



FIGURE E.6 Instruction formats for desktop/server RISC architectures. These four formats are found in all five architectures. (The superscript notation in this figure means the width of a field in bits.) Although the register fields are located in similar pieces of the instruction, be aware that the destination and two source fields are sometimes scrambled. Op = ¼ the main opcode, Opx = an opcode extension, Rd = the destination register, Rs1 = ¼ source register 1, Rs2 = source register 2, and Const = a constant (used as an immediate, address, mask, or shift amount). Although the labels on the instruction formats tell where various instructions are encoded, there are variations. For example, loads and stores, both use the ALU immediate form in MIPS. In RISC-V, loads use the ALU immediate format, while stores use the branch format.