

Code No: 124DJ

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**B.Tech II Year II Semester Examinations, May - 2017****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, c as sub questions.

PART- A**(25 Marks)**

- 1.a) Define parsing. [2]
- b) Differentiate between procedural languages and object oriented languages. [3]
- c) What mixed-mode assignments are allowed in C and Java? [2]
- d) Write any two design issues for arithmetic expressions. [3]
- e) What is meant by static and dynamic allocation? [2]
- f) List design issues of sub programs. [3]
- g) Define monitor. [2]
- h) What is the difference between checked and unchecked exception in java? [3]
- i) What data types were parts of original LISP? [2]
- j) What type inferencing is used in ML? [3]

PART-B**(50 Marks)**

- 2.a) What do you mean by axiomatic semantics? Explain with an illustration computation of weakest precondition for a sequence of statements.
- b) What are the factors that influence the basic design of programming languages? [5+5]

OR

- 3.a) Describe the basic concept of denotational semantics.
- b) Explain in detail about various language evaluation criteria and the characteristics that affect them. [5+5]

- 4.a) Explain about stack dynamic variables and explicit heap dynamic variables.
- b) Explain about heap management of a single size and variable size segments. [5+5]

OR

- 5.a) Explain about subscript bindings and various array categories.
- b) What are guarded commands? Explain. [5+5]

- 6.a) Explain how subprogram is overloaded. Give examples.
- b) Explain about parameterized abstract data types with an example in C. [5+5]

OR

- 7.a) Explain how various implementation models of parameter passing are actually implemented.
- b) Distinguish between name type compatibility and structure type compatibility using examples. www.ManaResults.co.in [5+5]

- 8.a) Explain in brief about exception handling in Ada.
b) Discuss in detail Terms and Goals statements in Prolog. [5+5]

OR

- 9.a) What is a semaphore? What are the operations performed on a semaphore?
b) Write short notes on C# threads. [5+5]

- 10.a) Explain the basic primitives of LISP. Give suitable examples.
b) Explain in detail ML inferencing process. [5+5]

OR

- 11.a) Explain about the data types and their values in python.
b) What is the importance of module library in python? [5+5]

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