

System Programming (CSE-210, Dec-2005)

Note: Section A is compulsory. Attempt any four questions from Section-B and any two from Section-C.

Section-A

1. a) What do you mean by multi-window editor?
- b) Differentiate static relocation and dynamic relocation.
- c) What are the features required in assembly to build a two pass assembler?
- d) What is the difference between a phase and a pass, a token and a uniform symbol? Give examples.
- e) In what phase is the elimination of common sub expressions performed? Why?
- f) What is the use of IDE?
- g) What do you mean by shell and shell scripts?
- h) Differentiate LEX and YACC.
- i) What are the different problems with the layered OS model? Define microkernel.
- j) What are different language processor development tools widely used in practice?

Section-B

2. Explain the different phases of the compiler.
3. Explain the pars structure of assembler? Make a flow chart for implementing one-pass assembler.
4. What is the purpose of the code generation phase? Explain with example.
5. What are various debugging techniques?
6. What is the requirement of optimization? Discuss machine independent optimization techniques.

Section-C

7. What are various loader schemes? Explain each scheme with the help of a diagram.
8. (a) What is the difference between binder and overlays? Define dynamic loading.
(b) What is parsing? Construct the parse tree for the following using BNF grammar:-
$$X = U - V \times W + X/Y$$
9. (a) Explain the intermediate code generation taking one example.
(b) Write short notes on the following
 - (i) CISC
 - (ii) FSA