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Roll No

MCADD-704 (2)

M.C.A. (Integrated) VII Semester

Examination, November 2019

Compiler Design

(Elective - I)

Time : Three Hours

Maximum Marks : 70

- Note:** i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Discuss various phases of a Compiler.
b) What is Interpreter? Explain.
2. a) Explain Boot strapping.
b) Why multiple parser are required by a compiler? Describe the strategies for reducing number of parser.
3. a) Differentiate between top down and bottom up parsing.
b) Discuss the tools for chemical analyzer.
4. a) Construct the LR (0) parsing table for the grammar
 - i) $S' \rightarrow Sp$
 - ii) $S \rightarrow (L)$
 - iii) $S \rightarrow x$
 - iv) $L \rightarrow S$
 - v) $L \rightarrow L, S$
b) What do you understand by LR (K) grammar.

5. a) Explain machine dependent and machine independent optimization.
b) How code is generated from DAG's?
6. Compare relative merits and demerits of the following
a) Quadruples
b) Triples
c) Indirect triples
And write the quadruples, triples and indirect triples for the expression
$$-(a + b) + (c + d) - (a + b + c + d)$$
7. a) What is operator precedence parsing? What are its limitations?
b) Explain various steps for constructing SLR parsing tables.
8. Write short notes on any three
a) Back patching
b) Automatic parser generation
c) LEX
d) Semantic error
e) Loop optimization
