Code No: RT31051 **R13** SET - 1

III B. Tech I Semester Supplementary Examinations, May - 2019

COMPILER DESIGN

(Computer Science and Engineering)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. Answering the question in **Part-A** is compulsory
3. Answer any **THREE** Questions from **Part-B**

~~~~~~

PART –A

1	a)	Define Boot strapping.	[3M]
	b)	What are the draw backs of predictive parsing?	[4M]
	c)	What are the actions performed by Shift reduce parser?	[4M]
	d)	What are Abstract Syntax trees?	[4M]
	e)	What are the advantages of heap storage allocation?	[4M]
	f)	What is machine independent code optimization?	[3M]

PART -B

2	a)	Discuss in brief about left Recursion and Left Factoring with examples.	[8M]
	b)	Define Regular Expression? Write about the identity rules for regular expressions.	[8M]
3	a)	Construct a Predictive parsing table for the Grammar E→E+T/T, T→T*F/F, F→(E)/id .	[8M]
	b)	Define Ambiguous grammar? Explain it with an Example.	[8M]
4	a)	Construct CLR Parsing table for the grammar S→L=R/R, L→*R/id, R→L.	[8M]
	b)	What is Dangling ELSE ambiguity? How to reduce it.	[8M]
5	a)	Translate the expression –(a+b)*(c+d)+(a+b+c) in to quadruple, triple and indirect triple.	[8M]
	b)	Differentiate between Synthesized and Inherited attributes with suitable examples.	[8M]
6	a)	Define Symbol table? Explain about the data structures used for Symbol table.	[8M]
	b)	Explain in brief about Stack Storage allocation strategy.	[8M]
7	a)	What are loop invariant Computations? Explain how they affect the efficiency of a program.	[8M]
	b)	Explain in brief about different Principal sources of optimization techniques with suitable examples.	[8M]

*****
~~~~~~