FPGA Computing Systems :
Background Knowledge & Introductory Materials

Quiz Answers

Week 1 : Reconfigurations

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1. Which of the following is a correct "kind" of reconfigurations

Partial - Static
Correct
This is right, since it is possible to stop the computation of the whole FPGA and reconfigure a single region.

Complete - Dynamic

Partial - Dynamic
Correct
This is right, since it is possible to reconfigure a region while executing operations in a core instantiate on a different regione.

Complete - Static
Correct
This is right. For instance, it is what happens when an FPGA is configured for the first time.

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2. We could be interested in looking into runtime reconfiguration to have a system able to adapt itself after the chip has been fabbed to deal with faults.

True
Correct
Yes, we are. This will allow to recovered from faulty states.

False

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3. Reconfiguration can be used to upgrade the system to an unknown and unpredictable state whenever a fault is going to be detected.

True

False
Correct
Reconfiguration can be used to bring the system back to a known and safe state whenever a fault is going to be detected.

4. Having a system capable to adapt the underlying computing infrastructure to implement the same functionality in a different way can cause problems of energy consumption.
True

False
Correct
Having a system capable to adapt the underlying computing infrastructure to implement the same functionality in a different way can provide us a better energy saving.

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5. We could be interested in looking into runtime reconfiguration to have a system able to adapt its behaviour because of the surrounding environment in which it is used.

True
Correct
According to the surrounding conditions, a system may be interested in behaving in different ways.

False

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6. Reconfigurable computing is creating a barrier between hardware and software design technologies

True

False
Correct
That is correct, reconfigurable computing is trying to fill the gap in between the hardware and software

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