**DATA MANIPULATION**

1. Which of the following is not contained in a CPU?

A. Instruction register B. Program counter

C. General-purpose register D. Memory cell

2. Which of the following instructions (as described in the language description table) change the content of the memory cell?

A. 10AB B. 20AB C. 30AB D. 40AB

3. Which of the following instructions (as described in the language description table) place 00000000 in the register A?

A. 1A00 B. 2A00 C. 3A00 D. 200A

4. Which of the following instructions (as described in the language description table) place 00000000 in the register 5?

A. 25FF B. 9555 C. 15FF D. 8555

5. Which of the following instructions (as described in the language description table) will not change the contents of the register 5?

A. 1508 B. 2508 C. A503 D. A508

6. Which of the following instructions (as described in the language description table) is equivalent to requesting that register A be rotated to the left by three bits?

A. AA05 B. AA03 C. AA08 D. AA01

7. Which of the following instructions (as described in the language description table) change the contents of register 7?

A. 4077 B. 4075 C. 4057 D. 37BB

8. The following table shows a portion of a machine's memory containing a program written in the language described in the language description table. Answer the questions below assuming that the machine is started with its program counter containing 00.

address content

00 21

01 0B

02 14

03 04

04 C0

05 00

A. What bit pattern will be in register 4 when the machine halts?

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B. What bit pattern will be in register 1 when the machine halts?

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