Unit wise Question Bank

Course Title :Principles of Programming Languages

Course Code :23CS508

Regulation : NR23

UNIT–I

S.No	Questions		BT	CO	PO
	Part – A (Short Answer Questions)				
1	Define Programming Language		L1	CO1	PO1
2	Difference between sentence and sentential form		L4	CO1	PO1
3	Define Syntax and Semantics		L1	CO1	PO2
4	Define Parse trees.		L1	CO1	PO2
5	Define Denotational semantics.		L1	CO1	PO1
6	Define Operational semantics.		L1	CO1	PO1
7	Differentiate compiler and interpreter.		L1	CO1	PO1
8	Distinguish simplicity and orthogonality		L1	CO1	PO1
9	Describe language recognizers		L1	CO1	PO1
10	List out language categories		L3	CO1	PO1
	Part – B (Long Answer Questions)				
11	a)	Discuss various programming domains and their associatedlanguages?	L1	CO1	PO1
	b)	Explain the different categories oflanguages.?			PO1
12	a)	What are the potential benefits of studying programming languageconcepts?	L1	CO1	PO1
	b)	Explain with examples how syntactic design choicesaffectreadability	L1	CO1	PO1
13	a)	Draw and explain the flow chart forcompilationprocess.	L1	CO1	PO1
	b)	Explain about the preconditions and post conditions of a given statement mean in axiomatic semantics	L1	CO1	PO2
14	a)	Describe the steps involved in the language evaluation criteria	L1	CO1	PO1
	b)	Explain with an example how operator associatively can be incorporated ingrammars?What are the uses ofattributegrammar?	L2	CO1	PO1
15	a)	Discuss about language recognizers and language generators?	L3	CO1	PO2
	b)	What are three main styles of describing semantics& explain briefly?	L1	CO1	PO2

UNIT–II

S.No		Questions	BT	CO	PO
Part – A (Short Answer Questions)					
1		Distinguish static and dynamic scoping	L4	CO2	PO2
2		Define associative arrays.	L3	CO2	PO2
3		Define guarded commands?	L3	CO2	PO2
4		Distinguish named type and structure type compatibility	L1	CO2	PO1
5		List the merits of sub range types.	L1	CO2	PO4
6		Differentiate union and enumeration.	L1	CO2	PO5
7		Define data type.	L1	CO2	PO1
8		List the merits of type checking	L1	CO2	PO2
9		Define user defined data type.	L1	CO2	PO1
10		Define widening and narrowing conversions?	L1	CO2	PO4
Part – B (Long Answer Questions)					
11	a)	Define the following? •Stack Dynamic •Explicit Heap Dynamic •Implicit Heap Dynamic •Static	L1	CO2	PO3
	b)	What is aliasing? What are the problems associated with it?	L1	CO2	PO1
12	a)	Define an array? Explain how to initialize an array?	L1	CO2	PO1
	b)	Explain the different types of arrays	L2	CO2	PO2
13	a)	What is type checking?	L1	CO2	PO1
	b)	Evaluate the two approaches for supporting dynamic allocation and deallocation for dynamiclengthstrings?	L1	CO2	PO1
14	a)	What do you mean by binding? Give examples of some of the bindings and their bindingtimes.	L1	CO2	PO4
	b)	Differentiate between static and dynamic type checkingand give their relative advantages	L1	CO2	PO3
15	a)	What are Type conversions, relational and Boolean expressions?	L1	CO2	PO1
	b)	Describe how the pointers used in C and C++ with examples?	L1	CO2	PO1

