Total No. of Questions : 8]

P627

## SEAT No. :

[Total No. of Pages : 2

## [5869]-249

## S.E. (Electronics / E & TC/Electronics & Computer) OBJECT ORIENTED PROGRAMMING (2019 Pattern) (Semester - IV)

[Max. Marks : 70

Instructions to the candidates:

*Time : 2<sup>1</sup>/<sub>2</sub> Hours*]

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Use of calculator is allowed.
- 5) Assume suitable data if necessary.
- Q1) a) What is operator overloading? Why it is necessary to overload an operator? [6]

•ØŔ

- b) Write a program in C++ to use scope resolution operator. [6]
- c) What is friend function? What are the merits & demerits of using the friend function? [6]
- *Q2*) a) What are the rules for over loading operators.
  - b) Which operators can not be overloaded? Write steps to overload + operator so that it can add two complex numbers. [6]
  - c) Write down program to overload unary operators? (Any three operators). [6]
- Q3) a) Explain virtual base class & virtual function with example? [6]
  - b) What does inheritance mean in C++? What are different forms of inheritance? Give example of each. [6]
  - c) Discuss the ways in which inheritance promotes software reuse, saves time during program development and helps prevent errors. [6]

<b>Q4</b> )	a)	What is the ambiguity that arises in multiple inheritance? How it ca	in be	
		overcome. Explain with example.	[6]	
	b)	What are types of inheritance? Explain in detail.	[6]	
	c)	Discuss the role of access specifiers in inheritance and show their visit	oility	
		when they are inherited as public, private protected.	[0]	
05)	-)		[2]	
$Q_{3}$	a)	write a C++ program involving a function template.		
	6)	Explain exception handling mechanism in $C++?$ write a program in to handle civide by zero exception	C++ [7]	
	c)	Explain class template and function template with example	[ <sup>7</sup> ]	
	0)	OR	[]	
06)	a)	Explain class template using multiple parameters? Write a program in		
QU)	u)	$C_{++}$ .	[ <b>7</b> ]	
	h)	Explain name space with example	[5]	
	c)	What is stream? Explain types of streams available in $C + 1$	[5]	
	0)	that is stream? Explain types of streams avalable in e ++.		
	X		[(]	
$Q^{\gamma}$	a)	what is File mode? Explain any four modes supported by C++.	[0]	
	b)	Explain error handling during file operations.	[5]	
	c)	What is the difference between opening a file with construction fund	ction	
		& open () function.	[6]	
		OR	30	
<b>Q</b> 8)	a)	Write a program using the open (), eof () & getline () functions to	open	
		& read file contents line by line.	. <b>[6</b> ]	
	b)	Explain file functions for text file and binary file operations.	[7]	
	c)	Explain file opening modes in detail.	[4]	
		So.		
9°				
[5869]-249 2				