R13

SET - 1

III B. Tech I Semester Supplementary Examinations, May – 2019
PRINCIPLES OF PROGRAMMING LANGUAGES
(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**

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PART –A

1	a)	Define Lexeme, Pattern and Token.	[4M]
	b)	What is attribute grammar? Explain how attribute grammar is use for evaluation of the expressions.	[4M]
	c)	Define Shallow and Deep binding for referencing environment of subprograms that have been passed as parameters.	[4M]
	d)	What are advantages and disadvantages of dynamic local variables?	[4M]
	e)	What does a lambda expression specify?	[3M]
	f)	Mention the various applications of multi paradigm languages.	[3M]

PART -B

2	a)	Discuss about Context-free grammar and regular expression? Give the parse tree of a following statement: **A = (B+C) * (D / E).**	[6M]
	b)	Describe differences between Top-Down and Bottom-Up Parsers.	[4M]
	c)	What are the main features of the programming paradigm with examples?	[6M]
3	a)	What is meant by type checking? Differentiate between static type checking and dynamic type checking and give their relative advantages.	[7M]
	b)	Discuss about Guarded Command.	[3M]
	c)	How subprogram names are passed as parameters? Explain.	[6M]
4	a)	Give different parameter passing methods and explain each of them with an example.	[8M]
	b)	Briefly discuss design issues of functions.	[8M]
5	a)	Explain how concurrency is provided in ML.	[8M]
	b)	What is dangling-else problem? Discuss How it can be handled by the programming language.	[8M]
6	a)	Discuss the fundamental concepts of lambda calculus.	[8M]
	b)	Explain about Predicate functions in Scheme.	[8M]
7	a)	For what sort of application logic programming is useful? Briefly explain.	[8M]
	b)	Explain Fact and Rule Statements in Prolog with suitable examples.	[8M]

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