

For questions 15 through 19, use the figure shown below and to the left which represents the execution of 6 instructions on an "in-order-issue/in-order-completion" machine. Assume that any instructions that share a column in the execute stage require the same resource. Any dependencies will be described in the text of the question. You may use the figure to the right as a "scratch pad" for reordering the instructions.

Decode		Execute		Write		Cycle
I1	I2					1
	I2	I1				2
	I2	I1				3
I3	I4	I2				4
I3	I4	I2				5
I5	I6		I4	I3		6
I5	I6		I4			7
	I6		I5			8
		I6				9
				I5	I6	10

OOI/OOC

Decode		Execute		Write		Cycle
I1	I2					1
I3	I4	I1				2
I5	I6	I1	I4	I3		3
		I2	I4		I3	4
		I2	I5		I4	5
		I6			I5	6
					I6	7
						8
						9
						10