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Register Number:

Name of the Candidate:

M.C.A. DEGREE EXAMINATION, May 2015

(THIRD SEMESTER)

331. PRINCIPLES OF COMPILER DESIGN

Time: Three hours Maximum: 100 marks

SECTION -A **(8 × 5 = 40)**

Answer any EIGHT questions

1. Define input buffering. Explain it.
2. Write a short note on NFA
3. What is the role of the parser? Explain it
4. Write short notes on LP parsers.
5. Give a brief note on recursive evaluators.
6. Discuss about overloading of functions.
7. Write a short note on symbol table.
8. Explain back patching procedure calls.
9. Give a brief note on DAG representation of basic blocks.
10. What is meant by peephole optimization? Explain it.

SECTION -B **(3 × 20 = 60)**

Answer any THREE questions

11. Construct NFA for the regular expression $r=(a/b)*abb$ using Thompson's construction algorithm.
12. Give an algorithm for detecting unreachable entries is predictive, operator-precedence and LR parsing tables.
13. Explain about the following:
    a) Intermediate representations
    b) Three-address code
    c) Types of three address statements
    d) Implementations of three address statements
14. Discuss in detail about flow graphs with an example.
15. Discuss in detail about run-time storage management.
