

R18

Code No: 156CP

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech III Year II Semester Examinations, August - 2022

PRINCIPLES OF COMPILER CONSTRUCTION

(Common to IT, ITE)

Time: 3 Hours

Max.Marks:75

Answer any five questions
All questions carry equal marks

- 1.a) What is the need for a compiler? Explain various phases in compiler construction.
- 1.b) Define token. Explain how it is represented. [10+5]
- 2.a) Give the Lex program structure with an example for identifying keywords in 'C' language.
- 2.b) Convert 01^*+11 Regular expression to NFA and DFA. [8+7]
- 3.a) Define context free grammar, parse tree and syntax tree.
- 3.b) Explain the steps to construct SLR parsing table. [6+9]
- 4.a) What is left factoring and left recursion in context free grammars? Explain the steps to eliminate these in context free grammars.
- 4.b) Write an algorithm for working principle of predicate parser. [8+7]
- 5.a) What are S-attributes and L- attributes grammar? Explain with an example.
- 5.b) Explain the SDD specification of simple type checker. [7+8]
- 6.a) Explain various forms of intermediate code.
- 6.b) Write the three address code for "if and while" statements. [9+6]
- 7.a) Compare various storage allocation methods.
- 7.b) What is DAG? Explain its representation for a basic block. [7+8]
- 8.a) Explain the principle source of code optimization.
- 8.b) Write about data flow analysis of structured program. [8+7]

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