

ECE 152B – Spring 2013

Experiment #2: Basic Undergraduate RISC Processor Lab

Grade Sheet - Group # _____

A. Design Approval (5 points): _____ (5) - Due Week 6 in your lab section

B. Group BURP simulation Demo (30 points): _____ (30) - Due Thursday of Week 7

1. Verilog/VHDL model of entire BURP _____ (15)

2. Correctness of ModelSim simulation of BURP _____ (15)

C. Group Demonstration (65 points): _____ (65) - Due Thursday of Week 9

1. Instructions work (30 points total): _____ (30)

_____ JC _____ JMP _____ INC

_____ MOV _____ MVI _____ ADD

_____ PUSH _____ POP _____ SUB

_____ SC _____ CC _____ AND

_____ IN _____ OUT _____ OR

_____ NOP

2. Demonstration program works properly. _____ (15)

3. Design pipelined correctly and efficiently. _____ (5)

4. Controller designed efficiently. _____ (5)

5. Stack overflow and underflow detected. _____ (5)

6. Carry and borrow work properly. _____ (5)

D. Individual knowledge (5 points each):

Member #1: _____ Score: _____ (5)

Member #2: _____ Score: _____ (5)

E. Lab Report (100 points): _____ (100) - Due Thursday of Week 10

Abstract _____ (5)

Hardware Description _____ (30)

Functional Block Diagram

Schematic Diagram

Text Description: Building Blocks, Data Path, Busses, Control Unit

Verilog/VHDL of your BURP

Experiment Description _____ (25)

Description of operations

Test program (description and program source code)

ModelSim simulation results

Discussion _____ (25)

Timing considerations; Pipelining issues; Performance

English/grammar _____ (5)

Report Organization _____ (5)

Conclusion _____ (5)

Total (A+B+C+D.1+E) of Member #1: _____ (200)

Total (A+B+C+D.2+E) of Member #2: _____ (200)

Demo TA

Report TA