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

**Teaching Plan Even Semester**

**Session (2018-19)**

**Class: B.A\B.Sc (IT)2nd Sem Name of the Teacher:Sonali**

**Subject: Computer Programming using C Period :8th**

**Paper : B Room No : 102**

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| **S. No** | **Dates** | **Topics to be covered** |
| Week 1 | 14 /01/2019 – 19/01/2019 | C Language : History, Structure of a C program: Data types – (int, float,  char, double, void), Data structures  Constants and variables, variable  declaration (integer, float, character, logical variables, string variables) |
| Week 2 | 21/01/2019 –  25/01/2019 | Constants Operators and Expressions: Arithmetic operators, Relational  Operators, logical operators, Expressions Control constructs: if-else, for, while. |
| Week 3 | 28/01/2019 –  2/02/2019 | Arrays: Array declaration, one and two dimensional arrays; Functions-  Fundamentals: General form, function arguments, Return value, |
| Week 4 | 4/02/2019 –  9/02/2019 | Basic I/O: Formatted input/ Output, Unformatted Input/output; Program Design examples Advanced features: Type modifiers and storage class specifiers for data types, Bit operators, ? Operator, & operator, \* operator, Type casting. Type conversion |
| Week 5 | 11/02/2019 –  16/02/2019 | Advanced Programming Techniques: Control constructs: do-while, switch  statements, break and continue, exit() function, goto and label; Scope Rules: Local and Global variables |
| Week 6 | 18/02/2019 –  23/02/2019 | Advanced Programming Techniques: Control constructs: do-while, switch  statements, break and continue, exit() function, goto and label; Scope Rules: Local  and Global variables. |
| Week 7 | 25/02/2019 –  02/03/2019 | Scope rule of functions; Functions: Parameter passing –call by value and call by  reference, calling functions with Arrays, argc and argv Recursion: Basic concepts,  Design examples (Tower of Hanoi, Recursive quick sort);  **DOUBTS**  **TEST** |
| Mid Semester Exam | | |  | Recursion: Basic concepts,  Design examples (Tower of Hanoi, Recursive quick sort);  **DOUBTS** |
| Week 8 | 11/03/2019 –  16/03/2019 | Dynamic Data structures  in C: Pointers, the & and \* operators, Pointer expression, Pointer assignments, Pointer arithmetic, Pointer comparison. The dynamic allocation functions – mal loc  and cal loc. |
| Week 9 | 18 /03/2019 –  22/03/2019 | Pointer Vs Arrays, Arrays of pointers, Pointers to Pointers, Initializing Pointers, Pointers to functions, function returning Pointer, Functions with variable number  of Arguments |
| Week 10 | 25/03/2019 –  30/03/2019 | Structures: Basics of Structures, Declaring a structure, Referencing  structure elements, Array of structures, Passing structures to functions, passing  entire structure to functions, Structure Pointers, Declaring a structure pointer,  Arrays and Structures within Structures |
| Week 11 | 1/04/2019 –  6/04/2019 | Unions: Declaration, Uses,  Enumerated data types, typedef, Example algorithms: linked list: insertion, deletion and search. |
| Week 12 | 8/04/2019 –  12/04/2019 | File Handling: The file Pointers, file accessing functions  (fopen, fclose, putc, getc, fprint)  **TEST** |
| Week 13 | 15/04/2019 –  20/04/2019 | C preprocessor: # define, # include, #undef,  #conditional compilation directives (#if, #else, #else if, #end if, #def and #fndef);  **TEST** |
| Week 14 | 22/04/2019 –  27/04/2019 | C Standard Library and Header files, Header files (stdlib.h), ctype.h, string.h,  math.h, stlib.h, time.h) etc., Standard library functions, string functions,  Mathematical functions, Date and time functions, |
| Week 15 | 29 /04/2019 –  3/05/2019 | Variable argument list  Functions, Utility functions, Character class test functions.  **DOUBTS** |