Roll No. .....

Total Pages : 02

BT-7/D-19 37204

COMPILER DESIGN

IT-401N

Time : Three Hours] [Maximum Marks : 75

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. Define Compiler and describe its phases with example.

2. (a) What is role of regular expression in Lexical Analysis ?
   (b) What is Finite Automata ?
   (c) Discuss Token Concept.

Unit II

3. Prove using example that context free Grammar are more powerful than regular expressions. Describe Parse Tree using suitable example.

4. (a) Explain top down Parsing.
   (b) Discuss SLR Parser and Implementation of Parsing Table OR Various data structure used for implementation of symbol table.

Unit III

5. What is Direct Acyclic Graph ? Give its significance in code generation. Explain DAG representation for three address code in compiler design.

6. (a) Discuss problems faced in generation of codes.
   (b) Regular allocation and assignment.
   (c) Runtime Storage Management.

Unit IV

7. Explain concept of Global Optimization. Discuss principle sources of optimization.

8. Write notes on the following :
   (a) Optimization of basic blocks of a code
   (b) Peephole optimization
   (c) Source language issues.