UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Online End Semester Examination, December 2020

Course: Object Oriented Programming **Semester: I**
Program: B.Tech. APE-UP/ASE/ASE-AVE **Time 03 hrs.**
Course Code: CSEG1008 **Max. Marks: 100**

Instructions: Students are supposed to assume any missing data and give examples wherever applicable.

SECTION A [30 Marks]
1. Each Question will carry 5 Marks
2. Instruction: Complete the statement / Select the correct answer(s)

S. No.	Question	CO

Q1.	Which of the following is not a type of constructor? _____
	
	    a. Copy constructor
	
	    b. Friend constructor
	
	    c. Default constructor
	
	    d. Parameterized constructor
		CO1

Q2.	What is the output of below program?
	
	int main()
	{
	 int a=10;
	 int b,c;
	 b = a++;
	 c = a;
	 cout<<a<<b<<c;
	 return 0;
	}
	
	    a. 111011
	    b. 111111
	    c. 101011
	    d. 101010
		CO2

Q3.	Which of the following concepts of OOPS means exposing only necessary information to client?
	
	        a. Encapsulation
	        b. Abstraction
	        c. Data Hiding
	        d. Data Binding
		CO3

Q4.	_____ is the correct statement for OOPs C++.
	
	    a. A constructor is called at the time of declaration of an object.
	    b. A constructor is called at the time of compilation.
	    c. A constructor is called at the time of declaration of a class.
	    d. A constructor is called at the time of calling a function.
		CO3

Q5.	Which of the following is not a type of inheritance?
	
	        a. Multiple
	        b. Multilevel
	        c. Distributive
	        d. Hierarchical
		CO4

Q6.	Which of the following access specifier used as a default in a class definition?
	
	        a. protected
	        b. public
	        c. private
	        d. friend
		CO4

SECTION B [50 Marks]

1. Each question will carry 10 marks
2. Instruction: Write short / brief notes

Note*: Attempt any one question of Q11

Q7.	Compute the sum of first 20 odd numbers using a C++ program.	**CO1**
Q8.	Contrast between private and protected access specifiers of C++.	**CO2**
Q9.	Demonstrate while and do-while loop through a small C++ program.	**CO3**
Q10.	Briefly discuss the features of OOPs in C++.	**CO4**
Q11.	Explain the use of scope resolution operator in C++ with a proper syntax.	
	OR	
	Illustrate abstraction and encapsulation properties of OOPs. Demonstrate the concept of data hiding through a C++ program.	**CO4**

SECTION-C [20 Marks]

1. Each Question carries 20 Marks.
2. Instruction: Write long answer. Give suitable examples/references where applicable

Note*: Attempt any one question of Q12

Q12.	a. Demonstrate sum of two matrix M1[3][3] and M2[3][3] applying OOPs concepts. b. Can we access the private data members in another class? Explain with a small C++ program	
	OR	**CO4**
	Write a program to demonstrate the working of different types of inheritance used in C++. You must also show implementation of Constructor and destructor in your code.	