

5.9. (a) ADD R1 to R1 with 0

(b) BRANCH to the next address

(c) BRANCH, but not executed

(c) is NOP. ADD return a result that can be used to change the condition

5-16. (a) PC-relative addressing mode

(b) Indirect addressing mode

(c) base+offset addressing mode

5-22. x3010: $R3 \leftarrow PC + 63$, $PC = X3011$

x3011: LOAD: $R4 \leftarrow R3$

x3012: LOAD: $R6 \leftarrow R4$

value: x123B

x3010: 1010 1100 0011 1111

5-23. x30FF: $R1 \leftarrow X3101$

x3100: $R2 \leftarrow X1482$

x3101: TRAP x25: halt the program

0x1482

J-40. decode instruction in IR to check if it's a branch instruction
and check the condition if it is satisfied, output 1 if
both are satisfied

J-41. (a) Positive Condition Code

(b) Yes, A should not be placed here