18CS602

Hall Ticket Number:

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III/IV B.Tech (Regular) DEGREE EXAMINATION

July, 2021   **Computer Science & Engineering**

Sixth Semester   **Compiler Design**

Time: Three Hours   Maximum: 50 Marks

Answer Question No. 1 Compulsorily.   (10X1 = 10 Marks)
Answer ONE question from each Unit.   (4X10=40 Marks)

1.	a)	Define Bootstrapping	CO1
	b)	Give an example to eliminate left recursion with rules?	CO1
	c)	What are the drawbacks of Predictive parsing?	CO1
	d)	What is the classification of LR Parsers?	CO2
	e)	Define an ambiguous grammar?	CO2
	f)	What is syntax directed definition?	CO2
	g)	What is syntax tree?	CO3
	h)	What is semantic action?	CO3
	i)	List the contents in Symbol table?	CO4
	j)	What is backpatching?	CO4

Unit - I

2.	a)	How to design a Lexical Analyzer to identify reserved words and identifiers?	CO1	5M
	b)	Explain how input buffering helps Lexical analyzer in compilation process?	CO1	5M

(OR)

3.	Construct predictive parsing table for the grammar S → A A → aB/Ad B → bBC/f C → cg and check the acceptance of the string 'abfcg'	CO1	10M

Unit – II

4.	Prepare a canonical parsing table for the grammar S → CC C → cC C → d	CO2	10M

(OR)

5.	Construct SLR parsing table for the grammar S → AS/b A → SA/a	CO2	10M

Unit – III

6.	a)	Explain three address codes and mention its types. How would you implement the three address statements? Explain with suitable examples.	CO3 5M
	b)	Translate the expression (a+b)*(c+d)+(a+b+c) into quadruple, triple and indirect triple.	CO3 5M

(OR)

7.	a)	Explain in detail about the issues in the design of a code generator	CO3	5M
	b)	Briefly discuss about simple code generation algorithm	CO3	5M

Unit - IV

8.	a)	Write about implementation of stack allocation scheme	CO4	5M
	b)	What is an activation record? Discuss its syntax	CO4	5M

(OR)

9.	a)	Define symbol table. Explain about the data structures used for symbol table	CO4	7M
	b)	Explain in detail about implementation of Block structured Languages?	CO4	3M