



Reg. No. : .....

Name : .....

**Sixth Semester B.Tech. Degree Examination, June 2015  
(2008 Scheme)**

**Branch : Computer Science and Engg.**

**08.602 : PRINCIPLES OF PROGRAMMING LANGUAGES**

Time : 3 Hours

Max. Marks : 100

**PART – A**



Answer **all** questions. **Each** question carries **4** marks.

1. Differentiate between discrete and scalar types.
2. What is type inference ? Describe three contexts in which it is important.
3. What do you mean by a tail recursive function ?
4. What is an inline subroutine ? What are its advantages and disadvantages ?
5. What is the difference between a function and a special form in scheme ?
6. Describe the generate and test programming idiom.
7. Differentiate between data parallelism and task parallelism.
8. Differentiate between greedy and minimal matches.
9. What is a pipe in unix ?
10. What is currying ? What is its use ? **(10x4=40 Marks)**

**PART – B**

Answer **any one full** question from **each** Module.

**Module – I**

11. a) Explain the closest nested scope rule. **4**
- b) What do you mean by internal and external fragmentation ? **4**
- c) Explain with examples, the different types of logically controlled loops. **12**

OR



12. a) Differentiate between applicative and normal order evaluation. 4
- b) What do you mean by lazy evaluation ? Explain with the help of an example. 4
- c) Discuss the comparative advantages of reference counts and tracing collection as a means of garbage collection. 12

### Module – II

13. a) Differentiate between dynamic and static method binding. How is dynamic binding connected with polymorphism ? 10
- b) Differentiate between forward chaining and backward chaining. 10

OR

14. a) Explain the following terms in Prolog 10
- clauses
  - terms
  - structures.
- b) What is a table ? What is its use ? 5
- c) List the important characteristics of functional languages. 5

### Module – III

15. a) Briefly explain remote procedure call. 10
- b) Write short notes on greedy and minimal matches. 10

OR

16. a) Briefly explain string and pattern manipulation in scripting languages. 10
- b) Explain scheduler based synchronization. 10