

Computer Organization and Assembly Language

Quiz# 4, Spring 2025

Thursday March 06, 2025

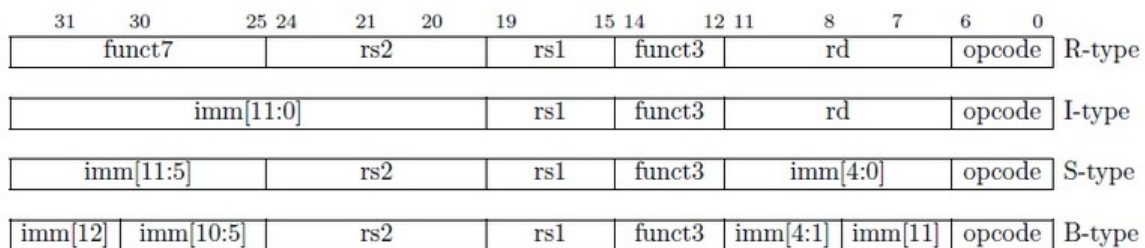
Name: _____

Roll Number: _____

Maximum Time Allowed: 20 minutes

Maximum Marks: 10

1. Instruction formats for four types of RISC-V instruction set and opcodes for six different instructions is shown below: [3]



Instruction	opcode
add (add)	0110011
sub (sub)	0110011
addi (add immediate)	0010011
ld (load doubleword)	0000011
sd (store doubleword)	0100011
beq (branch equal)	1100011

Convert the machine code instruction 0x00C58533 into assembly language instruction.

2. How the decimal number -17.125 will be stored in memory (using IEEE-754 format - single precision)? Show your work. [4]

3. Write RISC-V assembly language code to multiply a number in x10 by 9 using only shift and add operations. Store the result in x11. [3]