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Reg. No. : .....

Name : .....

**Third Semester M.C.A. Degree Examination, May 2009**  
**06.305.2. : COMPILER DESIGN**  
**(Elective – I)**

Time : 3 Hours

Max. Marks : 100

*Instructions : a) Answer all question from Part A.*  
*b) Answer any two questions from each Module of Part B.*

PART – A

(10×4=40 Marks)

1. What is a preprocessor ? What are the functions performed by preprocessors ?
2. Write notes on various compiler construction tools.
3. What are the four components of a context-free grammar ?
4. What is bootstrapping ? Explain.
5. What is DFA ?
6. What are the reasons for using regular expression to define the lexical syntax of a language ?
7. Write an algorithm to construct an SCR passing table.
8. What are DAGs ? Explain its use in compiler design.
9. What are the methods used for evaluating semantic rules ?
10. Give the structures of address descriptors and register descriptors.

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PART – B

MODULE – I

- 11. Give an algorithm to translate an infix expression into postfix and prefix form. **10**
- 12. Explain various phases of compilation with an example of IF statements. **10**
- 13. Explain predictive passing in detail. **10**

MODULE – II

- 14. Explain how to eliminate ambiguity in grammar. **10**
- 15. Write short notes on the following
  - a) Handler **5**
  - b) Handle Pruning. **5**
- 16. Explain lookahead-LR-technique in detail. **10**

MODULE – III

- 17. Explain how to eliminate left recursion from a translation scheme. **10**
  - 18. What are the different types of intermediate code generally used ? Give suitable example for each.
  - 19. Explain recursive evaluators in detail. **10**
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