2015

COMPUTER SCIENCE & TECHNOLOGY

Paper : 504

PROGRAMMING LANGUAGE

Full Marks : 80

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. (a) Represent the below lists in tree representation form: $2 \times 4 = 8$

   i. (it seems that you like me)

   ii. ((it seems that) you (like) me)

   iii. (it (seems that) you like (me))

   iv. (*1(*a(+0 b 0)))

   (b) What is Predicate Logic? What is the meaning of the Predicate Logic Expressions? $4 + 2 = 6$

   (c) Write the difference between LISP and Prolog. 3+3=6

2. (a) What are the different Data Types of Imperative Programming Language? Explain with example. 3+2+1=6

(b) What is Object Oriented Programming (OOP) Paradigm? Mention some of its features. Also mention some of its benefits and applications. 3+3+3+1=10

(c) Differentiate Single Inheritance and Multiple Inheritances. 2+2=4

3. (a) What are the different statements of Imperative Programming Language? Explain with example. 3+2+1=6

(b) Write about the development in programming methodology from the year 1951-2000. 5

(c) Simplify (* 1 (* a (+ 0 b 0))) into (* a b) by using tree representation method of lists. 5

(d) Represent the below lists in tree representation form: $2 \times 2 = 4$

i. (it seems that you like me)

ii. ((it seems that) you (like) me)

4. Write short notes on $4 \times 5 = 20$

i. Constructor and Destructor

ii. Data Abstraction and Encapsulation

iii. Inheritance and Polymorphism

iv. Static Binding and Dynamic Binding

v. Parameter passing Methods.

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