BTS(C) – IV – 07- 002 (B)

B. Tech Degree IV Semester (Special Supplementary) Examination, March 2007

CS 402 PRINCIPLES OF PROGRAMMING LANGUAGES

(1999 Admissions onwards)

Time : 3 Hours Maximum Marks : 100

I.	(a)	Define syntax and semantics, with examples.		(7)
	(b)	Write notes on :		
		(i)	Programming domains	(6)
		(ii)	Attribute grammars	(7)
		OR		
II.	(a)	Explain the formal methods of describing syntax and semantics of languages.		(10)
	(b)	Explain :		
		(i)	Language evaluation	(5)
		(ii)	Backus Naur Form	(5)
III.	(a)	Explain scope and lifetime of variables, with the help of examples.		(7)
	(b)	Explain overloading of functions with examples.		(6)
	(c)	Write a note on control structures.		(7)
		OR		
IV.	(a)	Explain different parameter passing mechanisms, with the help of examples.		(10)
	(b)	Explain :		
		(i)	Generic subprograms	(5)
		(ii)	Datatypes and variables	(5)
V.	(a)	Explain the features of object oriented languages.		(10)
	(b)	Explain exception handling mechanisms in Java.		(10)
		OR		
VI.	(a)	Compare C++ and Java.		(6)
	(b)	Explain the features of Smalltalk.		(6)
	(c)	Explain data abstraction, polymorphism and inheritance.		(8)
VII.	(a)	Explain the features of functional programming languages.		(10)
	(b)	Explain how list data structure is defined and manipulated in LISP.		(10)
		OR		
VIII.	(a)	Write a note on Lambda calculus.		(7)
	(b)	Explain the datatypes used in LISP.		(7)
	(c)	Explain the application of functional programming languages.		(6)
IX.	(a)	Explain the use of predicate calculus in logic programming languages.		(10)
	(b)	Give a brief introduction to Prolog and its features.		(10)
		OR		
X.	(a)	Write a note on horn clauses.		(10)
	(b)	Explain the applications of logic programming languages.		(10)

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