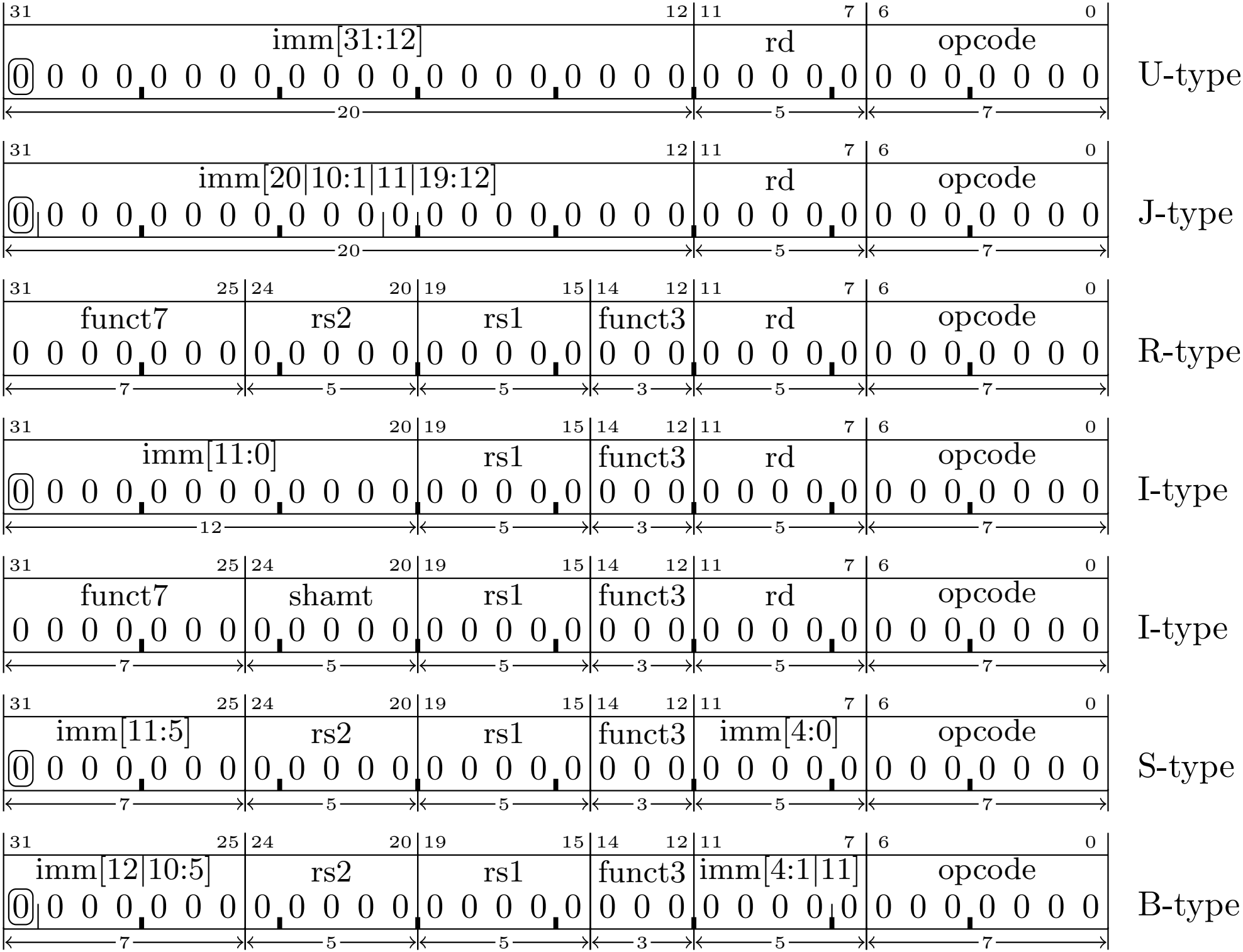
31 12 11 7 6 0
imm[31:12] rd opcode
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
20 5 7
U-type
31 12 11 7 6 0
imm[20|10:1|11|19:12] rd opcode
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
20 5 7
J-type
31 25 24 20 19 15 14 12 11 7 6 0
funct7 rs2 rs1 funct3 rd opcode
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
7 5 5 3 5 7
R-type
31 20 19 15 14 12 11 7 6 0
imm[11:0] rs1 funct3 rd opcode
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
12 5 3 5 7
I-type
31 25 24 20 19 15 14 12 11 7 6 0
funct7 shamt rs1 funct3 rd opcode
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
7 5 5 3 5 7
I-type
31 25 24 20 19 15 14 12 11 7 6 0
imm[11:5] rs2 rs1 funct3 imm[4:0] opcode
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
7 5 5 3 5 7
S-type
31 25 24 20 19 15 14 12 11 7 6 0
imm[12|10:5] rs2 rs1 funct3 imm[4:1|11] opcode
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
7 5 5 3 5 7
B-type