

**System Programming
(CSE-210, Dec-2007)**

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

Section-A

1. a) What is the use of BALR instruction?
- b) Differentiate between pseudo-op and machine -op.
- c) What is instruction counter?
- d) List the steps followed to design an assembler.
- e) What are dummy arguments?
- f) What are advantages of direct linking loader?
- g) What is the use of IDE?
- h) What are different types of cards produced by assembler?
- i) Elimination of sub expression is performed in which phase? Explain.
- j) Name the various databases used in design of compiler.

Section-B

2. What are macro-instruction arguments? Explain.
3. Explain two pass direct-linking loader scheme with the help of a block diagram.
4. Explain the difference between linker and loader. Also discuss their role.
5. What is the requirement of optimization? Discuss machine-independent optimization techniques.
6. List and explain various debugging techniques.

Section-C

7. Specify all the steps in producing a single pass assembler and give the detailed flowchart.
8. What are the various loader schemes? Explain each scheme with the help of a diagram.
9. Differentiate between the following:
 - (a) Binder and Overlays
 - (b) Compiler and interpreter
 - (c) Top down and bottom up parsing.