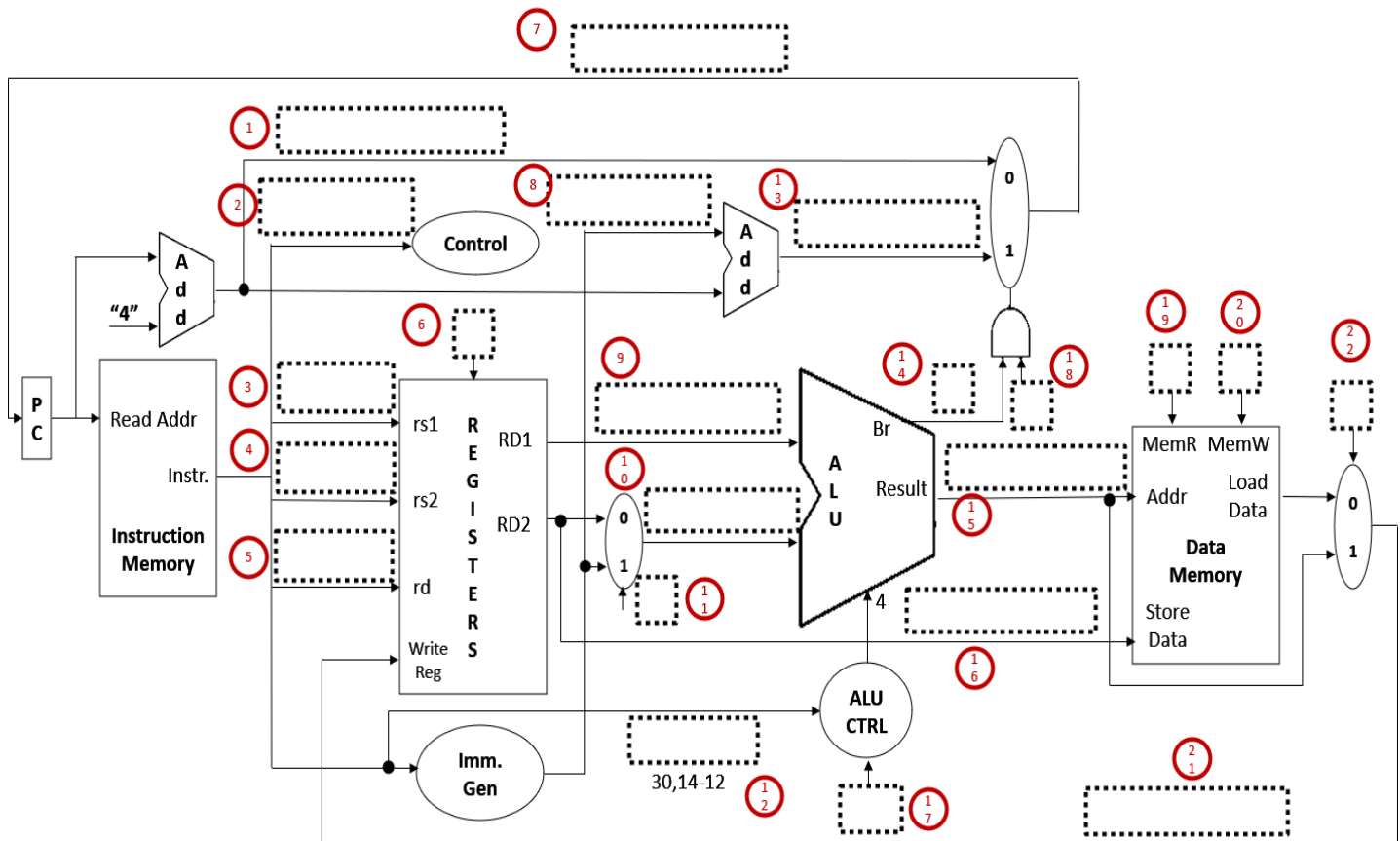


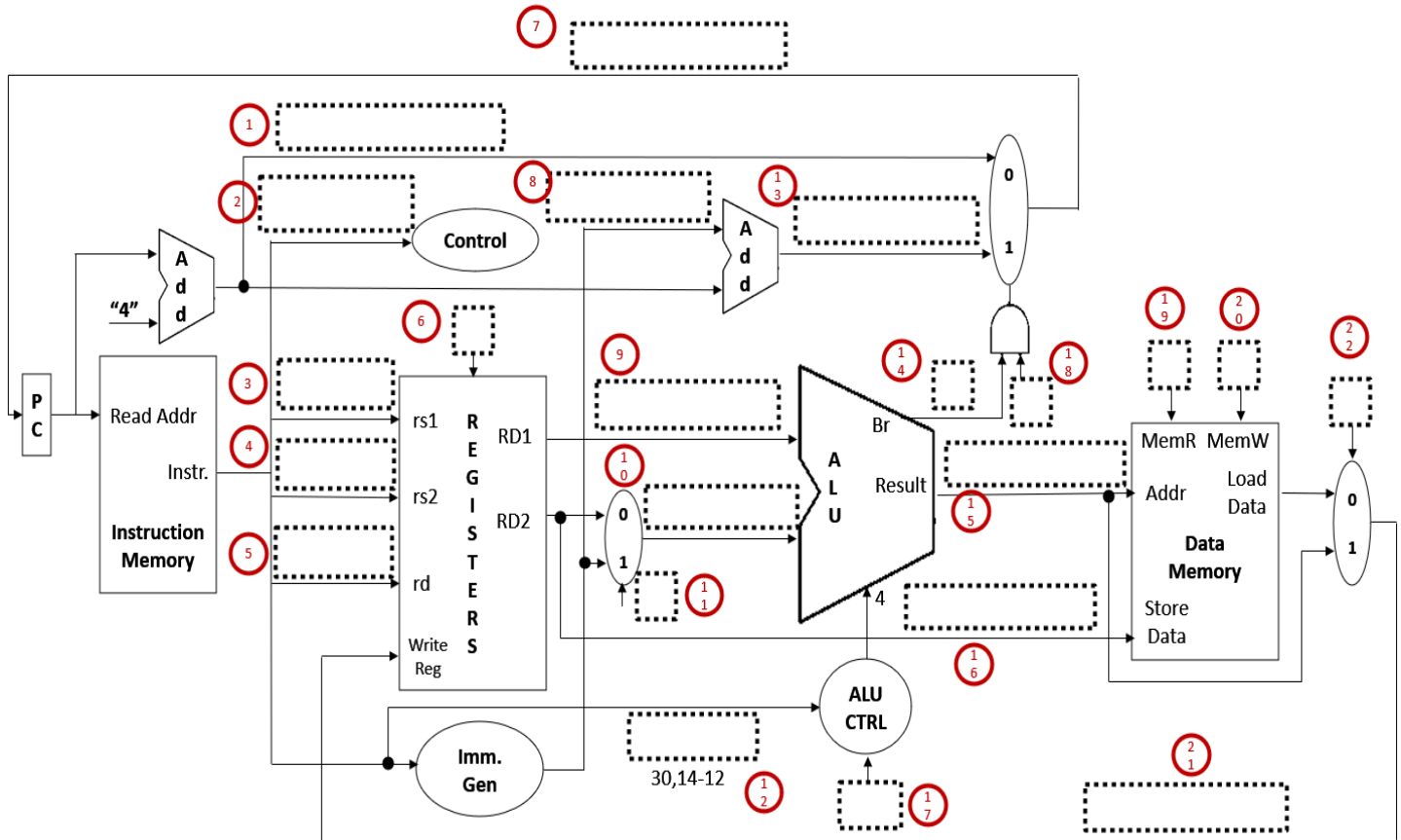
Given the following RISC-V instruction and register / data memory values, show the propagation of signals through the reduced Single-Cycle datapath that calculate the result of the instruction. You are permitted and encouraged to refer to the RISC-V Green sheet while completing the problem. The values of the registers / memory are the values at the beginning of the instruction.

- PC: 0x7ffff100
- Instruction: add x18, x19, x20
- Register x18 contains 0x0000002A
- Register x19 contains 0x00000014
- Register x20 contains 0x00000007



