SEMESTER II – PAPER V – C++ AND JAVA PROGRAMMING – MODULE I

C++ PROGRAMMING

UNIT I – INTRODUCTION TO C++

Basic concepts of Object Oriented programming – simple C++ program – structure of C++ Program – Basic data types – Operators in C++- Cin and Cout statements – setw, end switch statements – do while, while and for loops.

UNIT II – FUNCTIONS AND POINTERS IN C++

Function prototyping – call by reference – return by reference – intime function – function overloading – Friend and Virtual functions – arrays – one and multidimensional arrays – Pointers – the new Operator – delete – operators – arrays of pointers and pointers to arrays.

UNIT III – CLASSES OBJECTS AND INHERITANCE

C++ Program with class – defining – member function – arrays within a class – arrays of Objects – constructors in a class copy constructors – overloading many, binary operators using friends – single inheritance – multiple inheritance – multilevel inheritance.

JAVA PROGRAMMING

UNIT IV – INTRODUCTION

Introduction to JAVA – Features of Java – Java architecture – Java Important to Internet – A first simple Program – Data types, Variables and Arrays – Operators – Control statements. Classes and Objects – Class variables and Class methods – "This" operator – Reusing classes.

UNIT V

Inheritance – inheritance Basics – Using Super – Creating multilevel Hierarchy – Dynamic Method Dispatch – The "Final" key word – Polymorphism – Abstract classes and methods – Packages and Interfaces – Packages – Access Protection – Interfaces – I/O, Applets.

BOOK FOR STUDY:

1. Object Orient Programming with C++, E- Balagurusamy, Tata McGraw-Hill Publishing Limited, New Delhi.
2. Schaum's Outlines Theory and Problems with C++ - John R.Hub Bard – Tata McGraw – Hill Publishing Limited, New Delhi.
3. The Complete Reference Java 2 – Patrick Naughton and Herbert Schildt – Tata McGraw – Hill Publishing Limited, New Delhi – 2000.
   Unit IV – Chapter 1, 2, 3, 4, 5, 6 & 7, Unit V – Chapter 8, 9 & 12
4. Schaum's Outlines Theory and Problems of Programming with JAVA, john R.Hubbard, - McGraw Hill International, 1999.