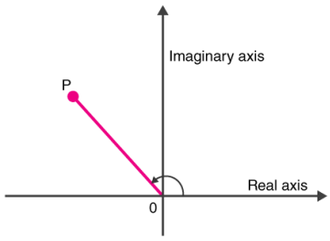
Military Institute of Science & Technology (MIST)
Department of Computer Science and Engineering
Class Test - 01, Course: CSE 205: Object-Oriented Programming Language

Time - 30 Mins **Total Marks - 20**

No.	Question	Marks
1.	Discuss the reasons for learning C++ over C programming language.	**05**

2.	Consider the code provided below.
	`#include <iostream>`
	`using namespace std;`
	`class vehicle {`
	`  int velocity;`
	`  int cost;`
	`};`
	`int main() {`
	`  vehicle v;`
	`  v.velocity = 10;`
	`  v.cost = 20;`
	`  cout<<v.velocity<<" "<<v.cost<<endl;`
	`}`
	Analyze whether the execution of the main function will lead to an error or not. If so, reformulate the program to overcome the error.
		05

3.	
	In mathematics, a variable that can take on the value of a complex number is known as a complex variable. In basic algebra, the variables x and y generally stand for values of real numbers.
	A "ComplexVariable" class, as given on the code snippet below, is designed to store complex numbers and perform addition and subtraction operations on complex numbers. The class will have another additional function, named print(), to print the values of the complex number.
	`class ComplexVariable {`
	`  int real;`
	`  int imaginary;`
	`public:`
	`//write constructors, destructors`
	`//Implement addition and subtraction function`
	`//implement print function`
	`}`
	`int main() {`
	`  ComplexVariable l1(3,2);`
	`  ComplexVariable l2(6,7);`
	`  ComplexVariable l3;`
	`  ComplexVariable l4;`
	`  l3 = l1.addition(l2);`
	`  l4 = l2.subtraction(l1);`
	`  l3.print();`
	`  l4.print();`
	`}`
	As a programmer, your job is to ensure that everything written in the main function works properly. Now, complete the code snippet for the class "ComplexVaribale" so that every line of code given on main() can work as intended.
		10