

**II B.Tech II Semester Supplementary Examinations, Apr/May 2006**  
**PRINCIPLES OF PROGRAMMING LANGUAGES**  
**(Computer Science & Systems Engineering)**

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. (a) What are the rules for translating a Syntax graph to parser.  
(b) Express the syntax of declaration statement in PASCAL using BNF notation and Syntax Graphs. [8+8]
2. Describe the various control statements in programming languages. [16]
3. (a) What are the advantages and disadvantages of language supporting name equivalence and structural equivalence.  
(b) Dynamic type binding is closely related to implicit dynamic variables. Explain their relation ship. [8+8]
4. Discuss the following:  
(a) Runtime implementation of scope.  
(b) Extent with an example. [8+8]
5. Explain the various parameter passing mechanisms in C language with suitable examples. [16]
6. Describe the exception handling in ADA and PL/1. [16]
7. Discuss how producer-consumer problem and dining philosopher's problem are solved using concurrency in ADA. [16]
8. (a) Explain main features of imperative languages.  
(b) Write a LISP function Fib(n) that computes nth Fibonacci number. [6+10]

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