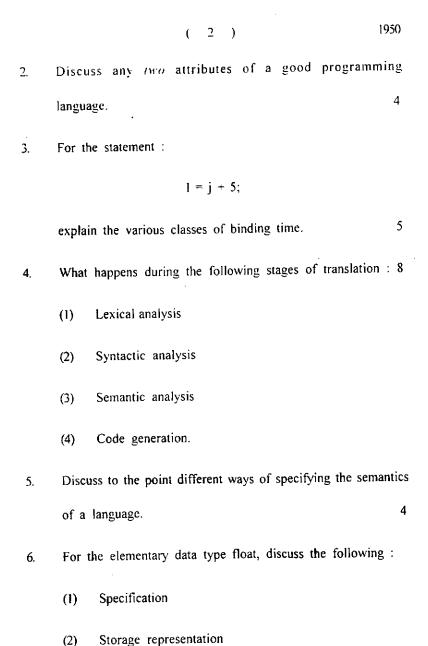
This question paper contains 4+1 printed pages]				
Your Roll No				
1950				
1750				
B.Sc. (H) Computer Science/IV Sem. C				
Paper 403: PROGRAMMING PARADIGMS				
(Admissions of 2001 to 2010)				
Time: 3 Hours Maximum Marks: 75				
(Write your Roll No. on the top immediately on receipt of this question paper.)				
Attempt All questions.				
Parts of a question must be answered together.				
Section A				
(Attempt All questions.)				
1. Differentiate between the following: 3×3=9				
(a) Prime and proper programs				
(b) Dynamic scope and static scope				
(c) Copy based approach and delegation based approach.				



The set of operations defined.

(3)

1+2+2=5

Section B

. (Attempt any four):

7.	(a)	Explain interactive input output files.	2
	(b)	Describe four methods to provide the programmer wi	th the
	•	ability to create new data types.	4
	(c)	What are generic subprograms and discuss	their
		implementation	4
8.	(a)	With the help of an example explain the problem o	f side
		effects while evaluating an expression.	5
	(b)	Using an example explain the code segment and activate	vation
		record of a subprogram.	5
9.	(a)	What are the various operations on data and pro-	ogram
		elements that require memory management?	. 5
	(b)	(i) Explain how ML allows users to define exce	ptions
		(ii) Describe the following LISP list functions w	ith the
		help of an example:	
		(a) car L	
		(b) cdr L	D.T.C

10. (a) Given the relations:

father (X, Y), X is the father of Y

mother (X, Y), X is the mother of Y

female (X), X is a female

male (X), X is a male

Give the following relations:

- (i) brother
- (ii) first cousin.
- (b) What do the following predicates in Prolog do?
 - (i) compound (X)
 - (ii) · atomic (X)
 - (iii) \sim bag of (X, P, L)
- 11. (a) Write the relation in prolog for finding the maximum of two numbers:
 - (i) without using cuts
 - (ii) using cuts.

(5) 1950

(b) Given the grammar:

 $S \rightarrow 0B1A$

 $A \rightarrow 0.0S 1AA$

 $B \rightarrow 1.1S \cdot 0BB$

for the string 00110101, find the following

- (i) Leftmost derivation
- (ii) Parse tree.

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