

Ramakrishna Mission Vivekananda College (Autonomous) , Evening College  
Mylapore, Chennai. – 4

**Department of Commerce – Information Systems Management  
Curriculum for B.Com (I.S.M) from Academic Year 2017 -2018**

Subject	<b>OOPs WITH C++ (THEORY)</b>	
Batch Code	17	
Subject Code	<b>UISAM07</b>	<b>Credits: 4</b>
Major/ Allied / Elective	Major	Instruction Hours/ Weeks: 5
Maximum Marks	100 (60:40)	(Internal Marks : 25 External Marks : 75)

Unit - I

**Overview of C++:** C++ fundamentals-C++ Tokens-Keywords and Identifiers-Constants-Variables-Data types-Operators-Expression-Managing Input and Output Operations.  
OOPS: Basic concepts-Benefits-Applications-Classes and Objects-Access Specifiers-Array of Classes

Unit - II

**Constructors:** Definition-Types of Constructors: Default, Parameterized, Copy Constructors- Multiple Constructors-Destructors.  
**Functions:** Function Overloading-Friend Function-Inline Function-Static Member function-const Member functions.

Unit - III

**Operator Overloading:** Overloading Unary Operators- Overloading Binary Operators- Overloading Arithmetic Assignment Operators  
**Inheritance:** Definition-Types: Single, Multiple, Multilevel, Hierarchical and Hybrid-Virtual Base Class-Abstract Class.

Unit - IV

**Polymorphism:** Definition-Types: Compile Time and Runtime -Virtual Functions-Pure Virtual Functions-"this" pointer-Pointer to Objects.

Unit - V

**Templates:** Class Templates-Function Templates-Overloading Templates Functions-Member Function Templates-Non Type Templates Arguments.  
**Exception Handling:** Basics-Mechanism-Throwing Mechanism-Catching Mechanism-Rethrowing an Exception-Specifying Exception.

End Semester Question Paper Pattern

Part	Theory	Problems	Total Questions	To Answer	Marks per Question	Total Marks
Section A	12	0	12	10	2	20
Section B	7	0	7	5	5	25
Section C	4	0	4	2	15	30

Text & Reference Books:

1. The Complete Reference C++-Herbert Schildt-Tata McGraw Hill
2. Object Oriented Programming with C++-4<sup>th</sup> Edition-E.Balaguruswamy- Tata McGraw Hill
3. Herbert Schildt, "Teach Yourself C++", III edition, Tata McGraw Hill 5th Reprint 2000.
4. Robert Lafore, "Object Oriented Programming in Turbo C++", Galgotia 2001