R16

Reg. No:

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech III Year II Semester Regular Examinations May 2019
COMPILER DESIGN
(Computer Science & Engineering)

Time: 3 hours   Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1 **a** Explain The Structure of a Compiler.   5M
   b Explain about LEX tool and write the syntax of LEX program.   7M

OR

2 **a** What is the role of lexical analyzer?   6M
   b Explain LEX Tool.   6M

UNIT-II

3 **a** Define augmented grammar? Construct the LR(1) items for the following   Grammar
       S->CC
       C->aC/d   8M
   b Explain about Predictive parsing.   4M

OR

4 **a** What is an LL(1) grammar? Verify whether the following grammar Is LL(1) or not
       E→ E+T,E→ T ,T→ T*F,T→ F,F-> (E),F→ id   8M
   b Write about LR(0)   4M

UNIT-III

5 **a** Explain about Construction of Syntax trees and DAGs for expressions.   8M
   b Differentiate between L attribute and S attribute.   4M

OR

6 **a** Write about the Applications of SDT.   4M
   b Explain different instructions in 3-address code.   8M

UNIT-IV

7 **a** Explain heap management mechanism.   7M
   b Discuss about access to non-local names.   5M

OR

8 **a** Explain about block structured language.   5M
   b Explain about on Activation tree and activation records.   7M

UNIT-V

9 **a** Construct the DAG for following statement. a+b*c+d+b*c.   7M
   b Explain about loop optimization.   5M

OR

10 **a** Explain about principle source of optimization.   7M
    b Describe the various strategies in register allocation.   5M

*** END ***