

1. Define System Programming.State difference between Application programs and system programs.
2. Explain different types of editors in brief.
3. Explain two pass assembler with flowchart and data structures.
4. Explain different types of intermediate code representation with example.
5. Wirth reference to assembler ,explain following tables with suitable example.  
1)MOT 2) POT 3) ST 4) LT
6. Compare compilers and interpreters.
7. Write a short note on parameterized macros.
8. Explain different features of macros.
9. Explain forward reference problem and how it is handled in assembler design.
10. Explain macro and macro expansion.
11. Explain with example conditional macro expansion.
12. Consider following code. What will be the entry come under MNT ?

The current values for MDTC and MNTC are MDTC=1 and MNTC=1

MACRO

```
INCR4      &AR1, &AR2, &AR3
    A      1, &AR1
    A      2, &AR2
    A      3, &AR3
```

MEND

Option A: Index-4, Macro name- INCR4, MDT index- 1

Option B: Index-1, Macro name- MACRO, MDT index- 1

Option C: Index-1, Macro name- INCR4, MDT index- 1

Option D: Index-4, Macro name- MACRO, MDT index- 4

13. Explain databases used in Single pass assembler design with suitable Example.

14. What is Macro call, Macro expansion, Macro definition? How is macro different from subroutine?