

B. Tech. Degree III Semester Examination November 2013

CS 1305 PRINCIPLES OF PROGRAMMING LANGUAGES

(2012 Scheme)

Time : 3 Hours

Maximum Marks : 100

PART A (Answer *ALL* questions)

(8 x 5 = 40)

- I. (a) Explain the various applications of programming languages.
(b) What are the factors affecting readability of programming languages?
(c) Explain the named constants and variable initialization in programs.
(d) Explain the coroutines.
(e) Explain the polymorphism and inheritance in object oriented languages.
(f) What is exception handling? Explain briefly.
(g) Write short notes on Lambda Calculus.
(h) What are horn clauses?

PART B

(4 x 15 = 60)

- II. Define syntax of a programming language. Discuss the formal methods of describing syntax. (15)

OR

- III. (a) Explain programming paradigms. (8)
(b) What is ambiguous grammar? Explain with example. (7)
- IV. (a) Describe the scope and lifetime of a variable. (7)
(b) Write short note on referencing environment with example. (8)

OR

- V. Explain various methods of passing parameter to subprograms with suitable examples. (15)

- VI. (a) Explain the various design issues associated with object oriented languages. (10)
(b) Explain the features of Java. (5)

OR

- VII. (a) Explain the abstraction and encapsulation. (9)
(b) Describe the features of smalltalk. (6)

- VIII. Explain the functional programming language and its applications. (15)

OR

- IX. Describe the programming language, PROLOG and also write the deficiencies of PROLOG. (15)