Bihar Engineering University, Patna **End Semester Examination - 2022**

Course: B. Tech. Code: 100313

Semester: III

Subject: Object Oriented Programming using C++

Time: 03 Hours Full Marks: 70

Instructions:-

- (i) The marks are indicated in the right-hand margin.
- (ii) There are NINE questions in this paper.

(i) new

(h)

(iii) malloc

(i) polymorphism (iii) hybrid inheritance

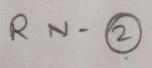
(iii) Attempt FIVE questions in all.	
(iv) Question No. 1 is compulsory.	
Q.1 Choose the correct answer of the following (a) Which among the following best de	
(i) copying the code already written(iii) using already defined functions(iv) using the data and functions int	(ii) using the code already written once.
(b) Which of the following is not a type (i) Abstract class (iii) Start class	e of class? (ii) Final class (iv) String class
(c) What is the default access specific within a class without any specifier (i) Private	ier for data members or member functions declared in C++? (ii) Protected
(iii) Public (d) Which of the following is not the m	(iv) Depends on compiler
(i) Static function (iii) Constant function	(ii) Friend function (iv) Virtual function
Class A { int i; A () { i = 0; } A (int x = 0) { i = x; } };	om the object created in the code below?
A obj1; (i) Default constructor (iii) Compile time error	(ii) Parameterized constructor (iv) Run-time error
(f) To prevent any method from overring (i) Static	(iv) None of the above
(iii) final (g) In C++ dynamic memory allocation (i) pow	(ii) this

(iv) delete

(ii) hierarchical inheritance

(iv) multipath inheritance

When a class serves as base class for many derived classes, the situation is called



	(i)	For a method to be an interface between the outside world and a class, it must be		
		declared		Grand Alle
		(i) private	(ii) protected	
	(:)	(iii) public	(iv) external	
	 (j) Which of the following statement is correct? (i) Base class pointer cannot point to derived class (ii) Derived class pointer cannot point to base class. (iii) Pointer to derived class cannot be created 			
	(iv) Pointer to base class cannot be created.			
		(iv) Former to base class carrier be created.		
Q.2	(a)	What are the advantages of using exception	on handling mechanism in a program?	[7]
	Explain the uses of try, throw and catch keywords using example.			
	(b)	Write a C++ program to find the sum of the		[7]
0.3	(a)	What is inheritance? Discuss different types	of inheritance with examples.	[7]
7	(b)	What is operator overloading? Write a pro		[7]
		operator.		
		William Color	that agints 'DELI Botno' from	[7]
Q.4	(a)	What is pure virtual function? Write a C++ inside a member function of a subclass over		1/1
	(b)	Discuss why converting a base-class p		[7]
	(0)	considered dangerous by compiler.		
0.5	- (a)	Differentiate between abstract class and inte		[7]
	(b)	What is access modifier in C++? Differentia	te between each type.	[7]
		Differentiate between a class and an object.	Write an example (syntax) to define a	(7)
0.6	, (a)	class in C++.		[7]
	(b)	With an example, explain the terms <i>constru</i>	ctor and destructor.	[7]
	(0)			
0.7	(a)	What is a friend function and what are its a	dvantages? What are the guidelines that	[7]
		should be followed while using friend funct	100?	[7]
	(b)	Explain dangling pointer with the help of ar	i example.	[7]
		Explain how base class member functions	can be involved in a derived class if the	[7]
Q.8	(a)	derived class also has a member function w	ith the same name.	
	(b)	· 1: 1	llowing:	[7]
	(0)	(i) Define suitable constructors an	d destructors	
		(::) Overload the operators + and -		
			ich adds the real and imaginary parts of	
		a complex object.		
		C.I. C. Hawing		$[7 \times 2=14]$
Q.9		ite short notes on any two of the following:		
	(a)	Polymorphism		
(b)		Function Templates		
	(c)	Container class		
	(d)	Inline function		