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**DHANALAKSHMI SRINIVASAN COLLEGE
OF ARTS & SCIENCE FOR WOMEN
(AUTONOMOUS)**

(For Candidates admitted from 2020-2021 onwards)

PG DEGREE EXAMINATIONS APRIL - 2021

M.C.A – COMPUTER APPLICATIONS

COMPILER DESIGN



Time: 3 Hrs

Max.Marks: 75

PART - A

CHOOSE THE CORRECT ANSWER

(10X1=10)

1. The action of parsing the source program into proper syntactic classes is called
 - a) General syntax analysis
 - b) Interpretation analysis
 - c) Syntax analysis
 - d) Lexical analysis
2. Does the compiler program translate the whole source code in one step?
 - a) No
 - b) depends on the Compiler
 - c) Yes
 - d) Depends on code
3. A bottom-up parser generates
 - a) Left-most derivation in reverse
 - b) Left-most derivation
 - c) Right-most derivation in reverse
 - d) Right –most derivation
4. The bottom-up parsing method is also called
 - a) Shift reduce parsing
 - b) Predictive parsing
 - c) Recursive descent parsing
 - d) none of these
5. Boolean expressions gives results in the form of _____.
 - a) Strings
 - b) Characters
 - c) Integers
 - d) True or False
6. Compiler translates the source code to _____.
 - a) Machine code
 - b) Executable code
 - c) Binary code
 - d) Both A and C
7. The compiler can detect what type of errors?
 - a)neither logical nor grammatical error
 - b)logical errors only
 - c) Grammatical errors only
 - d) both grammatical and logical errors
8. Code generation can be considered as the?
 - a)First phase of compilation
 - b) Second phase of compilation
 - c)Third phase of compilation
 - d) Final phase of compilation
9. DAG is an abbreviation of?
 - a) Detecting Acyclic Graph
 - b) Data Acyclic Graph
 - c) Dynamic Acyclic Graph
 - d) Directed Acyclic Graph

10. In Directed Acyclic Graph, Leaf nodes represent?

- a) identifiers b) names c) constants d) All of the above

PART- B

ANSWER ALL THE QUESTIONS

(5X7=35)

11. a) Write notes on Compiler construction tools.

(OR)

b) Discuss the role of Lexical analyzer in detail with necessary examples.

12. a) Explain Top down parsing with example.

(OR)

b) Discuss in detail about Shift reduce parsing with example.

13. a) Write about Boolean expressions in compiler design.

(OR)

b) Illustrate with example Intermediate languages.

14. a) What are the issues in the design of code generator?

(OR)

b) Elaborate on run time storage management with examples.

15. a) Discuss parameter passing with example.

(OR)

b) Identify the constructs for optimization in basic block.

PART-C

ANSWER ANY THREE QUESTIONS

(3X10=30)

16. Explain the phases of Compiler with neat diagram.

17. Analyze LR Parser with example.

18. Discuss in detail about procedure calls with example.

19. Describe Peephole optimization with example.

20. Explain global data flow analysis with necessary equations.