Name: **Enrolment No:**	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2022

Course: Object Oriented Programming **Semester: II**
Program: B.Tech. non-CSE **Time : 03 hrs.**
Course Code: CSEG 1008 **Max. Marks: 100**

Instructions: Attempt all questions. Assume any missing data, draw diagrams wherever applicable, provide appropriate examples

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1.	Explain Logical operators of C++.	**4**	**CO1**
Q 2.	What is a function prototype?	**4**	**CO1**
Q 3.	Differentiate between while and do-while loop of C++.	**4**	**CO2**
Q 4.	Illustrate the significance of **public:** in C++.	**4**	**CO2**
Q 5.	Describe function overloading.	**4**	**CO3**
	SECTION B **(4Qx10M= 40 Marks)**		
Q 6.	Define the term Problem. Explain the various techniques a problem could be solved with an example. Demonstrate the use of 'private, public and protected' access specifier using C++ code.	**10**	**CO1**
Q 7.	Explain the concept of access specifiers. Describe its functioning in terms of inheritance.	**10**	**CO2**
Q 8.	Describe a reason for usage of operator overloading in C++.	**10**	**CO3**
Q 9.	Explain the concept of exception handling. Justify the reason for its usage. **OR** Demonstrate the usage of constructor and destructor through a C++ program	**10**	**CO4**
	SECTION-C **(2Qx20M=40 Marks)**		
Q 10.	Write a program to find the average marks of a student by creating a Class **Marks** with the data members; variable **Stu_No , Stu_Name,** and marks 5 subjects i.e **Science**, **Maths**, **English**, **Hindi** and **CS** . (Note if average marks <40 then grade is "**F**" average marks>=40 then grade is "**Pass**"). Implement all the concepts of OOPs that you have learnt. [Hint: Constructor, Scope resolution operator, data members, functions, etc.]	**20**	**CO3**

Q 11.	a. Briefly discuss the features of OOPs in C++. b. Demonstrate the use of scope resolution operator in C++ with a proper syntax. **OR** a. Design and implement the program that is able to show the concept of data hiding. b. Explain ambiguity in inheritance through a small C++ program.	**20 [10+10]**	**CO4**