

**MCA/M09****6253****System Programming****Paper : MCA-404/405****Opt. : (ii)**

Time : Three Hours]

[Maximum Marks : 50

**Note :-** Attempt any **FIVE** questions in all, selecting at least **ONE** question from each unit. All questions carry equal marks.

**UNIT-I**

1. Explain evolution of System Software in detail. 10
2. Design and explain the flowcharts for Pass I and Pass II of the assembler. 10
3. (a) Write down the functions of the analysis and synthesis phases of the assembler. 5
- (b) What do you understand by system programming ? What are the basic fundamental of language processing ? 5

**UNIT-II**

4. What are macros ? Explain macro expansion with the help of suitable algorithm. Explain the Design of Macros pre-processor. 10
5. Explain the following with suitable examples :-
  - (a) Explain Chomsky Hierarchy of language 6
  - (b) Binding and biding times. 4
6. (a) Write algorithm for "Evaluation order of Operators". 5
- (b) Differentiate between Pure and Impure Interpreter. 5

7. Write short notes on the following :

- (a) Operator precedence Parsing 4
- (b) Regular Expression Language. 6

**UNIT-III**

8. What is loader ? Explain various types of loaders ? Differentiate between loader and linkers. 10
9. What are Software tools ? Explain the various house-keeping task performed by software tools in program developmenta and application usages. 10
10. (a) What do you mean by Programming environment explain its various components ? 5
- (b) Write a short note on self relocating programs. 5