Score: _____   Name:_____

ECE 3055 Quiz III, Wednesday, September 22

The instruction, **sub $6, $5, $10** is assembled using standard MIPS/SPIM syntax and executed on the MIPS single clock cycle datapath described in Section 4.4 and summarized in Figure 4.17 of the textbook. Assume the registers are all loaded with the register number prior to execution and all data memory words are loaded with the (byte addressable) memory address of the first byte of the 32-bit word. Fill in the values of the following control signals and buses.

MIPS Datapath bus values in hexadecimal

Instruction Bus = 00AA3022

Register file Read Data Bus 1 = C0000005

ALU Result Bus = FFFFFFFB

Write Register Bus = 06

Write Data Bus = FFFFFFFB

MIPS Control Signals in Binary

RegWrite = 1

ALUSrc = 0

MemtoReg = 0

ALU Op (two-bits) = 10

ALU control (four bits) = 0110