ALUSrcA = 0
ALUSrcB = 11
ALUOp = 00

MemRead
IRWrite
ALUSrcA = 0
ALUSrcB = 01
ALUOp = 00
PCWrite
PCSource = 00

Start

(Op = ‘LW’) or (Op = ‘SW’)

Instruction fetch

0

Memory reference FSM
(Figure 5.38)

R-type FSM
(Figure 5.39)

Instruction decode/
Register fetch

1

ALUSrcA = 0
ALUSrcB = 11
ALUOp = 00

Branch FSM
(Figure 5.40)

Jump FSM
(Figure 5.41)

(Op = R-type)

(Op = ‘BEQ’)

(Op = ‘JMP’)

(Op = ‘Mem’)

Instruction fetch