# ECE 3223
# Homework 7

Fall 1997 Dr. Havlicek

The following program has been assembled and loaded into our $\mu$P's memory beginning at address \$1000:

```
LDI R0,$1000        ADD R2,R1,R0
LDI R1,$2000        PUSH R2
LDI R2,$0003        LDI R3,$1017
LDI R3,$F000        LDI R2,$101A
ORI R2,R3,R2        NOT R0,R0
ADD R3,R0,R1        JNZ R2
MOV SP,R3           JMP R3
PUSH R2             PUSH R0
SRL R0,R0           LOD R0,$2000
SRL R0,R0           POP R1
SRL R0,R0           POP R2
SRL R0,R0           POP R3
SRI R1,R0           ORX R1,R1,R3
```

Suppose the $\mu$P executes the program.

1. How many clock cycles does this take?
2. What values are in R0, R1, R2, and R3 after the last instruction (the ORX) has been executed?
3. What is the value in PC after the ORX instruction has been executed?