Total No	. of Questions : 8] SEAT No. :			
P1528	[Total No. of Pages : 2			
S.E. (Computer Engineering) (Artificial Intelligence & Data Science)				
(Computer Science & Design Engineering)				
OBJECT ORIENTED PROGRAMMING (OOP)				
(2019 Pattern) (Semester - III) (Theory) (210243)				
Time: 21/2	[Max. Marks: 70			
	ons to the candidates			
<i>1</i> )	Endsem exam based on 3, 4, 5, 6.			
2) 3)	Draw Neat and clean Diagram. Assume suitable data if necessary.			
3)	rissime summer unit if necessary.			
01)				
<b>Q1</b> ) a)	What is runtime polymorphism? How it is achieved in C++. Explain it along with example. [5]			
<b>b</b> )				
b)	Explain virtual base class and virtual function with example. [6]			
c)	Explain need of operator overloading. Write C++ program to demonstrate use of unary operator overloading. [6]			
	demonstrate use of unary operator overloading. [6]			
<b>Q2</b> ) a)	Explain polymorphism and types of polymorphism in C++. [5]			
b)	Explain what is type casting, Explain Implicit and explicit type of			
,	conversion with example [6]			
c)	Write a program to overload insertion (<<) and extraction (>>) operator			
	in C++.			
<b>Q3</b> ) a)	What are various functions which are used to manipulate file pointers?			
	Explain using example. [7]			
b)	Explain command line arguments in C++? Write program to explain the			
	same. [7]			
c)	What are different file opening mode? [4]			
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<b>Q4</b> ) a)	Explain formatted and unformatted input and output functions used in C++ with example. [7]			
b)	What are stream classes and their use? Provide the hierarchy of stream			
U)	classes in C++. [7]			
c)	Explain the use of command line arguments. If we want to pass			
,	command line arguments what will be prototype of main function and			
	explain its arguments along with example. [4]			
	P.T.O.			
	A .			

<b>Q</b> 5)	a)	What is the power of templates in C++? Explain along with one exam	ple. [ <b>5</b> ]
	b)	Explain exception handling mechanism in C++? Write a program in C	C++
		to handle "divide by zero" exception.	<b>[6]</b>
	c)	Write a short note on typename and export keyword in C++.	[6]
	- /	OR OR	L-3
<b>Q6</b> )	a)	What is mean by user defined exception? Give one example.	<b>[5]</b>
	b)	Explain class template using multiple parameters. Write a program in C	++.
	- /		[6]
	<u>a)</u>	Hovemyltinla catching is implemented in execution handling?	
	c)	How multiple catching is implemented in exception handling?	[6]
<i>Q7</i> )	a)	Explain the concept of the Standard Template Library (STL) in C	<u>++.</u>
		What are its key components?	[7]
	b)	Differentiate between sequence containers and associative container	rs in
	- )	the STL. Provide examples of each.	[7]
	c)	Discuss the advantages of using container adapters in the STL. Pro-	vide
	- /	examples of container adapters	[4]
		OR	r - J
<b>(10)</b>	۵)	How can vectors and lists by used as sequence containers in the S'	TI 9
<b>Q</b> 8)	a)	How can vectors and lists be used as sequence containers in the S'	
		Explain with a appropriate example.	[7]
	b)		
		and pointers.	[7]0
	c)	and pointers.  Describe the process of using the STL algorithms for Quick sort.	.[4]
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