R13

SET - 1

III B. Tech I Semester Supplementary Examinations, October/November- 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   (22 Marks)

1.	a)	Define syntax and semantics of a language.	[3M]
	b)	Write any two design issues for evaluating arithmetic expressions.	[4M]
	c)	Outline the problems associated with aliasing.	[4M]
	d)	List the advantages and disadvantages of dynamic local variables.	[4M]
	e)	Write the importance of Meta Language declaration statements.	[4M]
	f)	List various applications of multi paradigm languages.	[3M]

PART –B   (48 Marks)

2.	a)	A concise and understandable description of a programming language is essential to the language's success. Justify the validity of the statement.	[8M]
	b)	Write the recursive procedures for any grammar using recursive descent parser. List out the limitations of it.	[8M]
3.	a)	Explain the scope and lifetime of variables. Illustrate when they would coincide and when they don't.	[8M]
	b)	Discuss the evaluation procedure for static scope and dynamic scope.	[8M]
4.	a)	Demonstrate the need of Co-Routines with an example.	[8M]
	b)	Explain the significance of nested subprograms with examples.	[8M]
5.	a)	Define monitor. Explain how cooperation synchronization and competition synchronization are implemented using monitors.	[8M]
	b)	Discuss the reasons for using exception handlers in a programming language.	[8M]
6.	a)	Discuss various primitive functions in Scheme.	[8M]
	b)	Demonstrate how functions are defined in Scheme?	[8M]
7.	a)	Explain how PROLOG is different from other logic programming languages? Give an example for each feature.	[8M]
	b)	Discuss Terms and Goal statements in Prolog with examples.	[8M]

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