CMR TECHNICAL CAMPUS

B. Tech. Mid Question Bank (R22 Regulation)

Academic Year: 2024   **Semester: V**

Subject Name: PRINCIPLES OF PROGRAMMING LANGUAGES

(Professional Elective - I)

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PART-A

Q.No	Questions	Marks	BL	CO	Unit No
1	Why is it useful for a programmer to have some background in language design, even though he or she may never actually design a programming language?	2	L1	CO1	1
2	Define Syntax and Semantics?	2	L2	CO1	1
3	Describe the operation of a general language recognizer?	2	L1	CO1	1
4	What the primary use of attribute grammars?	2	L2	CO1	1
5	What is Bottom-up parsing?	2	L2	CO1	1
6	What the primary use of attribute grammars?	2	L2	CO1	1
7	What are the design issues for character string types?	2	L1	CO2	2
8	Describe ordinal, enumeration, and subrange types?	2	L1	CO2	2
9	Define strongly typed? Define type error?	2	L1	CO2	2
10	What is a conditional expression? What is a compatible type?	2	L2	CO2	2
11	What is short-circuiting evaluation?	2	L3	CO2	2
12	What operator usually has right associatively? What is a ternary operator?	2	L2	CO2	2
13	What are the three general characteristics of subprograms?	2	L1	CO3	3
14	What are formal parameters? What are actual parameters?	2	L2	CO3	3
15	What are the design issues for subprograms?. What is an overloaded subprogram?	2	L3	CO3	3
16	What is ad hoc binding?	2	L2	CO3	3
17	What is Local referencing and What is Global referencing?	2	L2	CO3	3
18	What are the two kinds of abstractions in programming language? Define abstract data type?	2	L4	CO3	3
19	Explain private and limited private types in Ada?	2	L2	CO4	4
20	What is the fundamental difference between a C++ class and an Ada package?	2	L2	CO4	4
21	What is a C++ namespace, what is its purpose?	2	L4	CO4	4
22	What is the use of @private and @public directives?	2	L4	CO4	4
23	What kind of inheritance, single or multiple, does Smalltalk support?	2	L2	CO4	4
24	How are C++ heap-allocated objects de allocated?	2	L3	CO4	4
25	What data types were parts of the original LISP?	2	L2	CO5	5
26	What is tail recursion? Why is it important to define functions that use recursion to specify repetition to be tail recursive?	2	L1	CO5	5
27	What is type inferencing, as used in ML?	2	L2	CO5	5
28	What are the four exceptions defined in the Standard	2	L4	CO5	5

	package of Ada?				
29	What is the use of the assert statement?	2	L2	CO5	5
30	What is the use of Suppress pragma in Ada?	2	L2	CO5	5

PART-B

Q.No	Questions	Marks	BL	CO	Unit No
1	What are the formal methods of describing the syntax? Explain the Grammar?	4	L2	CO1	1
2	What are the rules of EBNF. Explain in detail the advantage and disadvantage of EBNF, Compare the BNF with EBNF?	4	L2	CO1	1
3	Explain life time. What is Referencing environment?	4	L4	CO1	1
4	Explain Semantics. What are the various methods?	4	L2	CO1	1
5	Explain Dynamic semantics in detail?	4	L1	CO1	1
6	What is Lexical Analyzer. What are the approaches for building a lexical analyzer. Implement using an example using state diagram?	4	L4	CO1	1
7	Explain Attribute Grammar in detail?	8	L2	CO1	1
8	What is Parsing and recursive Parsing in detail?	8	L2	CO1	1
9	What is Parsing and bottom Parsing in detail?	8	L3	CO1	1
10	What is binding. How the variables are binded. What are the various methods of binding?	4	L3	CO2	2
11	Explain in detail the Pointers and References?	4	L1	CO2	2
12	Explain in detail the attribute grammar and Explain briefly about scope and its lifetime?	4	L2	CO2	2
13	Explain Arithmetic expression? Explain with example Relational and Boolean Expressions?	4	L3	CO2	2
14	What is meant by data type? What are the various Primitive Data type. Evaluate the various data types?	4	L4	CO2	2
15	Explain briefly about control Structures? What are the design issues for unions?	4	L2	CO2	2
16	Explain Overloaded Operators? Define fully qualified and elliptical references to fields in records?	8	L5	CO2	2
17	What is Selection? Explain various branching Statements?	8	L5	CO2	2
18	What are the various assignments statements with an example?	8	L6	CO2	2
19	What is subprogram Explain with an example?	4	L2	CO3	3
20	What are the design issues of subprogram? What are the three general characteristics of subprograms?	4	L4	CO3	3
21	What are the various parameter Passing methods Explain with an example?	4	L3	CO3	3
22	What is Overloaded methods .Explain the generic methods?	4	L4	CO3	3

23	What is Semantic call. Explain? Explain stack and dynamic variables?	4	L5	CO3	3
24	Explain the nested subprograms? Implant the various subprogram?	4	L4	CO3	3
25	Discuss about User Defined Overloaded Operators?	4	L6	CO3	3
26	Explain Encapsulation Constructs and Naming encapsulations?	4	L2	CO3	3
27	What are the design issues of OOP languages? What is the purpose of a C++ destructor?	4	L2	CO4	4
28	Implement the oops constructor? What is a C++ namespace, what is its purpose?	4	L4	CO4	4
29	Explain with an example Concurrency?	4	L4	CO4	4
30	Explain with an example about semaphores?	4	L2	CO4	4
31	Explain with an example monitors?	4	L2	CO4	4
32	What is Thread explain?	4	L2	CO4	4
33	What are the various methods of Exception handling?	8	L2	CO4	4
34	What is State level concurrency? What is Event handling?	8	L5	CO4	4
35	What is the fundamental difference between a C++ class and an Ada package? What is the purpose of a C++ destructor? What are the legal return types of a destructor?	8	L3	CO4	4
36	What is lamda? Describe briefly?	4	L3	CO5	5
37	Write the fundamentals of FP languages and Explain why QUOTE is needed for a parameter that is a data list?	4	L2	CO5	5
38	Explain in brief about programming with ML with an example?	4	L4	CO5	5
39	Describe Logic and Logic Programming and What are the two forms of DEFINE?	4	L3	CO5	5
40	Explain Prolog and Write a program using prolog?	4	L2	CO5	5
41	What are the Multi paradigm languages in detail?	4	L2	CO5	5
42	Explain the various programming languages in detail?	8	L3	CO5	5
43	Write a program in scheme and Write a Program with scheme?	8	L4	CO5	5
44	What is exception propagation in Ada? What are the four exceptions defined in the Standard package of Ada?	8	L2	CO5	5