**PG.GOVT COLLEGE FOR GIRLS, SECTOR-42, CHANDIGARH**

**Teaching Plan Session Even Semester**

**(2018-19)**

**Name of the teacher: Anjali Rohilla**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Schedule** | | | **Subject 1 (Period 4th )**  **Room No : 318** | **Subject 2 (Period 8th )**  **Room No: 101** |
| **BSc Computer Sc. 1st Year (2nd Sem) Operating System and C Programming** | **B.A. & BSc 2nd year (4th Sem) Computer Networks and Web Programming(IT Elective)** |
| **Week No** | **Date From** | **Date Up to** | **Topics to be covered** | **Topics to be covered** |
| Week 1 | Jan 14, 2019 | Jan 19, 2019 | Operating Systems (OS): Introduction, need of operating system and functions of operating system. | Networking: Definition, Network hardware and Software, Network Topologies |
| Week 2 | Jan 21, 2019 | Jan 25, 2019 | Types of OS: Multi-user, Multitasking, Multiprocessing and Real time Operating Systems, Parallel systems, Distributed systems, Structure of Operating System | Types and Uses of Computer Networks, Brief Introduction to OSI reference model  and TCP/IP reference Model |
| Week 3 | Jan 28, 2019 | Feb 2, 2019 | Process Management: Introduction to Process, PCB, Process States, CPU Scheduling: Scheduling Criteria and Algorithms: FCFS, SJF, Priority, Round Robin, Multilevel Queue Scheduling, Multilevel Feedback Queue  Scheduling. | Internet, WWW, URL, and Introduction to Search engines.HTML: Introduction to HTML, Building blocks of HTML, lists, links, images, tables, frames, layers forms.  **Class Test** |
| Week 4 | Feb 4, 2019 | Feb 9, 2019 | Programming Process**:** Steps in developing of a program, Data Flow Diagram, Decision Table, Algorithm development, Flowchart, Pseudo Code, Testing and Debugging. | DHTML: Introduction to cascading style sheets (CSS), Types of Style sheets(Inline ,  embedded, external) ,class |
| Week 5 | Feb 11, 2019 | Feb 16, 2019 | Fundamentals of C Languages**:** History of C, Character Set and Keywords, Constants, Types of Constants, Rules for Constructing Integer, Real and character Constants, Variables, Data Types, rules for constructing variables. | Applying CSS. Java Script: Features, tokens, data types, variables |
| Week 6 | Feb 18, 2019 | Feb 23, 2019 | Operators and Expressions**:** C Instructions, Arithmetic operators, Relational operators, Logical operators, Assignment Operators, Type Conversion in Assignments, Hierarchy of Operations. | operations, control constructs,  strings arrays, functions, core language objects, |
| Week 7 | Feb 25, 2019 | Mar 2, 2019 | Standard and Formatted Statements, Structure of a C program, Compilation and Execution. | Document object model,client side  Objects, event handling. Applications related to client side form validation.  **Class Test** |
| MID SEMESTER EXAM | | | | |
| Week 8 | Mar 11 , 2019 | Mar 16 , 2019 | Decision Control Structure: Decision making with IF-statement, IF-Else and Nested IF-Else, The else if Clause. | Fundamentals of Java: Java Vs. C++, Byte lode, Java virtual machine, constants,  variables, data types |
| Week 9 | March 18, 2019 | March 22, 2019 | Loop Control Structure: While and do-while, for loop and Nested for loop.  Case Control Structure: Decision using switch, The go to statement. | operators, expressions, control structures, defining class, creating objects, accessing class members, constructions, method overloading. |
| Week 10 | March 25 , 2019 | March 30, 2019 | Practice of programming examples in C  Functions**:** Library functions and user defined functions.**Class Test** | Arrays, String handling Inheritance: Basics, member access, using super to call super  class constructors, creating a multi-level hierarchy, |
| Week 11 | April 01, 2019 | April 06, 2019 | Global and Local variables, Function Declaration, Calling and definition of function, Methods of parameter passing to functions, recursion, Storage Classes in C. | method overriding, Dynamic  Method dispatch, using abstract classes, using Final. |
| Week 12 | April 08, 2019 | April 12, 2019 | Arrays**:** Introduction, Array declaration, Accessing values in an array, Initializing values in an array, Single and Two Dimensional Arrays, Initializing a 2-Dimensional Array, Memory Map of a 2-Dimensional Array, Passing array elements to a function. | Packages and Interfaces: Defining a package, understanding CLASSPATH, Access  protection: Importing packages |
| Week 13 | April 15, 2019 | April 20, 2019 | Deadlocks: Introduction, Necessary and sufficient conditions for Deadlocks, Resource allocation graph. Introduction to methods for handling deadlocks, deadlock prevention, deadlock avoidance: Banker Algorithm, deadlock detection and recovery. | Interfaces, Defining an Interface, Implementing.  Interfaces, Applying, Interfaces, Variables in Interfaces. |
| Week 14 | April 22, 2019 | April 27, 2019 | Memory Management: Logical vs. Physical address space, Swapping, Introduction to Paging, Segmentation, and Virtual Memory-Demand paging, Introduction to Page Replacement algorithms: FIFO, Optimal Page replacement and LRU. **Class Test** | Exception Handling: Fundamentals, exception types, using Try and catch, Multiple Try and  Catch clauses, Nested Try statements, Built – in exceptions.  **Class Test** |
| Week 15 | April 29, 2019 | May 05, 2019 | String Manipulation in C: Declaring and Initializing string variables, Reading and writing strings, String  Handling functions (strlen(), strcpy(), strcmp(), strcat()). | Multi-threaded Programming: The Java Thread model, Thread priorities, synchronizations,  Messaging. The thread class and run able Interface, The Main Thread: Creating a Thread,  Implementing Runnable |
| Week 16 | April 30, 2019 | May 05, 2019 | Structures and Unions: Declaration of structures, Structure Initialization, Accessing structure members,  Union, Difference between Structure and Union.  Revision of covered topics | Extending Thread, creating Multiple Threads, Thread Priorities;  synchronizations: Methods, statements, Inter Thread communication, Deadlock, suspending,  Resuming and stopping Threads, Applet fundamentals. |