UNIT–III

S.No		Questions	BT	CO	PO
		Part – A (Short Answer Questions)			
1		Define scope and lifetime of a variable	L1	CO3	PO4
2		Explain subprograms in ADA	L1	CO3	PO2
3		Differentiate shallow and deep binding.	L1	CO3	PO5
4		Define local referencing environment	L2	CO3	PO2
5		Define pass by value	L1	CO3	PO1
6		Define pass by reference	L1	CO3	PO2
7		List the design issues of functions	L1	CO3	PO3
8		Define static scope	L1	CO3	PO1
9		Define dynamic scope	L1	CO3	PO4
10		Difference between procedure and co routines	L1	CO3	PO2
		Part – B (Long Answer Questions)			
11	a)	Define sub program? What are the categoriesofsubprograms?	L1	CO3	PO4
	b)	Discuss the design issues of subprograms?	L1	CO3	PO1
12	a)	What are the three general characteristicsofsubprograms?	L1	CO3	PO2
	b)	Write a detailed note on localreferencingenvironments?	L3	CO3	PO2
13	a)	Describe about the static and dynamic scope of variables with anexample	L1	CO3	PO1
	b)	Explain about the generic subprograms with example. What are the design issues of abstractdatatypes. Explain in detail various design issues of character stringtypes.?	L1	CO3	PO1
14	a)	Differentiate between actual andformalparameters	L1	CO3	PO3
	b)	Explainabout coroutines? How co-routines are different from conventionalsubprograms?	L3	CO3	PO1
15	a)	Define abstractdatatype? Explain type checking technique inparameterpassing.	L1	CO3	PO2
	b)	What are the modes, the conceptual models of transfer, the advantages and disadvantages of pass by value, pass by result, pass by value-result and pass by reference parameter passing methods?	L3	CO3	PO1

UNIT-IV

S.No		Questions	BT	CO	PO
		Part – A (Short Answer Questions)			
1		Define an exception	L1	CO4	PO1
2		Explain threads in C#	L1	CO4	PO3
3		Define concurrency	L1	CO4	PO1
4		Define monitors.	L1	CO4	PO2
5		Define mutual exclusion	L1	CO4	PO1
6		Write about message passing	L1	CO4	PO1
7		Define data abstraction	L3	CO4	PO2
8		Define an abstract data type.	L1	CO4	PO2
9		Write the applications of logic programming languages	L3	CO4	PO1
10		Define deadlock.	L1	CO4	PO1
		Part – B (Long Answer Questions)			
11	a)	What are the various methods of exception handling? Discuss.	L1	CO4	PO1
	b)	How message passing is implemented?Giveexamples	L1	CO4	PO2
12	a)	What are the various methods of exception handling? Discuss.	L3	CO4	PO2
	b)	Write in detail about the Exception Handling and Event Handling	L1	CO4	PO2
13	a)	Explain the difference Physical and logical concurrency?	L2	CO4	PO2
	b)	What are three possible levels of concurrency in programs?Explain?	L3	CO4	PO1
14	a)	What are different states a task can be? Explain?	L1	CO4	PO1
	b)	Explain In detail Cooperation synchronization?	L1	CO4	PO1
15	a)	Explain In detail Cooperation synchronization?	L1	CO4	PO1
	b)	Explain the following with respect to LISP: data types, structuresand LISP interpreter	L3	CO4	PO1

UNIT–V

S.No		Questions	BT	CO	
Part – A (Short Answer Questions)					
1		Give the meaning of lazy evaluation	L2	CO5	PO1
2		Define procedural abstraction	L2	CO5	PO2
3		List few characteristics of Python language	L5	CO5	PO1
4		Define functional language.	L2	CO5	PO3
5		Define imperative language.	L5	CO5	PO4
6		Give the meaning of scripting language.	L2	CO5	PO4
7		List few examples of scripting languages	L3	CO5	PO4
8		List few examples of scripting languages	L2	CO5	PO2
9		List data types of Python language.	L4	CO5	PO3
10		Define the term separate compilation in Python	L5	CO5	PO4
Part – B (Long Answer Questions)					
11	a)	Define functional language & imperative language.	L1	CO5	PO2
	b)	Discuss the applications of functional languages?	L1	CO5	PO3
12	a)	Write the comparison of functional and imperative languages?	L1	CO5	PO4
	b)	Explain the characteristics of scripting languages.	L2	CO5	PO5
13	a)	Give the meaning of scripting language & list few examples of scripting languages	L2	CO5	PO3
	b)	Define the term separate compilation in Python. List out keywords of Python language. What are the data types supported in Python?	L1	CO5	PO2
14	a)	Explain in detail i) Common Lisp ii) Haskell iii)ML	L1	CO5	PO2
	b)	Describe the semantics of COND and LET?	L3	CO5	PO1
15	a)	Discuss the key concepts of scripting languages.	L2	CO5	PO2
	b)	Discuss about the basic elements of Prolog with examples	L1	CO5	PO1

* **Blooms Taxonomy Level (BT)** (L1 – Remembering; L2 – Understanding; L3 –Applying;L4 – Analyzing; L5 – Evaluating; L6 – Creating)

Course Outcomes (CO) Program Outcomes (PO)