Q.P. Code: 18CS0514 **R18**

Reg. No: | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech III Year II Semester Supplementary Examinations February-2022

COMPILER DESIGN

(Computer Science & Information Technology)

Time: 3 hours Max. Marks: 60

PART-A

(Answer all the Questions **5 x 2 = 10** Marks)

1	a	Define the Role of Lexical Analyzer.	**2M**
	b	Define Ambiguous grammar.	**2M**
	c	What is bottom-up parsing?	**2M**
	d	Describe scope and lifetime of variable.	**2M**
	e	Give the applications of DAG.	**2M**

PART-B

(Answer all Five Units 5 x 10 = 50 Marks)

UNIT-I

2		Explain the phases of a compiler with neat diagram.	**10M**

OR

3		Discuss the following terms	
	a	Specification of Tokens	**5M**
	b	Recognition of Tokens	**5M**

UNIT-II

4	a	Eliminate left recursion for the following grammar i) E-> E+T/T ii) S->Aa/b ii) T-> T*F/F B->Bad/c iii) F-> (E)/id C->Cde/f	**5M**
	b	Explain about Left factoring with simple example?	**5M**

OR

5		Consider the grammar S->AB|ABad A->d E ->b D->b| ε B->c Construct the predictive parse table and check whether the given grammar is LL(1) or not.	**10M**

UNIT-III

6		Construct CLR Parsing table for the given grammar S->CC C->aC/d	**10M**

OR

7		Explain the Translation scheme of SDD.	**10M**

UNIT-IV

8	**a**	Discuss about symbol table entries.	**5M**
	b	Write about operations on symbol table.	**5M**

OR

9		Explain Representation of Three Address Codes with suitable Examples.	**10M**

UNIT-V

10	**a**	Discuss the various strategies in register allocation.	**5M**
	b	Write about loop optimization techniques.	**5M**

OR

11		Write short notes on	
	a	Simple code generator	**5M**
	b	Register allocation and assignment	**5M**

END