Alan S. Thomas

CSI 130-01CA

Pg. 5-27: 4, 5, 6, 8, 12, 13ab, 14a

4.) There are 0 general purpose registers located on figure 5.2. There registers that are listed are special purpose registers.

5.) There are 5 special purpose registers located on the processor illustrated in figure 5.2.

6.) The functionality of the microarchitecture can be determined by what the processor is designed to do. In an essence, the ISA provides the tools for the microarchitecture to use and determines the structure of the microarchitecture

8.) The ISA format described in this chapter is that the first 3 bits of an 8 bit binary code will consist of the opcode, the subsequent 5 bits will be the operand. Barrowing from the example on page 5-8, an ISA code would follow the below format.

10101001 > 101 01001 > 101 (add) 01001 (9)

12.) a. 2 b. 3

13.) a. Maximum of 4 indices. b. 64 possible locations in the base value \* 4 possible indices. 256 maximum memory locations available.

14a.) Trace attached to back.