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SNS College of Technology, Coimbatore-35.

(Autonomous)

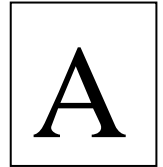
B.E/B.Tech- Internal Assessment -III

Academic Year 2023-2024(ODD)

Fifth Semester

Computer Science and Engineering

19CSB301 – Automata Theory and Compiler Design



Time: 1.5 Hours

Maximum Marks: 50

Part-A (5 x 2 =10Marks)

	CO	Blooms
1. Infer about back patching.	CO4	UND
2. List three kind of intermediate representation	CO4	REM
3. Define Dead Code	CO5	REM
4. What is Peephole optimization?	CO5	REM
5. Outline about global data flow analysis	CO5	UND

Part-B (2x13+14=40 Marks)

6.	a.	Construct the CLR parsing table for the following grammar. check whether the string (a) is accepted or not. $S \rightarrow (L)a$ $L \rightarrow L,S S$ <p style="text-align: center;">or</p>	13	CO4	APP
	b.	Illustrate the Storage allocation strategies in perspective of compiler with neat diagram.	13	CO4	UND
7.	a.	Demonstrate about the translation scheme to generate three address code for the Boolean Expression	13	CO4	APP
		or			
	b.	Explain the principle sources of code optimization in detail with example	13	CO5	UND
8.	a.	(i) What is an activation record? Explain how it is related with run time storage organization	10	CO4	ANA
		(ii) Summarize on back patching	4	CO4	UND
		or			

b. Construct the DAG for the following Basic block & explain it.

14 CO5 APP

1. $t1 := 4 * i$
2. $t2 := a[t1]$
3. $t3 := 4 * i$
4. $t4 := b[t3]$
5. $t5 := t2 * t4$
6. $t6 := \text{Prod} + t5$
7. $\text{Prod} := t6$
8. $t7 := i + 1$
9. $i := t7$
10. if $i \leq 20$ goto (1).

Und-Understanding Rem-Remembering App-Aplying
Ana-Analyze Cre-Creating Eva-Evaluating

Prepared By

Verified By

HoD