QUIZ 6

* **Question 1**

1 out of 1 points

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| Correct | A \_\_\_\_\_\_\_\_\_\_\_ is a sequence of instructions that starts with a branch target and ends with a branch. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct basic block |  |  | | --- | |  | |  |  |  |

* **Question 2**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Conditional branches in ARMv8 are limited in the maximum distance the branch destination can be from the current PC.  If a (somewhat) larger range is needed the \_\_\_\_\_\_\_ instruction can be used in combination with a conditional branch to get a greater range. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct B |  |  | | --- | |  | |  |  |  |

* **Question 3**

1 out of 1 points

|  |  |  |  |  |
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|  |  | | | |
| Correct | Given the following address and instruction stored at that address for a B instruction, what is the jump target address (in hex)?  Address           Value  0x10000000     0x1400AF15  Write your answer in hex with a leading 0x and all leading 0's removed. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct 0x1002BC54 |  |  | | --- | |  | |  |  |  |

* **Question 4**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | Given the following machine code instruction for a CBZ:  0xB4FFFF44  How much is added to the PC of *the branch* to form the branch target?  Give your answer in bytes as a hex value with a leading 0x, use a leading "-" if negative.  (ie. -0x2 for a negative 2). |  |  |  |
| |  |  | | --- | --- | | Selected Answer: | Correct -0x18 |  |  | | --- | |  | |  |  |  |

* **Question 5**

1 out of 1 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
| Correct | When constructing the destination of an unconditional branch from the machine code of a B instruction, the top four bits of the destination address should be set to 0x0. |  |  |  |
| |  |  | | --- | --- | | Selected Answer: Correct False |  | | |  |  | | --- | --- | | Response Feedback: | The offset encoded in the instruction is left shifted by two and added to the PC of the branch. | |  | |  |  | |  |  |  |