R13

III B.Tech I Semester Supplementary Examinations, March – 2021
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)	What are the factors influencing the writability of a language?	[4M]
	b)	What is a dangling pointer?	[4M]
	c)	Write differences between function and procedure.	[4M]
	d)	What type of inferencing is used in ML?	[4M]
	e)	What are the three features of Haskell that makes very different from schema?	[3M]
	f)	Differentiate In mode and Out Mode parameter passing mechanisms.	[3M]

PART –B   (48 Marks)

2	a)	Explain language evaluation criteria and the characteristics that affect them.	[7M]
	b)	Discuss in detail about the attribute grammars.	[6M]
	c)	Define CFG. What does it mean for CFG to be ambiguous?	[3M]
3	a)	Explain about static, fixed stack dynamic, dynamic and heap dynamic arrays.	[7M]
	b)	Define scope. Classify scope with relevant examples.	[6M]
	c)	List and explain design issues of pointers.	[3M]
4	a)	What are the problems posed by managing a heap of single-size cell and variable size cell? Explain in detail various methods for reclaiming garbage.	[8M]
	b)	Define a subprogram. Write the semantics of call and return of a subprogram.	[8M]
5	a)	Explain the basic concepts of exception handling.	[8M]
	b)	What are the three possible levels of concurrency in programs? Explain.	[8M]
6	a)	Give comparison of Functional and Imperative Languages.	[8M]
	b)	Write a LISP function that computes nth Fibonacci number.	[8M]
7	a)	Discuss about basic elements of Prolog.	[8M]
	b)	Explain different types of propositions present in logic programming.	[8M]

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