

**Code No.114DJ****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B.Tech II Year II Semester Examinations, May - 2016****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) What is syntax and semantics? [2]
- b) Differentiate between BNF and EBNF. [3]
- c) What is strong typing? [2]
- d) Give a note on guarded commands? [3]
- e) What is the difference between co-routines and sub programs? [2]
- f) What are local referencing environments? [3]
- g) Give a note on C# threads. [2]
- h) What is exception propagation? [3]
- i) What is a scripting language? Give examples. [2]
- j) Compare functional, imperative and scripting languages. [3]

**PART – B****(50 Marks)**

2. What are parse trees? Discuss about ambiguous grammars and attribute grammars. [10]

**OR**

3. Discuss about denotational semantics and axiomatic semantics for common programming language features. [10]

4. Explain the various control structures of any two object oriented programming languages. [10]

**OR**

5. Explain the data types of Java and C#. [10]

6. Discuss in detail about the design issues of subprograms, operations and overloaded operators. [10]

**OR**

7. Explain the parameter passing methods in C++ and Java. [10]

8. Give an introduction and overview of logic programming and discuss about application of logic programming in prolog with an illustration. [10]

**OR**

9. Write a short note on Small talk and Ada 95. [10]

10. Discuss about the types and control structures in python with an illustration. [10]

**OR**

11. Discuss about the fundamentals of FPL and Haskell and its applications. [10]

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