

III B.Tech I Semester Supplementary Examinations, May 2005
PRINCIPLES OF PROGRAMMING LANGUAGES
(Common to Computer Science & Engineering and Information
Technology)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Explain the features of object oriented programming.
(b) Write BNF description for **arithmetic expressions** which implements the Operator hierarchy of any imperative language.
2. Describe the various control statements in programming languages.
3. (a) Explain Enumerated data types and Subrange data types.
(b) Explain difference between Type conversion, Type Coercion, and non converting type casts.
4. (a) Explain the importance of scope in a programming language.
(b) How display is used during runtime.
5. (a) Explain coroutine relationships between two procedures with an example.
(b) Write an example generic procedure to add the elements of type VECTORS using ADA.
6. Give the abstract specification of:
(a) Stack.
(b) Binary search tree.
7. What is semaphores. What are the operations on semaphores? Give a solution to dining philosophers problem using semaphores.
8. (a) Explain main features of imperative languages.
(b) Write a LISP function Fib(n) that computes nth Fibonacci number.
