

ROLAND INSTITUTE OF TECHNOLOGY, SURYA VIHAR, BERHAMPUR
DEPARTMENT OF COMPUTER SCIENCE ENGG. & INFORMATION TECHNOLOGY
SYSTEM PROGRAMMING, 4TH SEMESTER
ASSIGNMENT 1
(INTRODUCTION, ASSEMBLER, MACRO PROCESSER)

- 1) What is the work of *USING* pseudo-op?
- 2) Describe the structure of BT (Base Table) used in pass 2 of assembler?
- 3) What is dummy argument in macro? Explain with example.
- 4) Define a formal system mathematically.
- 5) For the C statement: $c = a + b$; find the codes generated in code generation phases of a compiler.
- 6) Describe the overall design of a pass1 of an assembler with the description of the data structure used in it.
- 7) Describe the conditional macro expansion facilities with suitable examples.
- 8) Write an assembly language program for executing the C instruction; $d = a + b - c$; assume that address of $a = 100$, $b = 200$, $c = 300$, $d = 400$.
- 9) Describe the databases used in pass 1 of macro processing.
- 10) Write short notes on General machine structure
- 11) What is the objective of studying system programming?
- 12) What do we mean by system programming?
- 13) What are system programs? State and discuss the hierarchy of system program?
- 14) Give the machine structure of a general machine?
- 15) What property differentiates between data and instruction?
- 16) Define assembler with the help of a block diagram.
- 17) Define loader with the help of a block diagram.
- 18) Define compiler with the help of block diagram.
- 19) Define formal systems.
- 20) State different types of multiprogramming.
- 21) Differentiate between multiprogramming and multiprocessing.
- 22) How paging and virtual memory concepts do helps in memory management system?
- 23) Discuss the features of an operating system?
- 24) State the Von Neumann architecture with a diagram.
- 25) What is the unit of memory in 360 machines?
- 26) What is a nibble?
- 27) Discuss the register organization in a 360 machine?
- 28) How does register help in accessing memory locations?
- 29) Explain different types of data in 360 machines?
- 30) Explain different types of instruction formats in 360 machines?
- 31) Illustrate an example to show address modification in machine language.
- 32) Illustrate an example to show the use of index register in machine language.
- 33) Illustrate an example to show the use of looping in machine language.
- 34) Which property of instruction is depicted in question no 20?
- 35) Discuss the hierarchy of programming language till date.
- 36) Explain with an example the features of assembly language?
- 37) What are literals and how they help in assembly language programming?
- 38) Discuss the general procedure for design of an assembler?
- 39) With an example explain how an assembler assembles a source code?
- 40) Discuss the pass 1 and pass 2 of an assembler in brief?
- 41) Discuss the data structures used in pass 1 and pass 2 of an assembler?
- 42) Discuss the formats of data bases used in pass 1 and pass 2 of an assembler?
- 43) With an example explain how the data bases are filled in pass 1 and pass 2 in an assembler?
- 44) Discuss pass 1 of an assembler with a data flow diagram?
- 45) Discuss pass 2 of an assembler with a data flow diagram?
- 46) What are the modules under which the functions of an assembler can be categorized in an assembler?
- 47) Discuss the significance of table processing in system programming?
- 48) Discuss the techniques that are basically used in table processing?
- 49) Discuss various search techniques used in table processing?
- 50) Discuss various sorting techniques used in table processing?
- 51) Differentiate between bucket and radix exchange sort?
- 52) Differentiate between shifting and shell sorting?
- 53) How in random entry search better than binary search?
- 54) Discuss the significance of macro processing in system programming?
- 55) What is a macro? Define the structure of a macro?
- 56) Discuss the feature of macro?
- 57) With an example discuss macro with arguments?
- 58) With an example discuss macro calls within macro?
- 59) With an example discuss macro with conditional statements?
- 60) With an example discuss macro defining macro?