output.

- Actuator** Electrical signal → physical movement.

03 Choosing a device — input-process-output

IN

Input

Sensors/keyboard/scanner send data into the system.

P

Process

The CPU works on the data; storage saves and loads it.

OUT

Output

Monitor/printer/actuator present the result or act on it.

Sensor vs actuator

Sensor **measures** and inputs; actuator **acts** and outputs movement.

Touchscreen Both an input **and** an output device.

FINAL PASS BEFORE THE EXAM

Rapid exam tips

Six slips on input/output questions.

01

"Name a device and give a reason" → the **reason** is usually worth as much as the device. Justify it for the scenario.

02

A **touchscreen** is both input and output. Don't use it for both halves of an "input and output" question.

03

Name the quantity a **sensor** measures (temperature, light, pressure) — not just "a sensor".

04

Sensor = measures and inputs. **Actuator** = outputs movement. Don't mix them up.

05

Match the device to the **environment**: a laser printer suits an office, not a rugged outdoor system.

06

For accessibility, name a real device (eye-tracking, switch, sip-and-puff, voice) and say **how** it helps.