

III B.Tech I Semester Supplementary Examinations, November 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. [6+10]
2. Describe the various control statements in programming languages. [16]
3. (a) Explain elementary Data types in Programming languages.
(b) What are the advantages and disadvantages of language supporting type Coercion (between integer and real) for numeric calculations such as 8+6.38. [6+10]
4. Write short notes on the following.
 - (a) Block
 - (b) Dangling reference
 - (c) Dynamic scoping
 - (d) Extent [4+4+4+4]
5. Discuss the following and compare the merits and demerits of each:
 - (a) call-by-value.
 - (b) call-by-reference.
 - (c) call-by-name.
 - (d) call-by-value result. [4+4+4+4]
6. (a) Give an abstract specification of a queue.
(b) Explain the design issues of exception handling. [8+8]
7. Discuss how producer-consumer problem is solved in:
 - (a) concurrent-Pascal
 - (b) ADA. [8+8]
8. What is meant by logic programming? What are the applications of it? Explain logic programming in PROLOG with examples. [16]
