COMP 3 – 3 (RC)

S.E. (Comp.) (Semester – III) (Revised Course) Examination, May/June 2012
PRINCIPLES OF PROGRAMMING LANGUAGES

Duration : 3 Hours Max. Marks : 100

Instructions : *1) Answer **any five** questions by selecting atleast **one** question from **each** Module.*
*2) **Make** suitable assumptions.*

MODULE – I

1. a) Define Binding time. State and explain the classes of binding Times. 8
   b) What is translation or compilation ? Explain the various specialized types of translators. 7
   c) List and explain the various attributes of a good programming language. 5

2. a) Write a short note on Virtual Computers. 5
   b) Explain parse tree and comment on ambiguity with respect to the syntax of the languages. 6
   c) State and explain the various phases of Compiler. 9

MODULE – II

3. a) Explain the implementation of Subprogram invocation. 8
   b) List and explain the control statements for expressing the basic control forms of composition, alternation and iteration. 6
   c) What do you mean by Aliasing of data objects ? Explain with examples. 6

4. a) Explain the static rules associated with Block structured program. 8
   b) Write note on Activation Record. 5
   c) Discuss "the Pascal Forward Declaration". 7

MODULE – III

5. a) Explain the properties of context-sensitive and regular grammars. 6
   b) Discuss exception and exception handlers. 6
   c) Discuss the various methods of achieving synchronization of tasks. 8

P.T.O.

6. a) Write a prolog program to find the sum of first N natural numbers. 7
   b) Explain the various sequence control statements in FORTRAN. 7
   c) Discuss the various Preprocessor statements in C. 6

MODULE – IV

7. a) Write a Pascal program to find the sum of an elements of an array. 8
   b) Discuss the different primitive data types in Ada. 12

8. a) Explain how the sequence control is implemented in Smalltalk. 10
   b) Discuss the Data Objects in LISP. 10