Computer Architecture
Quiz 3, 10 Points
Time: 20 min.
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الأسم: ----------

1. (5 Points) **True or False?**

a. In a single cycle machine, instruction processing broken into multiple stages. [ ]

b. R-Type instructions are usually takes the shortest execution time. [ ]

c. Datapath: consists of hardware elements that deal with and transform data signals. [ ]

d. A multi cycle machine follow data flow model. [ ]

e. In a single cycle machine, the clock cycle specified by the longest instruction. [ ]

2. (5 points) Assume: access memory units (read or write) takes 200 picosecond(ps), ALU and adders takes 100ps, register file (read or write) takes 50ps, and other combinational logic takes 0ps. Based on the bellow Datapath figure, compute the Delay time for the following Instruction:

a. `Addi Rt,Rs,imm`

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b. `LW Rt, Offset(Base)`

Do your best, Good Luck