edX   **CornellX: ENGRI1210x The Computing Technology Inside Your Smartphone**   🏠 KarenWest ▼

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How to Use Jade

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CONTROL INSTRUCTIONS

2:58 / 2:58   **1.0x**

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1. CHECK YOUR UNDERSTANDING (1/1 point)

Which of the eight possible values of the Condition Code (N Z P) are valid indications that the value written to the register file is less than or equal to zero? **[You must check all that apply to get credit.]**

- [ ] 000
- [ ] 001
- [x] 010 ✔
- [ ] 011
- [x] 100 ✔
- [ ] 101
- [ ] 110
- [ ] 111

EXPLANATION

The only valid conditions are the three with a single 1, since the three conditions are mutually exclusive. The condition 001 indicates that the result was greater than zero, 010 equal to zero, and 100 less than zero. Thus, if the condition is 010 or 100, then the result was less than or equal to zero.

| Final Check | **Save** | Hide Answer | *You have used 1 of 2 submissions*

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2. CHECK YOUR UNDERSTANDING (1/1 point)

Which of the following instructions overwrite the Condition Code? **[You must check all that apply to get credit.]**

- [x] AND ✔
- [x] ADD ✔
- [x] LEA ✔
- [x] LD ✔
- [ ] ST
- [ ] STI

EXPLANATION

Only instructions that write their result to a general-purpose register overwrite the Condition Code. AND, ADD, LEA, and LD write a register; ST and STI do not.

| Final Check | **Save** | Hide Answer | *You have used 1 of 2 submissions*

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