SE-158

Seat No.	

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T.Y. B.Tech. (Computer Science and Engineering) (Part - III) (CBCS) (Semester - VI) (New) Examination, March - 2023

COMPILER CONSTRUCTION

Sub. Code : 81546

Day and Date : Friday, 23 - 06 - 2023 **Total Marks : 70**

Time : 10.30 a.m. to 01.00 p.m.

Instructions : **1)** **All questions are compulsory.**

2) **Assume suitable data wherever necessary.**

Q1) Solve MCQs. **[7×2=14]**

a) Optimizing Compiler _____.

i) Optimized to occupy less space

ii) Optimize the code

iii) Take less time to execute

iv) None of these

b) The linker _____.

i) is similar to interpreter

ii) uses source code as its input

iii) is required to create a load module

iv) none of these

c) Which of the following is not a token of C program?

i) 102 ii) #define

iii) MAX iv) 123.33

d) A bottom up parser generates _____.

i) Right most derivations

ii) Right most derivations in reverse

iii) Left most derivations

iv) Left most derivations in reverse

e) _____ is a top-down parser.

i) Operator precedence parser ii) An LALR (k) parser

iii) An LR (k) parser iv) Recursive descent parser

P.T.O.

f) The output of a code generator is a _____.

i) syntax tree ii) target program

iii) parse tree iv) source program

g) The quality of generated code is determined by its _____.

i) behavior and size ii) behavior and speed

iii) speed and size iv) behavior only

Q2) Solve any two of the following. **[2×7=14]**

a) Explain different compiler construction tools.

b) Explain Lex specification.

c) Explain LL (1) parsing algorithm.

Q3) Solve any two of the following. **[2×7=14]**

a) Explain translation of a statement using 6 phases of compiler.

b) What are tokens? Explain specification and recognition of tokens.

c) What is top down parsing? Explain with example.

Q4) Solve any two of the following. **[2×7=14]**

a) What is S attributed definition and L attributed definition? Explain with examples.

b) What are basic blocks?

c) What are issues in design of a code generator?

Q5) Solve any two of the following. **[2×7=14]**

a) Write Syntax Directed Translation Scheme for Assignment Statements.

b) What is peephole optimization?

c) Construct DAG (Directed Acyclic Graph) for following Expression ((a*b)+(a*b))+((c*d)+(c*d))