20322412009

Register Number:

Name of the Candidate:

C-9104

M.Sc.DEGREE EXAMINATION, DECEMBER 2022

(FOR AFFILIATED COLLEGES)

(NEW REGULATION 2022 ONWARDS)

COMPUTER SCIENCE

FIRST YEAR - I SEMESTER

22PCSCE16-1 - COMPILER DESIGN

Time: 3 Hours

Maximum: 75 Marks 10 x 2 = 20 Marks

PART - A

Answer All Questions

- 1. Define Compiler.
- 2. Write the languages denoted by the regular expression (a | b) (a | b)
- 3. Define a Parse tree.
- 4. State the rules for Operator grammar.
- 5. Define inherited translation.
- 6. Define syntax directed translation.
- 7. Write the difference between the syntax trees and parse trees.
- 8. What is a quadruple?
- 9. What is a basic block?
- 10. What are common subexpressions?

PART - B

 $5 \times 5 = 25 \text{ Marks}$

Answer All Questions

11. a) What are the three phases involved in analysis of a source program?

[OR]

- b) Explain the issues in lexical analysis.
- 12. a) What is CGF? Explain its components.

[OR]

- b) Write a short note on top-down parsing.
- 13. a) Explain the synthesized attributes on the parser stack.

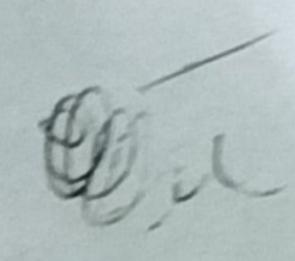
[OR]

- b) Explain the applications of syntax directed translation.
- 14. a) What is static checking? Explain its type.

[OR]

b) Explain the translation of a switch statement.

Role plasc



15. a) Write a short note on the target machine in code generation.

[OR]

b) What is a Code Generation algorithm? Explain.

PART - C

 $3 \times 10 = 30 \text{ Marks}$

(Answer Any Three Questions)

- 16. Construct the DFA for the regular expression (a | b) abb
- 17 Explain the role of Parser.
- 18. Explain the storage allocation strategy using Stack.
- 19. What is Backpatching? Discuss with an example.
- 20. Discuss the concept of Peephole Optimization.

