JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech II Year II Semester Examinations, April/May - 2023
PRINCIPLES OF PROGRAMMING LANGUAGES
(Information Technology)

Time: 3 Hours   **Max. Marks: 75**

Note: i) Question paper consists of Part A, Part B.
     ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.
     iii) In Part B, Answer any one question from each unit. Each question carries 10 marks
        and may have a, b as sub questions.

PART - A

(25 Marks)

1.a)	What is the difference between syntax and semantics?	[2]
b)	What are the uses of BNF and EBNF?	[3]
c)	What are named constants? Give an example?	[2]
d)	List the issues related to aliasing.	[3]
e)	What is local referencing environment?	[2]
f)	Give an example for parameters that are subprograms.	[3]
g)	How do you create a thread in Java? Give example?	[2]
h)	List the applications of logic programming.	[3]
i)	What are the features of ML?	[2]
j)	What are the uses of module library?	[3]

PART - B

(50 Marks)

2.a)	List and describe different language domains.	
b)	Discuss various language paradigms.	[5+5]

OR

3.a)	List and explain different phases of compilation process.	
b)	What is attribute grammar? Give an example.	[5+5]

4.a)	What are the different primitive data types provided by various languages? Discuss with examples?	
b)	Define binding, type checking, strong typing, and aliasing.	[5+5]

OR

5.a)	What is the need for iterative statements? Give examples.	
b)	What are user defined data types? Give the syntax and purpose of them.	[5+5]

6.a)	Discuss the design issues of sub programming.	
b)	What is static scope and dynamic scope? Explain the evaluation procedure.	[5+5]

OR

7.a)	Explain different parameter passing methods.	
b)	Discuss the design issues and advantages of overloaded sub programming.	[5+5]

8.a) In detail, discuss the object oriented concepts in Ada 95.
   b) What are the basic elements of Prolog?   [5+5]
OR
9.a) How does concurrency is achieved by using Monitors? Discuss.
   b) What is an exception? What is exception propagation?   [5+5]

10.a) Give the features of LISP.
    b) Compare functional and imperative languages.   [5+5]
OR
11.a) In detail give the key concepts of scripting language.
    b) Write a short notes on uses of separate compilation.   [5+5]

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