27/40

4.39 lui $t0, 0x2001
ori $t0, 0x4924
add $t1, $t0, $t0

First 4-bits from PC

4.40 It is possible since jump instructions can jump anywhere in text segment

-8 No

4.41 It isn't possible since branching instructions cannot go higher than $\pm 2^{15}$ offset.
The value at 4.39 is out of range for 0x00000600
2^{15} = 32768
0x00000600 = +1536
34304 -> the top cap for instructions
0x20014924 = 536955172 -> the target
536955172 > 34304 therefore the number is out of range

0x604 + 0x1FFC
~ 0x604 - 0x20000
PC+4

4.42 It is in range since the branching instructions is within the $\pm 2^{15}$ offset range.
2^{15} = 32768
1FFFF000 = +536866816
536899584 -> the top cap for instructions
0x20014924 = 536955172 -> the target
536955172 > 536899584 therefore the number is out of range

1FFF004 ± offset

in range

-5