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## ***B.Tech. Degree III Semester Supplementary Examination*** ***May 2017***

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

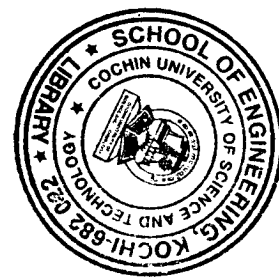
Time : 3 Hours

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 number. (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)