**FACULTY OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY**

**UNIVERSITY PUTRA MALAYSIA**

**SCL**

**COMPUTER ORGANIZATION AND ASSEMBLY LANGUAGE**

**SECOND SEMESTER 2021/2022**

1. Write the instructions in assembly language.
2. set AX to hexadecimal value of B800H. Ans: MOV AX, B800H
3. copy a value of AX *to data segment beginning location 39.*

Ans: MOV [0039], AX

1. set CH to binary value 11011111b Ans: MOV CH, 11010000B
2. set BX to 15Eh Ans: MOV EX, 015H
3. Show the result in the destination operand. Indicate if the instruction is invalid. Assume that BYTE1 is defined as DB 05 and WORD3 is defined as DW 216.
4. MOV CX,25H Ans: Assume before CX=0000H, after CX= 0025H
5. MOV CL,0 Ans: Assume before CX=FFFFH, after CX=FF00H
6. MOV AX, BYTE1 Ans: invalid because different size
7. ADD DL, BYTE1 Ans: valid, same size, assume before DX = 0120H, after DX= 0125H
8. SUB CL, WORD3 Ans: invalid
9. ADD DH, 051CH Ans: invalid
10. What is the value in the CX register after the sequence of the following instructions are executed? Assume the initial value in the CX register is 0000H.

A DB 11110100B

B DB 00000111B

MOV CH, 00000000B

MOV CL, B

ADD A, CL

CMP CL, B

JE L10

MOV CL, A

L10: ADD A, B

Ans: 0007H

1. How many times does the following LOOP instruction will be executed?

MOV CX, 9

L2:

SUB CX, 2

LOOP L2

Ans: 2

1. What is the value in the AX register and/or BL register after the following sequence of instructions are executed?

MOV BL, 01110000B

ROR BL, 01

MOV CL, 03

ROR BL, CL

MOV AL, 0EH

DIV BL

AX= 0002H/2D BL= 07H