**SARASWATI MAHILA MAHAVIDHYALAYA, PALWAL**

**LESSON-PLAN**

**Class: B.Sc (cs)2nd YEAR Semester: 3rd**

**Subject:** : Object-Oriented Design and C++ ( **paper:3.2) Session: 2020-21**

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| **Lecture Number** | **Topic** |
| **1-5** | Object oriented concepts: Class, Object, Methods, Message Passing, Abstraction, Inheritance |
| **6-8** | Polymorphism, Generosity, Overriding, Abstract Class & methods |
| **9-10** | Generalization, Aggregation, Associations. |
| **11-13** | Object modeling techniques: Introduction to object model. |
| **14-17** | Dynamic model, Functional Model. Strengths & Weakness of all models. |
| **18-20** | Introduction to Programming C++: Object-Oriented Features of C++ |
| **21-25** | data types in C++, variables, operators, flow control, recursion, array |
| **26-30** | Pointers and their manipulation |
| **31-33** | strings, structures, Class and Objects, Data Hiding |
| **34-36** | Encapsulation, Data members and Member functions |
| **37-40** | Inline Functions, Static Data Members |
| **41** | Member Functions, Friend Functions |
| **42** | Preprocessor Directives, |
| **43-45** | Namespace, Comparing C with C++. |
| **46-50** | Constructors & Destructors: Roles and types of Constructors |
| **51-53** | Constructor Overloading, Roles of Destructors |
| **54-57** | Dynamic Memory Allocation: Pointers and their Manipulation |
| **58-59** | new and delete Operators ‘this’ Pointer |
| **60-62** | Console I/O: Formatted and Unformatted I/O |
| **63** | Manipulators. |
| **64-66** | Compile-Time Polymorphism: Unary and Binary Operators overloading through Member Functions |
| **67-68** | Unary and Binary Operators overloading through Friend Functions |
| **69** | Function Overloading |
| **70** | virtual functions, abstract class |
| **71** | virtual class |
| **72-74** | Inheritance: Types of Derivations, Forms of Inheritance |
| **75** | Roles of Constructors and Destructors in Inheritance. |

 **Shweta**

 **(Asst Prof. in CS)**