Professional Course Examination, May 2024

(CBCS)

(4th Semester)

BACHELOR OF COMPUTER APPLICATIONS

(Object-Oriented Programming in C++)

Full Marks: 75

Time: 3 hours

The figures in the margin indicate full marks for the questions

(PART : A-OBJECTIVE)

(Marks: 25)

SECTION-I

(Marks: 15)

A. Tick (✓) the correct answer in the brackets provided:

 $1 \times 10 = 10$

- 1. Which of the following is not valid C++ data type?
 - (a) Boolean ()
 - (b) String ()
 - (c) Char ()
 - (d) Bool ()

2.	WI	nich of the following is valid variable name in C++?
	(a)	3var ()
	(b)	my variable ()
	(c)	_myvariable ()
	(d)	my-variable ()
3.	Wh	nat is the purpose of using inline function?
	(a)	To reduce program execution time ()
	(b)	To allow function to be called from multiple files ()
	(c)	To make function private to a class ()
	(d)	To enable recursion ()
4.	Wh	ich type of argument passing creates a copy of the arguments?
	(a)	Pass by array ()
	(b)	Pass by pointer ()
	(c)	Pass by reference ()
	(d)	Pass by value ()

٥.	110	w many	typ	es or co	onstruc	tors a	ire the	re in (3++7				
	(a)	1	()									
	(b)	2	()			•						
	(c)	3	() .							124		
	(d)	4	()		•							
6.	Ho	w many	des	tructor	s can	a clas	s have	in C+	+?				
	(a)	As ma	ny a	s the p	rogran	mer v	wants	(-)				
	(b)	As ma	ny a	s the c	onstru	ctor	() ,					
	(c)	Only o	ne	ĺ)	21 Q	G _{eo}						
	(d)	Two:	one	for bas	e class	and	one for	deriv	ed clas		()	
7.	Wh	ich of	the f	followin	g is tn	ue abo	out virt	ual fu	inction?	•			
	(a)	It can	be o	called f	rom an	ywhei	re in th	ne pro	gram	(,)		
	(b)	It can	be o	overrido	len	()						
	(c)	It can	not l	oe over	ridden		()						
	(d)	It is a	uton	natically	y called	l whe	n objec	ct is c	reated	()		

8.	How is pointer declared in C++?
	(a) int ptr; ()
	(b) int* ptr; ()
	(c) ptr* int; ()
	(d) pointer int; ()
9.	What is the keyword to re-throw exception?
	(a) Throw ()
	(b) Rethrow ()
	(c) Retry ()
	(d) throw_exception ()
10.	Which STL container provides constant-time insertion and deletion at both ends?
	(a) Stack ()
	(b) Queue ()
	(c) List ()
	(d) Deque ()

В.	Indicate	True	or	False	
_		II UC	VI.	T. CHOU.	

 $1 \times 5 = 5$

1. Copy construction is used to create a copy of existing object.

(True / False)

2. Data members in class are private by default.

(True / False)

3. Constructor cannot have default argument.

(True / False)

4. Pointers store actual value of the variables.

(True / False)

5. File pointer can point to binary files.

(True / False)

SECTION—II

(*Marks* : 10)

C. Answer the following questions in short:

 $2 \times 5 = 10$

1. (a) Explain dynamic binding in brief.

OR

- (b) What is the function and syntax of 'setw'?
- 2. (a) Explain default arguments in brief.

OR

(b) How do you return objects from function?

3. (a) What is operator overloading?

OR

- (b) Explain destructor in brief.
- 4. (a) Explain access control method in inheritance.

OR

- (b) What is a friend function?
- 5. (a) What is ios flag?

OR

(b) What do you mean by generic function?

