20BSM311T					Object Oriented Programming					
Teaching Scheme					Examination Scheme					
L	T	P	C	Hrs. / Week	Theory			Practical		Total Marks
					MS	ES	IA	LW	LE/Viva	
3	1	0	4	4	25	50	25			100

COURSE OBJECTIVES

- Understanding about object oriented programming.
- To make aware the concept of classes and objects.
- Understanding the process of exposing essential data and hiding the low level data.
- Understand the basics of constructors, destructors, inheritance and polymorphism.

UNIT 1 CONSTRUCTORS AND DESTRUCTORS **10 Hrs.**

Introduction, Basic of C and C^{++},constructors and destructors, types of constructors, destructors, declaration and application of constructors, Private constructor and destructors, program on constructors and destructors, memory management, Library of Python.

UNIT 2 INTRODUCTION TO OOP **10 Hrs.**

Whatis object oriented programming. Programming characteristics of object oriented languages, difference in C and C++, Basics of C++, Some simple C++ Program, Data types in C++, operators in C++, control structure in C++, I/O formatting.

UNIT 3 CLASSES AND OBJECTS **10 Hrs.**

Introduction to classes and objects, class, encapsulation, objects, member function, static member.

UNIT 4 INHERITANCE AND POLYMORPHISM **10 Hrs.**

Introduction and benefits, Types of Inheritance, Virtual functions and Function overriding, Polymorphism.

40 Hrs.

COURSE OUTCOMES

On completion of the course, student will be able to

CO1 – Apply the object oriented programming paradigm to write computer programs.
CO2 – Apply concept of function overloading which leads to more readable and maintainable code.
CO3 – Demonstrate the ability to apply concepts of inheritance and polymorphism.
CO4 – Analyse the memory by using constructor and destructor in programming.
CO5 – Evaluate mathematical problems by writing a simple program in an OOP approach.
CO6 – Create/manipulate objects belonging to the class.

TEXT/REFERENCE BOOKS:

1. E. Balagurusamy, Object-Oriented Programming with C++, Tata McGraw Hill.
2. R. Rajaram, Object Oriented Programming & C++, New Age International.
3. H. Schildt, C++ The complete Reference, 4th Ed, Tata McGraw Hill.
4. D. Samanta, Object-Oriented Programming with C++ and JAVA, PHI.

END SEMESTER EXAMINATION QUESTION PAPER PATTERN

Max. Marks: 100 **Exam duration: 3 Hrs.**

Part A: 6 questions of 4 marks each 24 Marks
Part B: 6 questions of 8 marks each 48 Marks
Part C: 2 questions of 14 marks each 28 Marks