

Convert the following program in to the Assembly language.

```
MACRO
&LABEL EXITLINK &TYPE
    AIF  ('&TYPE' NE "").FOUND
MNOTE  '**** MISSING TYPE PARAMETER'
MEXIT
.FOUND ANOP
    AIF  ('&TYPE' EQ 'N').NORMAL
    AIF  ('&TYPE' EQ 'R').RETURN
    AIF  ('&TYPE' EQ 'V').VALUE
    AIF  ('&TYPE' EQ 'B').BOTH
MNOTE  '****INVALID VALUE FOR TYPE ****'
MEXIT
.NORMAL ANOP
    L    13,4(13)          PICK BACKWARD POINTER
    LM   14,12,12(13)     PICK ALL REGS
    BR   14                RETURN TO CALLER
    AGO  .DONE
.RETURN ANOP
    L    13,4(13)          PICK BACKWARD POINTER
    L    14,12(13)         PICK ALL REGS EXCEPT
    LM   0,12,20(13)      REGISTER 15
    BR   14                RETURN TO CALLER
    AGO  .DONE
.VALUE  ANOP
    L    13,4(13)          PICK BACKWARD POINTER
    LM   14,15,12(13)     PICK ALL REGS EXCEPT
    LM   1,12,24(13)      REGISTER 0
    BR   14                RETURN TO CALLER
    AGO  .DONE
.BOTH  ANOP
    L    13,4(13)          PICK BACKWARD POINTER
    L    14,12(13)         PICK ALL REGS EXCEPT
    LM   1,12,24(13)      REGISTER 15 AND 0
    BR   14                RETURN TO CALLER
```

```
.DONE      ANOP
           MEND
MAIN      START
           EXITLINK Q
           EXITLINK
           EXITLINK V
           EXITLINK N
           EXITLINK R
           EXITLINK B
           END  MAIN
```

Q2. Make the following tables for the above example

- a) Macro Definition Table
- b) Macro Name Table
- c) Argument List arrays