

SS**Code: 9A15403**

B.Tech III Year I Semester (R09) Supplementary Examinations December 2015

PRINCIPLES OF PROGRAMMING LANGUAGES

(Information Technology)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Explain six primary reasons for studying programming languages.
(b) Write the difference between compiler and interpreter.
- 2 (a) Explain the concept of token of a language with an example.
(b) Distinguish between static and dynamic semantics.
- 3 (a) What is dynamic type binding? Explain advantages and disadvantages of dynamic type binding.
(b) Explain explicit heap dynamic variables.
- 4 (a) What is the role of parentheses with relate to precedence of operators.
(b) Explain conditional expression of C language.
- 5 (a) Consider the following program:
 Program Main(...);
 var Y:integer;
 procedure P(X:integer);
 begin X:=X+1; write(X,Y) end;
 begin
 Y:= 1; P(Y); write(Y)
 end.
 Give the three numbers printed in the case that Y is transmitted to P (i) Call by value. (ii) By reference. (iii) By value –result. (iv) By name.
(b) Explain the concept of static scope and block structure.
- 6 Explain in detail abstract data types in C++ with examples.
- 7 (a) Explain the list structures of Prolog.
(b) What are the forms of Horn clauses?
(c) What are the general forms of a proposition in casual form?
- 8 (a) Explain with suitable examples, the python procedural abstraction.
(b) Discuss in detail about the data abstraction using python.
