

IGCSE Computer Science

Name: _____ Score: _____

1. The ALU in a CPU:

- ☐ performs calculations and logical comparisons
- ☐ stores the running programs
- ☐ connects to the internet
- ☐ sends control signals to other parts

2. Which is an input device?

- ☐ a speaker
- ☐ a projector
- ☐ a barcode scanner
- ☐ a laser printer

3. ROM is volatile and holds running programs, while RAM is non-volatile and holds the boot instructions.

- ☐ True ☐ False

4. Which is true of a MAC address compared with an IP address?

- ☐ they are the same thing written in different formats
- ☐ the MAC address changes on every network the device joins
- ☐ the IP address never changes once a device is made
- ☐ the MAC is fixed to the physical device; the IP is given by the network and can change

5. Which change would improve CPU performance?

- ☐ using a smaller cache so the CPU checks it more quickly
- ☐ lowering the clock speed to reduce overheating delays
- ☐ removing a core so that tasks are not split up
- ☐ increasing the clock speed or the number of cores

6. A capacitive touch screen works by:

- ☐ breaking a grid of infrared light beams across the screen
- ☐ reading a pattern from the finger like a barcode
- ☐ pressing two flexible layers together to complete a circuit
- ☐ sensing the electric charge of your finger

7. A MAC address is normally written in denary (base 10).
- ☐ True ☐ False
8. Cache is small, very fast memory near the CPU that holds often-used data, so the CPU waits less than it would reading from main memory.
- ☐ True ☐ False
9. A laser printer fuses toner powder onto paper with heat, an inkjet sprays tiny drops of ink, and a 3D printer builds an object up in layers.
- ☐ True ☐ False
10. A device's IP address is fixed when it is made and never changes.
- ☐ True ☐ False

1. performs calculations and logical comparisons

The arithmetic logic unit does the maths and logic; the control unit manages the parts.

2. a barcode scanner

A scanner brings data in. Projectors, speakers and printers are output devices.

3. False

False. They are swapped: RAM is volatile and holds the running programs and data, while ROM is non-volatile and holds the start-up (boot) instructions.

4. the MAC is fixed to the physical device; the IP is given by the network and can change

The MAC stays with the device (set by the maker, written in hex); the IP depends on the network and can change.

5. increasing the clock speed or the number of cores

More cores, a larger cache and a higher clock speed all improve performance.

6. sensing the electric charge of your finger

Capacitive screens detect the finger's charge (multi-touch, used in phones); resistive presses layers; infrared breaks beams.

7. False

False. A MAC address is normally written in hexadecimal pairs, such as AC:DE:48:00:11:22.

8. True

A bigger cache, more cores and a higher clock speed all raise performance – cache helps by cutting the wait for data.

9. True

Three different output technologies: laser (toner + heat), inkjet (sprayed ink), 3D (layer-by-layer).

10. False

False. The IP address is assigned by the network the device joins, so it can change. The MAC address is the one set at manufacture.