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Total No. of Questions: [09]

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B. Tech. (CSE) (Semester – 5th)
COMPILER DESIGN
Subject Code: BCSES1501
Paper ID: [18111120]

Time: 03 Hours

Maximum Marks: 60

Instruction for candidates:

1. Section A is compulsory. It consists of 10 parts of two marks each.
2. Section B consist of 5 questions of 5 marks each. The student has to attempt any 4 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

Section – A

(2 marks each)

Q1. Attempt the following:

- a. Differentiate between compiler & interpreter.
- b. Define symbol table with its structure.
- c. Define peep- hole optimization.
- d. Define regular languages with an example.
- e. What do you mean by top down parsing in a syntax tree?
- f. What do you mean by code generation?
- g. Differentiate tokens, patterns and lexeme.
- h. List various phases of compiler.
- i. List the issues in code generation.
- j. Define LEX.

Section – B

(5 marks each)

- Q2. Explain different types of intermediate forms with example.
- Q3. Explain about left factoring and left recursion with example.
- Q4. Calculate FIRST and FOLLOW for the following grammar:
E-> E+T/T
T-> T*F/F
F-> (E)/id

Q5. Explain optimization techniques on Basic Blocks with simple examples?

Q6. Define Symbol table. Explain different types of Data structure for symbol table

Section – C

(10 marks each)

Q7. Construct the DAG for following statement. $a+b*c+d+b*c$

Q8. Consider the grammar

$S \rightarrow xABC$

$A \rightarrow a|bbD$

$B \rightarrow a|\epsilon$

$C \rightarrow b|\epsilon$

$D \rightarrow c|\epsilon$

Construct predictive parsing table for the given grammar.

Q9. Explain different phases of compiler.