

**PG.GOV'T COLLEGE FOR GIRLS, SECTOR-42, CHANDIGARH**

**Teaching Plan Session Odd Semester**

**(2018-19)**

**Name of the Teacher: Anjali Rohilla**

**Department: Computer Science**

<b>Schedule</b>			<b>Subject 1 (Period 8<sup>th</sup>) Room No: 102</b>	<b>Subject 2 (Period 4<sup>th</sup>) Room No: 111</b>
			<b>B.A. &amp; BSc 2<sup>nd</sup> C++ (IT Elective)</b>	<b>BSc 1<sup>st</sup> Computer Fundamental (CS Elective)</b>
<b>Week No</b>	<b>Date From</b>	<b>Date Up to</b>	<b>Topics To be covered</b>	<b>Topics to be covered</b>
Week 1	July 22-24, 2018	July 29, 2018		
Week 2	July 31 2018	Aug 5, 2018		
Week 3	Aug 6, 2018	Aug 11, 2018	Concepts of Object Oriented Programming: Introduction to OOP, Difference between OOP and POP, Object, Class, Encapsulation, Abstraction, Polymorphism, Inheritance.	Computer Appreciation: Introduction to computers, characteristics of computer; History of computers. Classification of computers on size: (Micro, Mini, Mainframe and super computers), Working Principles of computer.
Week 4	Aug 13, 2018	Aug 18, 2018	Structure of a C++ Program and I/O streams. Classes and Objects Class Declaration : Data Members, Member Functions, Private and Public members, Creating Objects, Accessing class data members, Accessing member functions	Generations of computers. Applications of computers, commonly used terms– Hardware, Software and Firmware. Basic Computer Organization: Block diagram of computer system, Input unit, CPU and Output Unit and their functions.

Week 5	Aug 20, 2018	Aug 25, 2018	Class Function Definition: Member Function definition inside the class declaration and outside the class declaration, friend function, inline function, static function. <b>Class Test</b>	Description of Computer input devices: Keyboard, Mouse, Trackball, Pen, Touch screens, Scanner, Digital Camera; Output devices: Monitors, Printers, Plotters.
Week 6	Aug 27, 2018	Sept 1, 2018	Scope resolution operator, Private and Public member function, Nesting of member functions, Arrays within a class. Arrays of Objects.	Computer Memory: Representation of information: BIT, BYTE, Memory, Memory size; Units of measurement of storage; Main memory: main memory organization, RAM, ROM, PROM, EPROM
Week 7	Sept 3, 2018	Sept 8, 2018	Objects as function arguments: Pass by value, Pass by reference, Pointers to Objects. Constructors and Destructors: Declaration and Definition. Types of Constructors, (Default, Parameterized, Copy Constructors). Destructors: Definition and use.	Concept of files and directories; Disk Operating System: DOS, System Files, types of DOS commands: Internal and External commands: Introduction to AUTOEXEC.BAT, Directory commands XCOPY, DEL, RENAME, ATTRIB, BACKUP, RESTORE, FIND, SYS; General commands: TYPE, DATE, TIME, PROMPT; Batch Files, Wild Cards, Line Editor
Week 8	Sept 10, 2018	Sept 15, 2018	Function Overloading & Operator Overloading. Inheritance - Extending Classes Concept of inheritance, Base class, Defining derived classes Visibility modes : Public, Private, Protected . <b>Class Test</b>	Introduction to graphical user interface, window operating system, Anatomy of windows, organizing folders and files, recycle bin, my computer, windows explorer, control panel.
Week 9	Sept 17, 2018	Sept 22, 2018	Polymorphism: Definition, Application and demonstration of Data Abstraction, Encapsulation and Polymorphism. Early Binding	<i>Word Processing</i> : Basics of Word Processing; Opening, Creating, Saving, Printing and Quitting Documents, Using the Interface (Menu Toolbars), Editing Text (Copy, Delete, Move), Finding and Replacing Text, Spell Check, Autocorrect; Auto Text, Character formatting, Page formatting; Document Enhancement

Week 10	Sept 24, 2018	Sept 29, 2018	<b>Class Test</b> ; Single inheritance: Privately derived, Publicly derived; Making a protected member inheritable, Access Control to private and protected members by member functions of a derived class.	<i>Word Processing</i> : Basics of Word Processing; Opening, Creating, Saving, Printing and Quitting Documents, Using the Interface (Menu Toolbars), Editing Text (Copy, Delete, Move), Finding and Replacing Text, Spell Check, Autocorrect; Auto Text, Character formatting, Page formatting; Document Enhancement
Week 11	Oct 1,2018	Oct 8, 2018	Multilevel inheritance, Nesting of classes. Polymorphism with pointers	Adding Borders and shading, Adding Headers and Footers, Setting up Multiple columns, Sorting blocks, Adjusting Margins and Hyphenating Documents; <b>Class Test</b>
Week 11	Oct 20, 2018	Oct 27, 2018	Virtual Functions, Late binding, pure virtual functions. File Processing : Opening and closing of file Stream	Creating Master Documents, Creating Data Source, Merging Documents, Using Mail merge feature for labels and envelops; Inserting Pictures, Tables, Working with equations.
Week 12	Oct 29, 2018	Nov 3, 2018	State member functions, Binary file operations, structures and file operations, classes and file operations, Random file processing.	Types of software: System and Application software; Programming Languages: Generation of Languages; Translators - Interpreters, Compilers, Assemblers and their comparison.
Week 13	Nov 5, 2018	Nov 10, 2018	Data Structures: Basic Concepts and notations, introduction to Complexity, Data Structure operations, applications of Data Structure	Secondary storage devices: Sequential Access Memory, Direct Access Memory Magnetic Tapes, Magnetic disks, Optical disks: CD, DVD; Memory storage devices: Flash Drive, Memory card. Range of Applications: Scientific, Word Processing, Spread Sheets, E-commerce, Business, Educational, Industrial.
Week 14	Nov 12, 2018	Nov 17, 2018	Arrays: Introduction, Types of Array, Memory representation, applications and operations; Stacks: Array	National level weather forecasting, Remote Sensing, Planning Multilingual Applications. Spread Sheet : Worksheet

			representation of a stack, operations- initialization, push, pop, empty, and full; applications	overview, Row, Column, Cells, Menus, Opening, Saving, Printing Worksheets; Calculations, Auto fill, Working with Formulae, Data Formatting, Working with Ranges.
Week 15	Nov 19, 2018	Nov 22, 2018	Queue: introduction, memory representation, operations- add, remove, initialization; applications <b>Class Test</b>	Establishing Worksheet links; Creating, Sorting and Filtering Data Base; Creating charts, Creating Macros, Functions (Statistical, Financial, Mathematical, String, Date and Time). Operating Systems: Components of Operating System; Functions of Operating System; Types of Operating System; Linux/Dos/Windows. <b>Class Test</b>
Week 16	Nov 26, 2018	Dec 1, 2018	Linked List: introduction, declaration, operations:-traversing, searching, inserting, deleting; Introduction to Circular list.	MS-Power Point: Creating, Saving, Printing Presentation; Selecting Design Templates, Animations and Transitions, Auto Content Wizard. Computers and Communication: Single user, multi-user, workstation, and client server systems. Computer networks, Network protocols. LAN, WAN, Services offered by Internet.