SATHYABAMA
INSTITUTE OF SCIENCE AND TECHNOLOGY
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RETEST-CONTINUOUS ASSESSMENT TEST

Program : B.E/B.Tech-CSE/IT **Max. Marks: 30**
Course : Compiler Design **Time : 1 Hour**
Course code : SCS1303 **Sem : V**
Batch : 2018-2022 **Date : 20-11-2020**

Part-A **Answer ALL the questions** **(5×2=10)**

Q.No	Questions	CO (L)
1.	Construct the NFA for the regular expression: i. aa*|bb* ii. (0|123)*	**1(5)**
2.	Compare LL and LR parsers.	**2(4)**
3.	Generate the three address code for: **while** A < B do { A=A+B*C }	**3(3)**
4.	Define Constant Folding.	**4(1)**
5.	Explain the Data flow equations used in global data flow analysis.	**4(2)**

Part-B **Answer ALL the questions** **(2×10=20)**

Q.No	Questions	CO (L)
6.	Construct the Minimized DFA for **(a | b)(a | b)**	**1(5)**
	(OR)	
7.	Consider the following grammar: **E → E + T | T** **T → T * F | F** **F → (E) | id** a. Compute LEADING () and TRAILING (). **(2 marks)** b. Construct the operator precedence parsing table**.** **(3 marks)** c. Parse the input string : **id+id*id$** **(3 marks)** d. Construct the precedence graph**.** **(2 marks)**	**2(4)**

8.	a) Determine the quadruples, triples and indirect triples for the expression: **A = B * - C + B * - C** **(5 marks)** b) Construct a syntax-directed translation for assignment statement and show the trace of moves in generating the three-address code for the statement: **A = - B * (C + D)** **(5 marks)**	**3(5)** **3(5)**

	(OR)	
9.	a) Discuss the importance of loop optimization with suitable example. **(7 marks)** b) Discuss the use of Dominators with an example. **(3 marks)**	**4(6)** **4(6)**