R20

SET - 1

III B. Tech I Semester Regular Examinations, Dec/Jan – 2022-23
PRINCIPLES OF PROGRAMMING LANGUAGES
(Common to CSE(CS),CSE(IOT),CS)

Time: 3 hours   Max. Marks: 70

Answer any **FIVE** Questions **ONE** Question from **Each unit**
All Questions Carry Equal Marks
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UNIT-I
1.	a)	Discuss the formal methods of describing syntax.	[7M]
	b)	What is Context Free Grammar? Explain with an example.	[7M]

(OR)

2.	a)	Briefly discuss the evolution of programming languages.	[7M]
	b)	Define Parsing. Explain the types of parsers.	[7M]

UNIT-II
3.	a)	Explain in detail about the Static binding and Dynamic binding.	[7M]
	b)	Write about Scope and Lifetime of a variable with an example.	[7M]

(OR)

4.	a)	What is the difference between Indexed array and Associative array?	[7M]
	b)	Explain about Operator overloading and its benefits.	[7M]

UNIT-III
5.	a)	Discuss the design issues for Subprograms.	[7M]
	b)	Write about pass-by-value result implementation model for parameter passing with an example.	[7M]

(OR)

6.	a)	What is meant by subprograms reference environment?	[4M]
	b)	Explain the following i)Nested subprograms ii)Static and Dynamic Scoping	[10M]

UNIT-IV
7.	a)	Define the following (i)Visibility and Information Hiding (ii) Classes and Objects (iii)Encapsulation.	[7M]
	b)	Describe the states of a Thread in JAVA and Ada.	[7M]

(OR)

8.	a)	How the object-oriented paradigm supports code reuse?	[7M]
	b)	Explain the key components of Event – driven programming.	[7M]

UNIT-V
9.	a)	List and Explain the distinguishing characteristics of functional programming languages.	[7M]
	b)	Give the syntax of Lambda Calculus and explain the process of evaluating Lambda Calculus.	[7M]

(OR)

10.	a)	Explain the syntax of Recursion and Iteration construct in the Scheme programming.	[7M]
	b)	Write a Prolog program that finds the maximum of a list of numbers.	[7M]