St. Thomas' College of Engineering & Technology

B. Tech. 7th Semester, 1st Internal Examination, Jan 2021

Compiler Design (CS 702)

Full Marks: 25   **Time: 50 Min.**

Attempt all the questions.

1. **Choose the correct answer.**   **[1 × 5 = 5]**

i.   Shift reduce parsers are _____
   a) Top down Parser
   b) Bottom Up parser
   c) May be top down or bottom up
   d) None of the mentioned

ii.   In a compiler, keywords of a language are recognized during _____
   a) the code generation
   b) parsing of the program
   c) the lexical analysis of the program
   d) dataflow analysis

iii.   Synthesized attribute can be easily simulated by a
   a) LR grammar
   b) LL grammar
   c) Ambiguous grammar
   d) None of these

iv.   A top-down parser generates
   a) Left-most derivation in reverse
   b) Left-most derivation
   c) Right-most derivation in reverse
   d) Right –most derivation

v.   Which of the following parsers is the most powerful?
   a) SLR
   b) LALR
   c) Canonical LR
   d) Operator-precedence

Short Answer type questions.

2. For the regular expression (a| b)*ba find DFA. Calculate firstpos, lastpos, followpos.   **[5]**
3. Explain symbol table.   **[5]**

Long Answer type questions.

4. Construct SLR parsing table for the following grammar.
   P→(P)P
   P→ε
   Define viable prefix.   **[8 + 2 = 10]**