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,7900 H
    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
```

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

```
TITLE "XLAT"
.MODEL SMALL
.STACK 32H
.DATA
    VAR    DB  "MISEIOHTNO_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?