(PART : B-DESCRIPTIVE)

(Marke . 50)

			(<i>Marks</i> : 50)		
D.	An	swer	the following questions:	0×5=50	
	1.	(a)	What are the basic concepts of OOP?	6	
		(b)	Give the comparison of OOP and procedural programming.	4	
			OR		
		(c) (d)	Explain console I/O operations in C++. Explain class and objects.	6 4	
			What is function overloading? Write a program to demonst	rate	
			Write a program to demonstrate arrays of objects.	2+4=6 4	
OR					
		(c)	Write a program to demonstrate pass by value and pass reference.	-	
		(d)	Write a program to demonstrate passing object as a funcargument.	6 tion	

4

3	. (a	What is a constructor and copy constructor in OOP?	4						
	(b)	Write a program to demonstrate default constructor and parameterized constructor.	6						
		OR							
	(c)	Write a program to demonstrate unary operator overloading.	5						
	(d)	Describe dynamic initialization of objects giving example.	5						
4.	(a)	Explain the different types of inheritance in detail.	6						
	(b)	What is virtual function? Explain giving example.	4						
OR									
	(c)	What do you mean by dynamic memory allocation?	3						
	(d)	Describe the role of 'new' and 'delete' operators using example.	7						
5.	(a)	Explain file stream operation in C++.	6						
		What do you mean by command line argument?	4						
		OR							
	(c)	Explain exception handling mechanism. Write a program to illustrate exception handling.	3=5						
	(d)	Describe the major categories of a container.	5						

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	5 Write 2 instrument to demonstrate default conscious and	(6)
	CIE.	
	 Кате в поврет и фетанулите инату презаит оченоватия. 	5
	d Describe dynamic mineration of objects giving example.	5
£	or Explain the different types of inheritance in detail.	10
	in What is virtual function? Explain giving example.	4
	CR.	
	What do you mean by dynamic memory allocation?	117
	(d) Describe the rule of 'new' and 'delete' operators using example.	-
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(Marks: 15)

A. Tick (1) the correct answer in the brackets provided:

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4.	Which type of argument passing creates a copy of the arguments?
	(a) Pass by array ()
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5.	How	many	type	es of	cons	tructo	ors a	are th	nere i	in C	++?					
	(a)	1	()		180										
	(b)	2	()				•								
	(c)	3	()	35.1											
	(d)	4	()												
	6. H	low ma	ny d	estru		can				1 C+-	+?					
	(0	a) As r	nany	as	the pr	ogran	nmer	war	its	()					
	(b) As	man	y as	the co	onstru	uctor		()						
		(c) On	ly or	ne	()										
		(d) Tw	o : c	ne fo	or bas	e clas	ss an	nd on	e for	deriv	ed cla	iss .e		()	
	7.	Which	of t	he fo	llowin	g is t	true	abou	t virtı	ual fu	nction	1?				
		(a) It	can	be c	alled f	from a	anyw	here	in th	e pro	gram		()		á
		<i>(b)</i> It	can	be o	verrid	den		()								
		(c) I	t can	not 1	oe ove	rridde	en	()							
		(d) I	t is	autor	natica	lly cal	lled v	when	objec	ct is	created	d	()		
	/625							3								[Contd.

8.	Ho	w is point	er deci	areu	III C+	8 277					
	(a)	int ptr;	()							
	(b)	int* ptr;	()							
	(c)	ptr* int;	()							
	(d)	pointer in	ıt;	()						
9.	W	nat is the	keywor	d to	re-thro	ow exc	eption?				
	(a)	Throw	()		la g					
	(b)	Rethrow	1)							
	(c)	Retry	(<u>.</u>							
	(d)	throw_exc	eption		()						
10.	What	nich STL c both ends?	ontaine	er pr	ovides	consta		insertion	and	deletio	n
	(a)	Stack	(
	(b)	Queue	()							
	(c)	List	()							\$	
	(d)	Deque	()							

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D.	Indicate	True	OL	raise	

1×5=5

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(b) What do you mean by generic function?

(PART : B-DESCRIPTIVE)

(Marks: 50)

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