

Code No: R7311502

**R7**

**III B.Tech I Semester(R07) Supplementary Examinations, May 2011  
AUTOMATA AND COMPILER DESIGN**

**(Common to Information Technology, Computer Science & Systems Engineering)**

**Time: 3 hours****Max Marks: 80**

**Answer any FIVE questions  
All questions carry equal marks**

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1. Discuss in detail about the Lex program specification. Write a Lex program for recognizing the int, real, while, for, do, #define and #include tokens.
2. Write short notes on the following:
  - (a) Top Down parsing.
  - (b) Error recovery in predictive parsers.
  - (c) Ambiguous grammars.
3. Write short notes on:
  - (a) Computation of First and Follow sets
  - (b) SLR Vs CLR parsers
  - (c) Handles and Handle pruning
4. What is use of intermediate code and it's generation in the compilation process? Explain about different types of intermediate codes with suitable examples.
5. Explain Unrestricted Grammar and give the recognizer for the Unrestricted Grammar?
6. Explain Hash table Organization of Symbol tables for block structure Languages?
7. Explain the machine independent Optimization in Detail?
8. Write and Explain Heuristic Ordering algorithm for DAG with one example.

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