**Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**CSCI 360-2 Assignment 4 – ABENDs and Dump Reading Fall 2020 30 points**

**Run the following program on the Marist mainframe. Be sure to put your KC-ID and name in the first line and you should have no blank lines before or after what is provided below:**

//KC03nnnA JOB ,'your name here',MSGCLASS=H

//JSTEP01 EXEC PGM=ASSIST

//STEPLIB DD DSN=KC00NIU.ASSIST.LOADLIB,DISP=SHR

//SYSPRINT DD SYSOUT=\*

//SYSIN DD \*

DUMPEX1 CSECT  
 USING DUMPEX1,15 ESTABLISH A BASE REGISTER  
 L 2,FIRST LOAD THE FIRST NUMBER INTO R2  
 L 3,SECOND LOAD THE SECOND INTO R3  
 AR 2,3 ADD THE TWO NUMBERS  
 ST 2,SUM STORE THE RESULT  
 XDUMP SUM,4 DUMP THE RESULT  
 BCR B'1111',14 RETURN TO CALLER  
\*  
FIRST DC F'33' FIRST NUMBER  
SECOND DC F'98' SECOND NUMBER  
EOFFLAG DC C'N' A FLAG FOR FUTURE USE  
SUM DS CL4' ' SUM OF THE TWO NUMBERS  
\*  
 END DUMPEX1

/\*

//

**After running the above program you should be able to *type in your answers* to the following questions based on the ABEND dump generated. There are five blank lines between each of questions 1 through 13. Please do not change this. Each question is worth 2 points:**

1. What is the address of the ***next*** instruction to be executed?

1. What is the address of the instruction that caused the abend?

1. Give the S0C number and name of the type of error that occurred?

1. What actually causes this error?

1. Correct the error by rewriting the section of code that caused it.

1. What is the value in register 2 in decimal?

1. What does the value in register 2 represent at the time of ABEND?

1. Why is the LOC address of the storage area with the label FIRST on it 000018 when the branch statement before it whose LOC address is 000014 only takes up 2 bytes?

1. What are the contents of the two bytes of user storage starting at address 000016? What do they represent?
2. What are the contents of the byte saved at address 00001B? Does this byte represent the first byte of a full word?
3. If the ABEND error was corrected, what value would the storage area at label SUM contain, in both hex and decimal?
4. What is the condition code at the time of ABEND?
5. What is the ILC (Instruction Length Code) value at the time of ABEND?
6. Which instruction and operands set the condition code found at the time of ABEND?
7. Change the font to **red** for each of the following that are synonyms for storage of the ***same*** length?
8. 6 hex digits
9. 4 bytes
10. 8 hex digits
11. 32 bytes
12. 32 bits
13. doubleword
14. fullword
15. byte
16. foot
17. 64 bytes
18. halfword
19. meter