

**HOME WORK FOR EE390 SECTION 1 AND 2**

1. For the following program, assume CS=DS=SS=ES and “LABEL=CS:0015”  
Execute the program and fill the appropriate **stack** segment locations the registers BX, CX, DX and SP register.

```

Title "PUSH POP AND SUBROUTINE"
.MODEL      small
.STACK     32

.DATA
.CODE
        MOV  AX,@DATA
        MOV  DS,AX
        MOV  SP,0200H
        MOV  AX,0080H
        MOV  BX,7900H

        PUSH AX
        PUSH BX
        CALL SUBROUT1
LABEL:POP  CX
        POP  DX
        MOV  AH,4CH
        INT  021H
        SUBROUT1 PROC NEAR
                INC  AX
                MOV  CX,AX
                RET
        SUBROUT1 ENDP
END
    
```

Registers	Contents
<b>BX</b>	
<b>CX</b>	
<b>DX</b>	
<b>SP</b>	

Stack Address	Memory Content
<b>SS:0200</b>	
<b>SS:01FE</b>	
<b>SS:01FC</b>	
<b>SS:01FA</b>	
<b>SS:01F8</b>	
<b>SS:01F6</b>	
<b>SS:01F4</b>	
<b>SS:01F2</b>	
<b>SS:01F0</b>	

2. Execute the following program and find the REGISTER VALUES.

```

TITLE "XLAT"
.MODEL SMALL
.STACK 32H
.DATA
VAR DB "MISEIOHNT0_IPAOTTAS"
VAR1 EQU 10H
.CODE
        MOV  AX,@DATA
        MOV  DS,AX
        XOR  AH,AH
        MOV  AL,VAR1
        LEA  BX,VAR
        XLAT
        CBW
        MOV  DX,AX
        MOV  AX,4C00H
        INT  21H
END
    
```

1. Write the value stored in DX register : \_\_\_\_\_
2. Can “LEA” instruction (line 12) be replaced with “OFFSET” instruction: \_\_\_\_\_
3. What type of operators are “EQU” & “DB”: \_\_\_\_\_
4. What is the purpose of the last two lines before ‘END’ instruction?