

OBJECT ORIENTED PROGRAMMING USING C++ LAB**Course Code: CSE 224****Credit Units: 01****Total Hours: 20****Course Objective:**

To perform object oriented programming solution and develop solutions to problems demonstrating usage of control structure, modularity, classes, I/O and the scope of the class members.

SOFTWARE REQUIRED: TURBO C++

Course Contents :

Lab Experiments are based on the course Object Oriented Programming Using C++ (CSE 204)

Lab assignment will be based on the following:

- 1 [Classes and Objects] Write a program that uses a class where the member functions are defined inside a class. **(1 Hour)**
- 2 [Classes and Objects] Write a program that uses a class where the member functions are defined outside a class. **(1 Hour)**
- 3 [Classes and Objects] Write a Program to Demonstrate Inline functions. **(1 Hour)**
- 4 [Classes and Objects] Write a Program to Demonstrate Friend function, classes and this pointer. **(1 Hour)**
- 5 [Constructors and Destructors] Write a program to demonstrate the use of zero argument and parameterized constructors. **(2 Hours)**
- 6 [Operator Overloading] Write a program to demonstrate the overloading of increment and decrement operators. **(2 Hours)**
- 7 [Inheritance] Write a program to demonstrate the single inheritance. **(1 Hour)**
- 8 [Inheritance] Write a program to demonstrate the multiple inheritance. **(1 Hour)**
- 9 [Inheritance] Write a Program to demonstrate use of protected members, public & private protected classes, multilevel inheritance etc. **(1 Hour)**
- 10 [Polymorphism] Write a program to demonstrate the runtime polymorphism. **(1 Hour)**
- 11 [Exception Handling] Write a program to demonstrate the exception handling. **(2 Hours)**
- 12 [Templates and Generic Programming] Write a program to demonstrate the use of function template. **(2 Hours)**
- 13 [Templates and Generic Programming] Write a program to demonstrate the use of class template. **(2 Hours)**
- 14 [File Handling] Write a Program to Show how file management is done in C++. **(2 Hours)**

Course Outcomes:

At the end of this course, students will demonstrate ability to:

- knowledge of the structure and model of the C++ programming language, (knowledge)
- evaluate user requirements for software functionality required to decide whether the C++ programming language can meet user requirements (analysis)
- design the object-oriented programs for real world problems.

Examination Scheme:

IA			EE			
A	PR	Practical Based Test	Major Experiment	Minor Experiment	Practical Record	Viva
5	10	15	35	15	10	10

Note: IA –Internal Assessment, EE- External Exam, PR- Performance, LR – Lab Record, V – Viva.

Text & References:**Text:**

- A.R.Venugopal, Rajkumar, T. Ravishanker “Mastering C++”, TMH, 1997
- R. Lafore, “Object Oriented Programming using C++”, BPB Publications, 2004.
- “Object Oriented Programming with C++” By E. Balagurusamy.
- Schildt Herbert, “C++: The Complete Reference”, Wiley DreamTech, 2005.

References:

- Parsons, “Object Oriented Programming with C++”, BPB Publication, 1999.
- Steven C. Lawlor, “The Art of Programming Computer Science with C++”, Vikas Publication, 2002.
- Yashwant Kanethkar, “Object Oriented Programming using C++”, BPB, 2004