Q.P. Code: 20CS0516

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

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech III Year I Semester Regular Examinations March-2023

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	Give the neat diagram of phase of a compiler	CO2	L1	4M
	b	Explain each phase of a compiler.	CO2	L2	8M
		OR			
2	a	What is LEX.	CO3	L2	2M
	b	Explain the working of a LEX Tool	CO3	L2	10M
		UNIT-II			
3	a	Define parse tree.	CO3	L6	2M
	b	Construct Leftmost and Rightmost derivation and parse tree for the string 3*2+5 from the given grammar.	CO3	L2	10M
		OR			
4	a	What is left recursion? Describe the procedure of eliminating Left recursion.	CO1	L2	6M
	b	Eliminate left recursion for the following grammar E→E+T/T T→T*F/F F→(E)/id	CO3	L2	6M
		UNIT-III			
5	a	Define augmented grammar	CO2	L1	2M
	b	Construct the LR(0) items for the following Grammar S→L=R / R L→*R / id R→L	CO6	L3	10M
		OR			
6		Design the LALR parser for the following Grammar S → AA A → aA A →b	CO3	L6	12M
		UNIT-IV			
7	a	Discuss about symbol table entries.	CO5	L1	6M
	b	Describe the various operations on symbol table.	CO4	L2	6M
		OR			
8	a	List and define various representation of Three Address Codes.	CO5	L1	4M
	b	Explain representation of Three Address Codes with suitable Examples.	CO5	L2	8M
		UNIT-V			
9	a	List the optimization techniques of basic blocks.	CO6	L1	4M
	b	Analyze different types of optimization techniques of basic blocks.	CO6	L4	8M
		OR			
10	a	List all the issues in the design of a code generator.	CO6	L2	4M
	b	Explain the issues to be handled when code generator is designed.	CO6	L2	8M

*** END ***