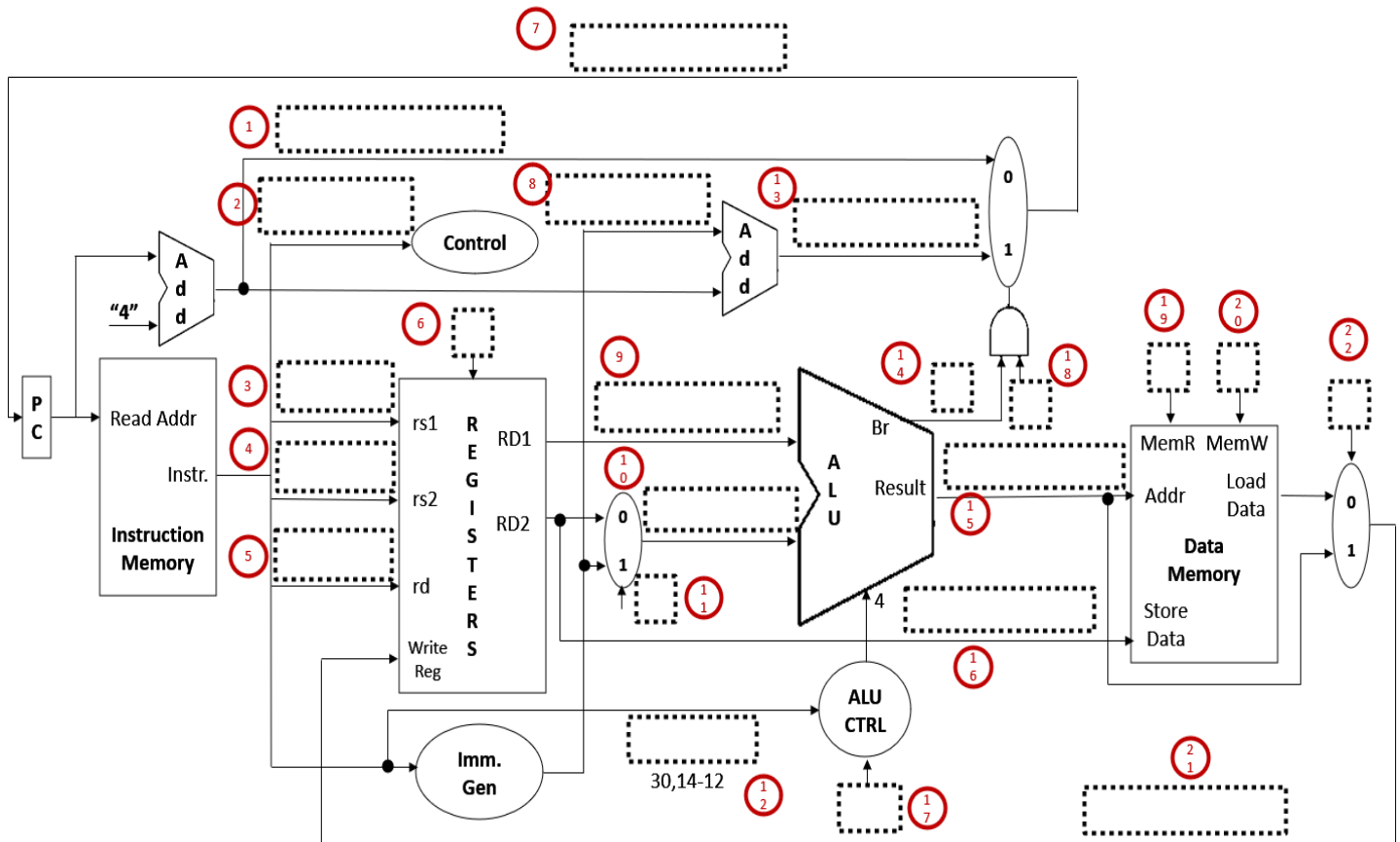
Given the following RISC-V instruction and register / data memory values, show the propagation of signals through the reduced Single-Cycle datapath that calculate the result of the instruction. You are permitted and encouraged to refer to the RISC-V Green sheet while completing the problem.

- PC: 0x7ffff310
- Instruction: addi x19, x18, -5
- Register x18 contains 0x00000011
- Register x19 contains 0x0000001A



