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BICS-015

00566

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

Term-End Examination

June, 2013

BICS-015 : PRINCIPLES OF PROGRAMMING LANGUAGE.

Time : 3 hours *Maximum Marks : 70*

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

1. (a) Discuss the evolution of programming languages and explain type equivalence with suitable examples. 5

(b) Compare elementary data with structured data and explain static and dynamic scope roles. 5

2. (a) What is virtual function in C^{++} ? Explain the concept of inheritance in object oriented programming with the help of suitable examples. 5

(b) Explain control mechanism in PROLOG. Describe concurrent tasks in Ada. 5

3. (a) Differentiate between In-line functions and recursive functions. Define a loop. How do you handle special cases in loop ? 5

(b) Explain the differences between in type coherence and type equivalence. Also explain early and late binding. 5

4. (a) What are the function calling mechanisms supported by C++, explain them with examples. 5

(b) What is dynamic binding ? Out line this concept through a virtual destructor. 5

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

(i) COBOL (ii) C (iii) Java

(b) Compare LISP and C++ based on data structure concepts, sequence control between statements, subprogram facility and block structure. 5

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

(b) Explain design issues of sub program and parameter passing methods. 5

7. (a) What is coercion ? Explain the rules for expression evaluation in functional programming. 5

(b) Write a LISP program for a list of vehicles and determine whether motor-cycle occurs in vehicles. 5

8. Explain file processing mechanism of COBOL and also explain procedure of table handling in COBOL. 10

9. What are the methods of parameter passing ? Explain procedure of encapsulation and message passing in programming language. 10

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

(a) Java threads and error handling

(b) Quoting in LISP and cute predicate in PROLOG

(c) Default and parameterized constructors.