

Code: CS4T1

II B.Tech - II Semester–Regular/Supplementary Examinations–April 2018

**COMPILER DESIGN
(COMPUTER SCIENCE & ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

PART – A

Answer *all* the questions. All questions carry equal marks

11 x 2 = 22 M

1. a) Define Compiler.
- b) Define Linker and Loader.
- c) Define cross compiler.
- d) Draw the diagram for the language processing system.
- e) Define input buffering.
- f) Explain Left Most Derivation with an example.
- g) Define handle pruning.
- h) Explain stack allocation.
- i) Define constant folding.
- j) Explain dead code elimination.
- k) Define strength reduction.

PART – B

Answer any **THREE** questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) Explain Lexical Analyzer and Syntax Analyzer phases of the compiler .Give an example for each phase. 8 M

b) Write different errors that can occur in different phases of the compiler. 8 M

3. Find the LL(1) parsing table for the following grammar: 16 M

$S \rightarrow CC$
 $C \rightarrow cC|d$

4. Construct the SLR parsing table for the grammar G 16 M

$S \rightarrow (L)|a$
 $L \rightarrow L,S|S$

5. a) Explain various parameter passing techniques with examples. 8 M

b) Write the quadruples and triples for the expression $-(a+b)*(c+d)-(a+b+c)$. 8 M

6. a) Explain in detail about Data Flow Analysis? 8 M

b) Explain register assignment and allocation with an example. 8 M