	Parul University **Faculty of Engineering and Technology** **Parul Institute of Engineering and Technology** **Computer Science Engineering-Cyber Security Department**			
Subject Name	**Objected Oriented Programming**	**A. Y**	**2025-26**	
Subject Code	**03010502ES01**	**Semester**	**2nd**	
Assignment-1				
Sr No	**Question**	**COs**	**B.T**	**Competence**
Unit 1: Principles of Object Oriented Programming				
1	Define Object Oriented Programming.	CO1	BT1	Remember
2	Explain features of OOP.	CO1	BT2	Understand
3	Differentiate OOP and POP.	CO1	BT4	Analyze
4	Explain applications of OOP.	CO1	BT2	Understand
5	Describe structure of C++ program.	CO1	BT1	Remember
6	Explain basic data types in C++.	CO1	BT2	Understand
7	Describe user-defined data types.	CO1	BT2	Understand
8	Explain derived data types.	CO1	BT2	Understand
9	Explain dynamic initialization of variables.	CO1	BT3	Apply
10	Explain reference variables.	CO1	BT2	Understand
11	Describe scope resolution operator.	CO1	BT3	Apply
12	Explain access specifiers with example.	CO1	BT3	Apply
Assignment-2				
Unit 2: Functions, Class and Objects				
1	Explain concept of functions in C++.	CO1	BT2	Understand
2	Define function prototyping.	CO1	BT1	Remember
3	Explain function calling mechanism.	CO1	BT2	Understand
4	Explain inline functions.	CO1	BT2	Understand
5	Explain default arguments.	CO1	BT3	Apply
6	Explain constant arguments.	CO1	BT3	Apply
7	Explain function overloading.	CO1	BT4	Analyze
8	Define class and object.	CO2	BT1	Remember
9	Explain member functions.	CO2	BT2	Understand
10	Explain nesting of member functions.	CO2	BT3	Apply
11	Explain private member functions.	CO2	BT2	Understand
12	Explain friend function.	CO2	BT3	Apply
Assignment-3				
Unit 3: Constructor and Destructor				

1	Define constructor.	CO3	BT1	Remember
2	Explain default constructor.	CO3	BT2	Understand
3	Explain parameterized constructor.	CO3	BT2	Understand
4	Explain copy constructor.	CO3	BT2	Understand
5	Explain destructor.	CO3	BT2	Understand
6	Differentiate constructor and destructor.	CO3	BT4	Analyze
7	Write program using default constructor.	CO3	BT3	Apply
8	Write program using parameterized constructor.	CO3	BT3	Apply
9	Write program using copy constructor.	CO3	BT3	Apply
10	Explain order of constructor and destructor.	CO3	BT2	Understand
11	Explain constructor overloading.	CO3	BT4	Analyze
12	Explain role of destructor in memory management.	CO3	BT2	Understand
Assignment-4				
Unit 4: Inheritance				
1	Define inheritance.	CO4	BT1	Remember
2	Explain single inheritance.	CO4	BT2	Understand
3	Explain multiple inheritance.	CO4	BT2	Understand
4	Explain multilevel inheritance.	CO4	BT2	Understand
5	Explain hybrid inheritance.	CO4	BT2	Understand
6	Explain function overriding.	CO4	BT3	Apply
7	Differentiate function overloading and overriding.	CO4	BT4	Analyze
8	Explain virtual base class.	CO4	BT2	Understand
9	Explain abstract class.	CO4	BT2	Understand
10	Write program for single inheritance.	CO4	BT3	Apply
11	Write program for multiple inheritance.	CO4	BT3	Apply
12	Explain advantages of inheritance.	CO4	BT2	Understand
Assignment-5				
Unit 5: Pointers and Virtual Functions				
1	Explain pointers to objects.	CO5	BT2	Understand
2	Explain pointer to derived class.	CO5	BT2	Understand
3	Explain virtual functions.	CO5	BT2	Understand
4	Explain pointer to virtual functions.	CO5	BT2	Understand
5	Explain this pointer.	CO5	BT2	Understand
6	Write program using pointer to object.	CO5	BT3	Apply
7	Write program using virtual function.	CO5	BT3	Apply

8	Explain runtime polymorphism.	CO5	BT4	Analyze
9	Differentiate static and dynamic binding.	CO5	BT4	Analyze
10	Explain advantages of virtual functions.	CO5	BT2	Understand
11	Explain memory allocation using pointers.	CO5	BT3	Apply
12	Explain real-time application of virtual functions.	CO5	BT3	Apply