Roll No. | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

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.