


Name:			
Enrolment No:			
UNIVERSITY OF PETROLEUM AND ENERGY STUDIES End Semester Examination, May 2023			
Course: Object Oriented Programming Program: B.Tech. (Engg.) FSE Course Code: CSEG 1008		Semester: II Time : 03 hrs. Max. Marks: 100	
Instructions: All Questions are Compulsory.			
SECTION A (5Qx4M=20Marks)			
S. No.		Marks	CO
Q 1	Discuss the need of templates in C++ and write a program to explain the concept of function template.	4	CO4
Q 2	Explain Inline functions and discuss the circumstances when compiler declines the request for in lining.	4	CO 2
Q 3	Describe the term Polymorphism and discuss operator overloading with suitable example.	4	CO 3
Q 4	Explain the characteristics of a good algorithm and draw an algorithm to find simple interest.	4	CO 1
Q 5	Explain static function with the help of a C++ program.	4	CO 2
SECTION B (4Qx10M= 40 Marks)			
Q 6	Explain the method of handling exceptions in C++ and write a program to handle division by zero exception.	10	CO 4
Q 7	Discuss different loop control statements in C++ with examples. Or Discuss the rules for creating a flow chart and draw a flow chart to find average of 2 numbers.	10	CO 1
Q 8	Discuss the use of Virtual Functions with a suitable example.	10	CO 3
Q 9	Write a program to find the area of a circle using friend function.	10	CO 2
SECTION-C (2Qx20M=40 Marks)			
Q 10	a) Discuss different types of Inheritance with suitable example of each. b) Write a C++ program to swap two numbers using pointers.	20	CO3
Q 11	a) Write a C++ program to overload area() function to calculate area of shapes like triangle ,square, circle.	20	CO 1, CO 3

	<p>b) Write a program to check whether a given number is palindrome or not.</p>		
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Or

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| | <p>a) Discuss different datatypes available in C++ along with their size and memory consumption.</p> <p>b) Explain the concept of Constructors and Destructors with their characteristics.</p> | | |
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