

203 224/2009

Register Number:

C-9104

Name of the Candidate:

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

PART - A

10 x 2 = 20 Marks

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 x 5 = 25 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.

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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 x 10 = 30 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.