

6 A programmer is buying a new computer.

(a) The programmer is considering the following two computers:

Computer 1	Quad-core 2.2 GHz processor 16-bit architecture 1 GB Random Access Memory (RAM) 500 GB magnetic hard disk
Computer 2	Dual-core 3.8 GHz processor 32-bit architecture 2 GB RAM 500 GB solid state drive (SSD)

(i) Computer 1 has a magnetic hard disk.

Complete the description of the principal operation of a magnetic hard disk by writing the missing words.

The magnetic hard disk has one or more that can be magnetised. These are mounted on a and rotate at high speed.

A is moved across the surface on an arm.

When data is read, the changes in the produce a change in the electric current.

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(ii) The two computers have different amounts of RAM.

Explain how different amounts of RAM affect the performance of a computer.

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(iii) The two computers have different bus widths.

Explain how different bus widths affect the performance of a computer.

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(b) Both computers have an Operating System (OS).

Describe the purpose of an OS in a computer.

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