

Roll No.

Total No. of Pages : 02

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B.Tech. (CSE) (Sem.-6)

COMPILER DESIGN

Subject Code : BTCS-601-18

M.Code : 79249

Date of Examination : 06-05-2024

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Answer briefly :

- a) NFA, DFA and Transition Table
- b) Language Translators
- c) Type checking
- d) Parse tree
- e) Jumping code
- f) Syntactic Error vs Semantic Error
- g) Syntax tree
- h) DAG
- i) Backpatching
- j) Left recursion.

SECTION-B

2. How does Input Buffering help in recognizing tokens? Explain in detail.

3. Consider the grammar

$$E \rightarrow 2E2$$

$$E \rightarrow 3E3$$

$$E \rightarrow 4$$

Perform Shift Reduce parsing for input string "32423".

4. Explain in detail the design of a simple code generator.

5. Explain the implementation of quadruple, triple and indirect triple in detail.

6. Write a note on Yacc.

SECTION-C

7. Write a note on global data flow analysis used in basic blocks.

8. Explain in detail various types of optimizations with a suitable example.

9. How SLR(1) parsing is performed on the given below grammar, create its parsing table and explain in detail.

$$E \rightarrow T+E/T$$

$$T \rightarrow id$$

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.