**MODULE: 3**

**SE – Introduction to OOPS Programming**

* **Introduction to C++:-**

1. **What are the key differences between Procedural Programming and Object-Oriented Programming (OOP)?**
2. **List and explain the main advantages of OOP over POP.**
3. **Explain the steps involved in setting up a C++ development environment.**
4. **What are the main input/output operations in C++? Provide examples.**

* **Variables, Data Types, and Operators:-**

1. **What are the different data types available in C++? Explain with examples.**
2. **Explain the difference between implicit and explicit type conversion in C++.**
3. **What are the different types of operators in C++? Provide examples of each.**
4. **Explain the purpose and use of constants and literals in C++.**

* **Control Flow Statements:-**

1. **What are conditional statements in C++? Explain the if-else and switch statements.**
2. **What is the difference between for, while, and do-while loops in C++?**
3. **How are break and continue statements used in loops? Provide examples.**
4. **Explain nested control structures with an example.**

* **Functions and Scope:-**

1. **What is a function in C++? Explain the concept of function declaration, definition, and calling.**
2. **What is the scope of variables in C++? Differentiate between local and global scope.**
3. **Explain recursion in C++ with an example.**
4. **What are function prototypes in C++? Why are they used?**

* **Arrays and Strings:-**

1. **What are arrays in C++? Explain the difference between single-dimensional and multi- dimensional arrays.**
2. **Explain string handling in C++ with examples.**
3. **How are arrays initialized in C++? Provide examples of both 1D and 2D arrays.**
4. **Explain string operations and functions in C++.**

* **Introduction to Object-Oriented Programming:-**

1. **Explain the key concepts of Object-Oriented Programming (OOP).**
2. **What are classes and objects in C++? Provide an example.**
3. **What is inheritance in C++? Explain with an example.**
4. **What is encapsulation in C++? How is it achieved in classes?**