

SARDAR PATEL UNIVERSITY
Programme & Subject: B.Sc (Computer Science)
Semester: V
Syllabus with Effect from: June-2013

Paper Code: US05CCSC01	Total Credit: 3
Title Of Paper: Object Oriented Programming Using C++	

Unit	Description in detail	Weighting (%)
I	<p>Object Oriented Programming (OOP) Concepts and C++ Structured programming vs. object oriented programming Basic OOP concepts : objects , classes , encapsulation , data hiding , inheritance, polymorphism Introduction to C++: structure of a C++ program , data types , variables, constants, expressions, statements and operators Usage of header files Control flow statements : if else, for loop, while loop, do while loop, switch, break and continue</p>	25%
II	<p>Input/Output, Arrays and Working with Classes Basic I/O in C++ Arrays in C++ : introduction, declaration, initialization of one , two and multi-dimensional arrays, operations on arrays Working with strings: introduction, declaration, string manipulation and arrays of string. Classes and objects in C++ Constructors : default, parameterized, copy, constructor overloading and destructor Access specifiers, implementing and accessing class members Working with objects : constant objects, nameless objects, live objects, arrays of objects</p>	25%
III	<p>Functions, Function overloading and Inheritance Introduction to functions, library and user-defined functions, parameters passing, default arguments, Functions overloading , inline functions, friend functions and virtual functions Inheritance: Introduction , derived class declaration, forms of inheritance Inheritance and member access ability, constructor and destructor in derived class, construction invocation and data member initialization.</p>	25%
IV	<p>Operator Overloading Pointers and Files Operator overloading : Introduction, overloaded operators, unary operator overloading, operator keyword, operator return values, binary operators overloading, overloading with friend function. Introduction to pointer, pointer variable, pointer arithmetic array of pointers, pointer to object, Dynamic memory allocation Files : introduction and applications. File operations : open, read, write, seek and close.</p>	25%



Text Books:

- E.Balagurusamy:Object Oriented Programming in C++,Tata McGraw-Hill Publishing Co.Ltd.
- Robert Lafore:Object Oriented Programming in Turbo C++, Guide, Galgotia Pub.(P) Ltd.

Basic Text & Reference Books:-

- Barkakati N. : Object Oriented Programming in C++, PHI.
- OOP's using C++ for Dummies.

