

## **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.