Instructions to test Multicycle RISC

% First Initialise the eight registers with values

— Method 1

LHI R0, 101101010	0011 000 101101010
LHI R1, 011010101	0011 001 011010101
LHI R2, 101010111	0011 010 101010111

— Method 2

LW R3, R0, 010101	0100 011 000 010101
LW R4, R1, 111011	0100 100 001 111011

— Method 3

LM R4, 000001111	0110 100 000001111

% Now, testing the arithmetic instructions on R5-R7

— Add

ADD R7, R5, R6	0000 111 101 110 000
ADC R4, R7, R3	0000 100 111 011 010
ADD R1, R2, R3	0000 001 010 011 000
ADZ R5, R6, R1	0000 101 110 001 001
ADI R3, R5, 111010	0001 011 101 111010

— Store now

SW R1, R2, 000101	0101 001 010 000101
SW R3, R4, 010100	0101 011 100 010100

— Nand

NDU R5, R6, R7	0010 101 110 111 000
NDZ R4, R3, R1	0010 100 011 001 001
NDC R2, R4, R6	0010 010 100 101 010

— Store Again

SM R4, 11111111	0111 100 011111111
LM R4, 1111111	0110 100 011111111

— Branching Stuff

BEQ R1, R2, 010101	1100 001 010 010101
BEQ R1, R1, 010111	1100 001 001 010111

— Jump

JAL R6, 010101010	1000 110 010101010
JLR R4, R5	1001 100 101 000000