

3 A computer system has a dual-core Central Processing Unit (CPU).

(a) State the purpose of the system clock and the Control Unit (CU) in a CPU.

System clock
.....
CU
..... [2]

(b) (i) The number of cores in the processor affects the performance of the computer system.

Identify **one other** feature of a processor that can affect the performance of a computer system **and** state why it affects the performance.

Feature
.....
Reason
..... [2]

(ii) A solid state (flash) memory drive is automatically recognised by the computer when it is plugged into a port in the computer.

Identify an appropriate type of port to connect the solid state memory drive to the computer.

Explain how this port provides an automatic connection.

Port
Explanation
.....
..... [3]

(c) Identify **two** disadvantages of using Dynamic RAM (DRAM) instead of Static RAM (SRAM) in a computer system.

1
.....
2
..... [2]

(d) The computer system is used to store data received from a temperature sensor every five seconds. The data is stored on an optical disc using an optical disc reader/writer.

(i) Describe the principal operation of an optical disc reader/writer.

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..... [4]

(ii) The computer uses a buffer when writing data to the optical disc.

Explain the use of a buffer when writing data to the optical disc.
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..... [3]