

CRM08

Rev 1.10

CSE

18/07/2022

CONTINUOUS INTERNAL EVALUATION - 3

Dept: CSE Sem /Div: 6th A&B Sub: System Software and Compilers S Code:18CS61

Date:21/07/22 Time: 9:30-11:00 am Max Marks: 50 Elective:N

Note: Answer any 2 full questions, choosing one full question from each part.

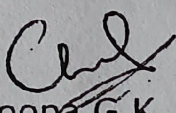
QN	Questions	Marks	RBT	CO's
PART A				
1 a	Define synthesized and inherited attributes. Give examples. Write SDD for simple desk calculator and draw the annotated parse tree for the expression: $1*2*3*(4+5)$	8	L3	CO2, 3
b	Write 3-address code, syntax tree, DAG, quadruples and triples for the instruction: $a-a*(b+c)-(b+c)/d$	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	Differentiate between syntax tree and DAG. Explain value number method for constructing DAG.	8	L3	CO2, 3
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 eliminate comment lines in a C program using state concept. Write expected output of your program. 9 L3 CO4

OR

- 4 a Explain the structure of YACC. Write a YACC program to recognize a string belonging to the language $L = \{a^n b : n \geq 0\}$ 8 L2 CO4
- b Explain the use of following built in functions. 8 L2 CO4
- | | |
|---------------|----------------|
| i) yylex() | v) yyparse() |
| ii) yywrap() | vi) yyin |
| iii) ECHO | vii) yyout |
| iv) yyval | viii) lex.yy.c |
- c Write a YACC program to evaluate an arithmetic expression involving operators +, -, *, /. Write expected output of your program. 9 L3 CO4

Prepared by:


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HOD