Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Fourth Semester B.Tech (Minor) Degree Examination July 2021 (2019 admisssion)

Course Code: CST282

Course Name: Programming Methodologies

Max. Marks: 100 Duration: 3 Hours

PART A

(Answer all questions; each question carries 3 marks) Marks

1		Name any three reasons for studying Programming languages	3
2		What is the concept of binding? Mention various binding times.	3
3		What do you mean by ordinal data types? Give two examples of user defined ordinal data types	3
4		What is short circuit evaluation in programming? Give an example.	3
5		Give example for unconditional branching statement. List out some problems with unconditional branching.	3
6		What do you understand by coroutines? How do we achieve control transfer between coroutines?	3
7		What is Inheritance in Object Oriented Programming? List out different forms of inheritance in object oriented programming.	3
8		List out any six design issues of exception handling.	3
9		What is task synchronization? Which are the three different methods for synchronization?	3
10		List out some of the applications of Prolog.	3

PART B

(Answer one full question from each module, each question carries 14 marks)

Module -1

11	a)	Briefly explain some of the language criteria to evaluate a programming language.	8
	b)	What are the advantages and disadvantages of dynamic type binding?	6

12	a)	Discuss about scope and lifetime of a variable. What are the advantages of dynamic scoping over static scoping?	8
	b)	Explain with example the referencing environment of a statement .	6

Module -2

13	a)	Discuss various Primitive data types with suitable examples.	8
	b)	Define Coercion, Type error, Type checking and Strong Typing. Explain the usage of these with an example.	6
14	a)	Explain about static, fixed stack dynamic, fixed heap dynamic and dynamic arrays.	8
	b)	Briefly explain about the relational and boolean expressions in programming languages.	6

Module -3

15	a)	Explain different types of parameter passing techniques.	8
	b)	Explain how subprogram is overloaded? Give examples.	6
16	a)	What are the design issues for logically controlled loop statements? Explain with example.	8
	b)	Briefly explain about two general categories of selection statements	6

Module -4

17	a)	Discuss different design issues for object oriented languages.	8
	b)	With the help of an example, explain the concept of dynamic binding.	6
18	a)	Explain the basic concepts of exception handling? What are the design issues for exception handling systems?	8
	b)	Explain the concept of Event driven programming	6

Module -5

19	a)	Explain how message passing helps in concurrency control? Explain with an example.	8
	b)	What is LISP and SCHEME used for?	6
20	a)	Elaborate how concurrency is provided using semaphores?	8
	b)	Which are the basic elements of Prolog ?	6

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