Code No: 124DJ

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech II Year II Semester Examinations, December - 2019
PRINCIPLES OF PROGRAMMING LANGUAGES
(Information Technology)

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

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full 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 attribute grammar?	[2]
b)	What are general purpose languages? Give some examples.	[3]
c)	Define row major order and column major order in arrays.	[2]
d)	Discuss about Array data types with suitable examples.	[3]
e)	What are design issues of two-way selection statement?	[2]
f)	List the design issues for subprograms.	[3]
g)	Discuss wait () and release () methods of semaphores.	[2]
h)	Define abstraction and encapsulation.	[3]
i)	Compare scripting and functional programming Languages.	[2]
j)	How procedural abstraction is supported in Python?	[3]

PART-B
(50 Marks)

2.a)	Explain how attribute grammar is used for evaluation of the expressions.	
b)	Explain different phases of compilation.	[5+5]

OR

3.	Describe criteria for evaluating a programming language.	[10]

4.a)	Write a short note on primitive data types in different programming languages.	
b)	Discuss various methods for reclaiming garbage.	[5+5]

OR

5.a)	Discuss about type checking and type compatibility in any two programming languages with examples.	
b)	Discuss about various types of assignment statements.	[5+5]

6.a)	Discuss about user defined over loaded operators in any programming language with examples.	
b)	Write about generic subprograms in Ada.	[5+5]

OR

7.a)	Briefly discuss design issues of functions.	
b)	Discuss scope and life time of variables in C.	[5+5]

8.a) Write a short note on abstract data type in JAVA.
  b) Discuss object oriented programming features of ADA 95.   [5+5]

OR

9.a) Discuss C# threads and contrast with Java threads.
  b) How message passing mechanism is implemented in programming languages.   [5+5]

10.   Explain the application of functional programming language and compare them with imperative languages.   [10]

OR

11.a) Discuss about key concepts and syntax of Haskell.
   b) How module library of Python is used?   [5+5]

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