**CSCI240 – Computer Organization and Assembly Language Programming**

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**Assignment:** Homework: The LC-3

6. a.

7. 11111, which is decimal 15.

8.It would require 4 bits to represent 32 registers in the LC-3 instructions, which would cause a problem due to how many bits are required to represent the entire instruction.

9.0001 001 001 1 00000 (Add register 1 by zero and store result in register 1) and 0000 000 00000000 (Break with no n, z, or p flag set) both do nothing without effecting the program. Unlike the others, the ADD instruction actually performs a calculation on operands.

10.

A. 0000111101010101 (BR\_nzp offset 341)

B. 0100111101010101 (JSR offset 1877)