

Reg. No:

--	--	--	--	--	--	--	--	--	--

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
 (AUTONOMOUS)
B.Tech III Year II Semester Supplementary Examinations February-2022
COMPILER DESIGN
 (Common to CSE & CSIT)

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- 1 a Explain about Language Processor in compiler Design. 8M
 b What is the need for separating lexical analysis and syntax analysis? 4M

OR

- 2 a Explain LEX Tool with an Lex Programme? 8M
 b Differences between compiler and Interpreter. 4M

UNIT-II

- 3 a Perform Shift Reduce Parsing for the input string using the grammar. 8M
 $S \rightarrow (L)a$
 $L \rightarrow L,S|S$
 a) (a,(a,a))
 b) (a,a)
 b Define Ambiguous grammar with example? 4M

OR

- 4 a Explain about Left factoring and Left Recursion with an example. 6M
 b Construct Predictive Parse Table for the grammar 6M
 $E \rightarrow E+T|T$, $T \rightarrow T*F|F$, $F \rightarrow (E)|id$ and parse the string $id+id*id$.

UNIT-III

- 5 a Describe the evaluation order of SDT with an example. 8M
 b) Define a syntax-directed translation and example? 4M

OR

- 6 a Describe the representation of 3-address code with an example. 8M
 b What are the three functions of backpatching? 4M

UNIT-IV

- 7 a Explain about block structured language. 6M
 b Explain the Non Block Structured Languages? 6M

OR

- 8 a Define Symbol table. Explain different types of Data structure for symbol table 8M
 b Define scope and life time of variable with example? 4M

UNIT-V

- 9 a Explain the simple code generator and generate target code sequence for the 8M
 following statement $d := (a-b) + (a-c) + (a-c)$
 b Give the applications of DAG. 4M

OR

- 10 a Explain optimization techniques on Basic Blocks with simple examples? 6M
 b Role of peephole optimization in compilation process 6M

*** END ***