BTS-III(S)-05.17-0739 Reg. No. | | | | | | | | |

B

B.Tech. Degree III Semester Supplementary Examination
May 2017

CS 15-1305 PRINCIPLES OF PROGRAMMING LANGUAGES
(*2015 Scheme*)

Time : 3 Hours Maximum Marks : 60

PART A
(Answer *ALL* questions)

(10 × 2 = 20)

I. (a) Define orthogonality of programming language with example.
(b) Define aliasing with example.
(c) What is a generic subprogram?
(d) Compare static scope and dynamic scope.
(e) Define abstract data type with example.
(f) Discuss polymorphism with example.
(g) What do you mean by lifetime of variable?
(h) Discuss internal representation of list in LISP.
(i) What is resolution in logic programming language?
(j) What is a horn clause? Give example.

PART B

(4 × 10 = 40)

II. Discuss the criteria for programming language evaluation. (10)

OR

III. (a) Discuss the programming language domain. (5)
(b) Explain synthesized and inherited attributes with example. (5)

IV. (a) Discuss the problem of dangling pointers with example. (5)
(b) Explain various categories of variables. (5)

OR

V. Explain the parameter passing mechanisms in procedural languages. (10)

VI. Explain the design issues of object oriented programming languages. (10)

OR

VII. Explain types of inheritance with example. (10)

VIII. (a) Write a LISP program to find the factorial of a umber. (5)
(b) Write a LISP program to find the roots of quadratic equation. (5)

OR

IX. (a) What are the basic elements in Prolog? Explain. (5)
(b) Explain the inferencing process in PROLOG. (5)

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