00122

B.Tech. IN COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

Term-End Examination

December, 2012

BICS-015 : PRINCIPLES OF PROGRAMMING LANGUAGE.

Time : 3 hours *Maximum Marks : 70*

Note : *Attempt **any seven** questions..*

1. (a) What is the scope of a Loop parameter in ADA? Compare it with static and dynamic scope. 5

(b) Write a recursive function in LISP to find maximum number from the list. 5

2. (a) What is the purpose of the 'Private' part of an object interface? Also differentiate between functional and logic programming. 5

(b) Define static binding and dynamic binding. Describe data types in Ada language. 5

3. (a) Explain object oriented programming and also discuss the effect of the global variable on the writability and readability of a large program. 5

(b) Compare elementary data with structured data, and mention any four desirable features of a good programmming language. 5

4. (a) Explain the important features of ***any two*** languages given below. 5

(i) C++

(ii) LISP

(iii) PROLOG

(b) Describe different aspects of sequence control within an expression. 5

5. Compare COBOL and C based on : 10

(a) Data structure concepts.

(b) Sequence control between statements.

(c) Subprogram facility.

(d) Storage management.

(e) Block structure.

6. (a) Explain the concept of public and private inheritance in C++ and Java. 5

(b) Explain procedure of encapsulation and message passing in programming languages. 5

7. (a) Write the working procedure of exception handling in C++. 5

(b) Why pointer is necessary in any programming language? What do you mean by Co-routines ? Explain. 5

8. (a) What is back tracking in PROLOG ? Explain with the help of suitable examples. 5

(b) Explain the control mechanism in PROLOG and discuss concurrent task in Ada. 5

9. (a) Discuss syntax directed control flow and also explain the term Rendezvous in Ada. 5

(b) Differentiate between early and late binding and explain type equivalence with suitable examples. 5

10. Write short notes on *any two* of the following : 10

(a) Dangling-else ambiguity and dangling pointers.

(b) Cute predicate in PROLOG.

(c) Data abstraction and Information hiding.