

CONTINUOUS INTERNAL EVALUATION- 2

Dept:CSE	Sem / Div:6th / A & B	Sub:System software & Compilers	S Code:18CS61
Date:24/06/2021	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 the following with example: i)Token ii)Pattern iii)Lexeme and Give the formal definition of operations on languages.	8	L1,L2	CO2
b	Explain input buffering strategy, used in lexical analysis phase.	8	L2	CO2
c	Explain the interactions between lexical analyzer and parser with the help of diagram. Also write the look ahead code with sentinels for input buffering strategy used in lexical analysis phase.	9	L2	CO2,3
OR				
2 a	Write the transition diagram to recognize the token below: i. Relational operator ii. Unsigned number iii. Identifier	8	L2	CO2
b	Define regular definition and write regular definition for C identifier and unsigned number.	8	L2	CO2
c	Explain the role of parser in compiler model with diagram. Also explain any 2 error recovery strategies in parser.	9	L2	CO2,3
PART B				
3 a	Write an algorithm to eliminate left recursion. Eliminate left recursion from the grammar: $S \rightarrow Aa b$ $A \rightarrow Ac Sd a$	8	L2	CO3
b	Give the rules for constructing FIRST and FOLLOW sets. Compute FIRST and FOLLOW of the given grammar: $S \rightarrow ,BR;$ $B \rightarrow aF$ $F \rightarrow bF \epsilon$ $R \rightarrow KL$ $L \rightarrow n \epsilon$ $K \rightarrow m \epsilon$	8	L3	CO3
c	What is a shift reduce parser? List the actions of shift reduce parser. Show the actions for the input "id+*id" for the grammar: $E \rightarrow E+T T$ $T \rightarrow T*F F$ $F \rightarrow (E) id$	9	L3	CO3
OR				
4 a	Write an algorithm for table driven predictive parser. Write block diagram.	8	L2	CO3
b	Explain the ambiguity in "dangling else" grammar. How do you eliminate it? Explain.	8	L2	CO3

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c	Construct the predictive parsing table by making necessary changes to the grammar given below and show the parsing of string id+id $E \rightarrow E*T T$ $T \rightarrow id+T id$	9	L3	CO3
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