Reg. No.

B.E./ B. TECH.DEGREE EXAMINATIONS, MAY 2023
Second Semester
CS22203 – OBJECT ORIENTED PROGRAMMING
(Computer Science and Engineering)
(Regulation 2022)

TIME:3 HOURS   **MAX. MARKS: 100**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Apply the concepts of data abstraction, encapsulation and inheritance for problem solutions. Critically analyze the problem and apply Object Oriented Concepts for practical problem solving.	2
CO 2	Develop applications with function and operator overloading.	3
CO 3	Develop programs with reusability.	3
CO 4	Design and implement generic classes with C++ templates and handle exceptions.	3
CO 5	Handle large data set using file I/O and use STL.	1

PART- A(20x2=40Marks)
(Answer all Questions)

		CO	RBT LEVEL
1.	Illustrate Object Oriented Programming.	1	2
2.	Distinguish between class and objects.	1	2
3.	Discuss about Member functions.	1	2
4.	Differentiate between keyword and identifier.	1	4
5.	Can destructors be overloaded? Justify	2	4
6.	Articulate the purpose of defining a destructor function?	2	2
7.	Summarize Parameterized constructors.	2	2
8.	Discuss about dynamic constructor?	2	2
9.	Discuss the need for pure virtual function with an example.	3	2
10.	Illustrate RTTI.	3	2
11.	Differentiate Compile time polymorphism and Runtime polymorphism.	3	4
12.	Explain the need of abstract class in C++.	3	2
13.	Discuss about templates and their advantages.	4	2
14.	Differentiate Error and Exception.	4	4
15.	Illustrate Uncaught Exception.	4	2
16.	Write a function template that takes five parameters and returns the maximum of them.	4	4
17.	Illustrate global namespace.	5	2
18.	Discuss about STL.	5	2

19. Outline the concept of manipulators and also mention the manipulators that are used in C++.   5   2

20. Discuss about iterators.   5   2

PART- B (5x 10=50Marks)

			Marks	CO	RBT LEVEL
21. (a)	Explain OOPS concepts briefly.		(10)	1	4
	(OR)				
(b)	Explain functions in C++ in detail.		(10)	1	4
22. (a)	Explain about the various types of constructor with suitable examples.		(10)	2	4
	(OR)				
(b)	Explain about type conversion. Give an example of basic to object type conversion		(10)	2	4
23. (a)	Illustrate the importance of runtime polymorphism with suitable example program.		(10)	3	3
	(OR)				
(b)	Illustrate the various types of inheritance that are available in C++ with suitable example for each.		(10)	3	3
24. (a)	Explain about function template and class template with an example.		(10)	4	3
	(OR)				
(b)	Explain briefly about exception handling mechanism in C++.		(10)	4	3
25. (a)	Explain Standard Template Library with suitable example.		(10)	5	3
	(OR)				
(b)	Explain the process of open, read, write and close files.		(10)	5	3

PART- C (1x 10=10Marks)

(Q.No.26 is compulsory)

			Marks	CO	RBT LEVEL
26.	(i)	Write a C++ program to create student information system with roll number, name, department, 3 subject marks and credits. Calculate GPA and print all the student details.	(5)	1	5
	(ii)	Write a C++ program to add two complex numbers using call by value and call by reference.	(5)	1	5

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