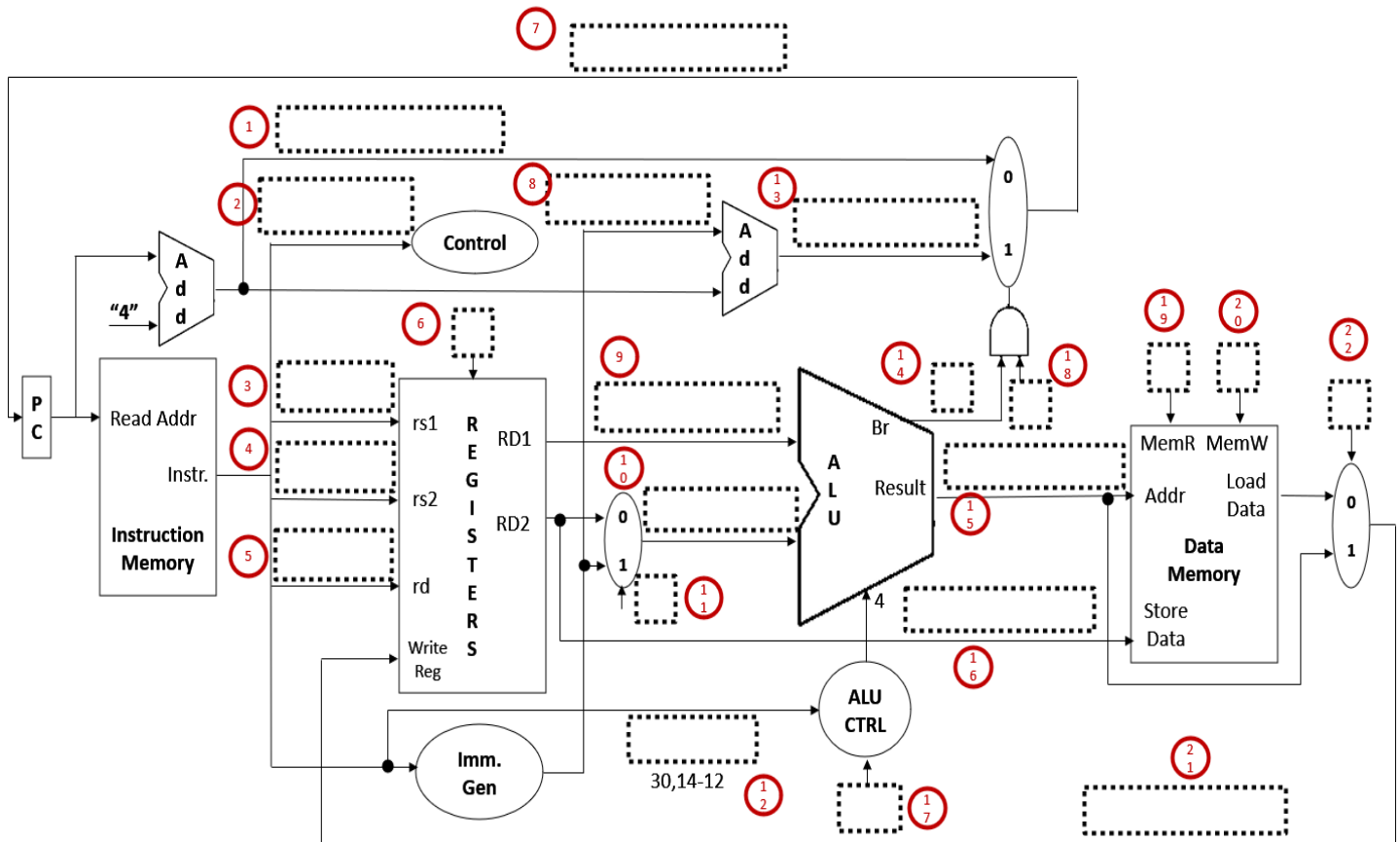
Given the following RISC-V instruction and register / data memory values, show the propagation of signals through the reduced Single-Cycle datapath that calculate the result of the instruction. You are permitted and encouraged to refer to the RISC-V Green sheet while completing the problem.

- PC: 0x7ffff3a8
- Instruction: lw x6, 8(x18)
- Register x18 contains 0x7fff5110
- Register x6 contains 0x0000001A
- Data Memory at 0x7fff5110 contains 0x00000000
- Data Memory at 0x7fff5114 contains 0x00000001
- Data Memory at 0x7fff5118 contains 0x00000002
- Data Memory at 0x7fff511c contains 0x00000003



