**CSCI 360-1 Assignment 6 - Dump Assignment Fall 2017**

**30 points**

**Run the following program on the Marist mainframe:**

DUMP1 CSECT  
 USING DUMP1,15 ESTABLISH A BASE REGISTER  
 L 1,ONE LOAD THE FIRST NUMBER INTO R1  
 L 2,TWO LOAD THE SECOND INTO R2  
 AR 1,2 ADD THE TWO NUMBERS  
 ST 1,THREE STORE THE RESULT  
 XDUMP THREE,4 DUMP THE RESULT  
 BR 14 RETURN TO CALLER  
\*  
ONE DC F'64' FIRST NUMBER  
TWO DC F'32' SECOND NUMBER  
EOFFLAG DC C'0' A FLAG SAVE AREA  
THREE DS CL4' ' SUM OF THE TWO NUMBERS  
\*  
 END DUMP1

**After running the above program you should be able to answer the following questions:**

1. What is the address of the next instruction to be executed?
2. What is the address of the instruction that caused the abend?
3. What type of error occurred?
4. What actually causes this error?
5. Correct the error by rewriting the section of code that caused it.
6. What is the contents of register 1 in decimal?
7. What does the value in reg 1 represent at the time of ABEND?
8. Why is the LOC address of the storage area with the label ONE on it 000018 when the branch statement before it whose LOC address is 000014 only takes up 2 bytes?
9. What are the contents of the two bytes of user storage starting at address 000016? What do they represent?
10. What are the contents of the byte saved at address 00001B? Does this byte represent the first byte of a full word?
11. Circle each of the following that are synonyms for the storage of the same length?
    1. 6 hex digits
    2. 4 bytes
    3. 8 hex digits
    4. 32 bytes
    5. 32 bits
    6. doubleword
    7. fullword
    8. byte
    9. foot
    10. 64 bits
    11. halfword
    12. meter
12. If the dump program error were corrected, what value would the storage area at label THREE contain?
13. What two instructions have you worked with which cause data conversion to take place?
14. What is the decimal equivalent of hex 0002BA14?