

EDULiTO

Component 1: Computer Systems (J276/01)

Topic Tests



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This resource has been produced to ensure that your students are able to successfully complete the Computer Systems component of the OCR Computer Science GCSE (from 2016)

These tests are designed to provide a stimulating, engaging and effective way of assessing the progress of your students. This set of topic tests provides complete coverage of the OCR Computer Systems component and includes 8 standalone tests.

As well as the 8 topic tests, you are also provided with a comprehensive marking scheme for each test. Please be aware that there may be appropriate alternative answers to some of the questions, and it is therefore suggested that the teacher uses their discretion when marking students work.

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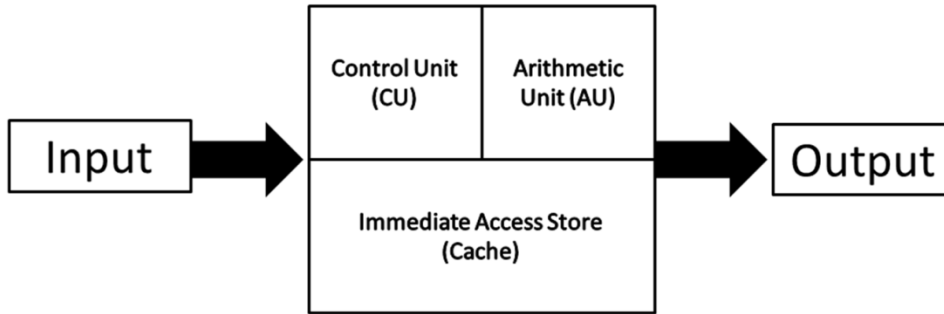
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SAMPLE

Topic Test 1.1 Systems Architecture

1. Below is a diagram to show some of the features of a CPU. A CPU can be found inside computer devices.

Central Processing Unit (CPU)



(a) Describe the role played by the CPU in a computer device [2]

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.....

.....

What is the role played by each of the following components within the CPU?

(b) Control Unit [1]

.....

.....

.....

(c) Arithmetic Unit [2]

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.....

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(d) Cache [2]

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.....

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(e) Some CPUs perform better than other CPUs. Apart from the amount of cache in a CPU, list two other factors that influence the performance of a CPU and for each explain how the characteristic listed can improve performance. [4]

Factor 1

Explanation

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Factor 2

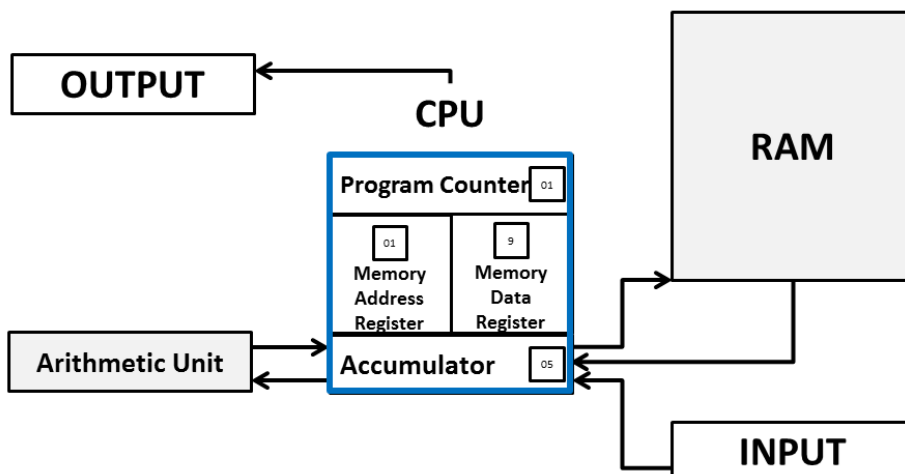
Explanation

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2. The diagram below shows a pictorial representation of Von Neumann architecture.



In relation Von Neumann architecture what is the role played by the:

(a) The Memory Address Register (MAR)? [2]

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.....

(b) The Memory Data Register (MDR)? [2]

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(c) The Program Counter (PC)? [3]

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(d) The Accumulator?[2]

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