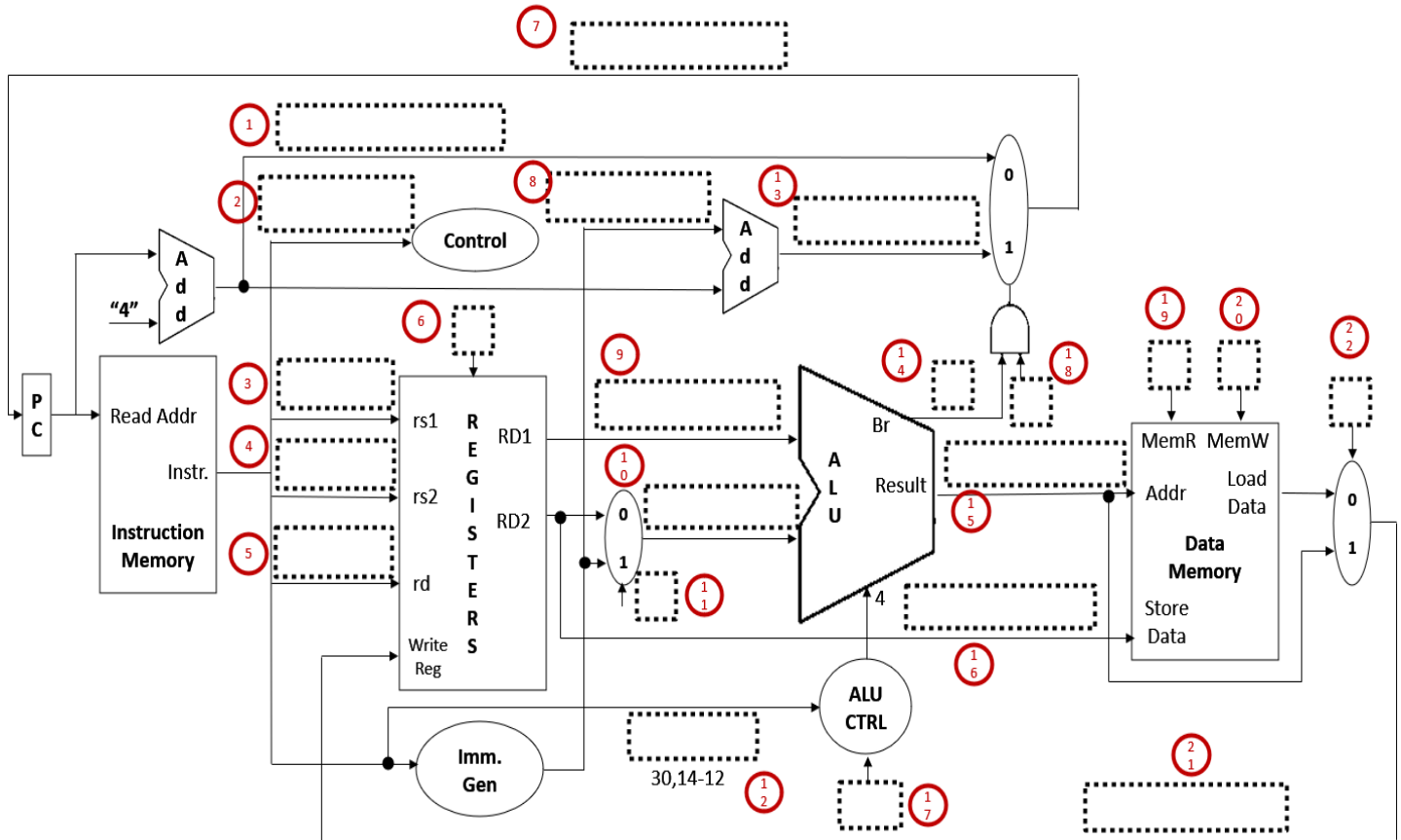
Given the following RISC-V instruction and register / data memory values, show the propagation of signals through the reduced Single-Cycle datapath that calculate the result of the instruction. You are permitted and encouraged to refer to the RISC-V Green sheet while completing the problem.

- PC: 0x7ffff24c
- Instruction: sw x7, 8(x17)
- Register x17 contains 0x7fff32a0
- Register x7 contains 0xFFFFFFFF5
- Data Memory at 0x7fff32a0 contains 0x00000000
- Data Memory at 0x7fff32a4 contains 0x00000001
- Data Memory at 0x7fff32a8 contains 0x00000002
- Data Memory at 0x7fff32ac contains 0x00000003



Given the following RISC-V instruction and register / data memory values, show the propagation of signals through the reduced Single-Cycle datapath that calculate the result of the instruction. You are permitted and encouraged to refer to the RISC-V Green sheet while completing the problem.

- PC: 0x7ffff300
- Instruction: beq x21, x22, 24
- Register x21 contains 0x00000008
- Register x22 contains 0x00000008



Given the following RISC-V instruction and register / data memory values, show the propagation of signals through the reduced Single-Cycle datapath that calculate the result of the instruction. You are permitted and encouraged to refer to the RISC-V Green sheet while completing the problem.

- PC: 0x7ffff200
- Instruction: bne x21, x22, 48
- Register x21 contains 0x0000001c
- Register x22 contains 0x0000001c

