4 A computer with a Von Neumann architecture has a central processing unit (CPU) that performs the fetch–decode–execute (FDE) cycle.

(a) Complete and annotate the diagram to show how instructions are decoded and executed.

[5]

(b) The CPU is dual core and has a processor speed of 2.4 GHz.

Describe what is meant by a core.

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..... [2]

(c) Explain **two** ways that the performance of the CPU could be increased.

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.... [4]