Sanjivani College of Engineering
Department of Computer Engineering
SPOS Tutorial -2

1. Compare Macro and Function
2. What are the different ways in which we can specify arguments to macro call? Expalin with the help of examples

3. Consider the following code segment

```
MACRO
        INCR &A, &B, &REG
        MOVER &REG, &A
        ADDS &A, &B
        MOVEM &REG, &A
MEND
MACRO
        ADDS &F, &S
        MOVER AREG, &F
        ADD AREG, &S
        MOVEM AREG, &S
        WRITE &S
MEND
MACRO
        SUBS &F, &S
        MOVER BREG, &F
        SUB BREG, &S
        MOVEM BREG, &S
MEND
START 200
READ N1
READ N2
ADDS N1, N2
SUBS N1, N2
INCR N1, N2, DREG
STOP
N1 DS 2
N2 DS 2
```

   Show the contents of i) MNT ii) MDT iii)ALA

4. What information must be supplied by an assembler to the direct linking loader? Explain the significance of this information with respect to design of direct linking loader

5. Compare compile-and-go loader and absolute loader
6. What is the use of overlay structure
7. Explain the functioning of compile-and-go loader scheme. What are the advantages and disadvantages of this scheme

8. Write the entries of ESD, TXT, RLD, and Global External Symbol Table (GEST) for PG1 and PG2 given below

```
Relatice address        Source program
0               PG1 START
                        ENTRY PG1ENT1, PG1ENT2
                        EXTRN PG2ENT1, PG2
20              PG1ENT1 ----------
                        ----------
                        ----------
30              PG1ENT2 ----------
40                      DC A(PG1ENT2)
44                      DC A(PG1ENT2+15)
48                       DC A(PG1ENT2-PG1ENT1-3)
52                      DC A(PG2)
56                      DC A(PG2ENT1 + PG2 – PG1ENT1 +4)
                        END

0                PG2 START
                        ENTRY PG2ENT1
                        EXTRN PG1ENT1, PG1ENT2
16              PG2ENT1 ----------
                        ----------
24                       DC A(PG1ENT1)
28                      DC A(PG1ENT2+15)
32                      DC A(PG1ENT2-PG1ENT1-3)
                        END
```

9. Explain the design of relocating loader
10. Explain the design of direct linking loader? Mention and give significance of required data structure

Prepared by
Mr.N.G.Pardeshi
Subject Teacher

Approved by
Dr.D.B.Kshirsagar
HOD