

CRM08	Rev 1.10	CSE	02/08/2021
-------	----------	-----	------------

CONTINUOUS INTERNAL EVALUATION- 3

Dept:CSE	Sem / Div:6th / A & B	Sub: System Software & Compilers	S Code: 18CS61
Date:04/08/2021	Time: 9:30-11:00 am	Max Marks: 50	Elective:N
Note: Answer any 2 full questions, choosing one full question from each part.			

Q N	Questions	Marks	RBT	COs
PART A				
1 a	Define synthesized and inherited attributes. Give examples. Write SDD for simple desk calculator and draw the annotated parse tree for the expression: $1*2*3*(4+5)n$	8	L3	CO2,3
b	Write 3-address code, syntax tree, DAG, quadruples and triples for the instruction: $a-a*(b+c)-(b+c)/d$	8	L3	CO2,3
c	Enlist common three address instruction forms.	9	L2	CO2,3
OR				
2 a	Explain construction of syntax tree with example.	8	L3	CO2,3
b i)	Differentiate between syntax tree and DAG.	8	L3	CO2,3
ii)	Generate target code for the following 3-address code assuming 'a' is an array whose elements are 8-byte values. $x = a[i]$ $b[i] = y$ $y = *q$ $q = q + 4$			
c	Discuss the issues in the design of code generator.	9	L2	CO2,3
PART B				
3 a	Explain the structure of LEX, with any one example program.	8	L2	CO4
b	Define regular expression. Discuss some of the important regular expressions used in LEX.	8	L2	CO4
c	Write a LEX Program to count no.of characters, words, spaces and lines of a text file. Write expected output of your program.	9	L3	CO4
OR				
4 a	Explain the structure of YACC, with any one example program.	8	L2	CO4
b	Explain the use of following built in functions. i) <code>yylex()</code> v) <code>yyparse()</code> ii) <code>yywrap()</code> vi) <code>yyin</code> iii) <code>ECHO</code> vii) <code>yyout</code> iv) <code>yyval</code> viii) <code>lex.yy.c</code>	8	L2	CO4
c	Write a YACC program to evaluate an arithmetic expression involving operators <code>+, -, *, /</code> . Write expected output of your program.	9	L3	CO4

Mrs. Roopa G K / Mrs. Savitha M

HOD