**SARASWATI MAHILA MAHAVIDYALAYA,PALWAL**

SESSION:**2021-22**

**LESSON PLAN** Sem : Even

Name of faculty : Ms. Priyanka Bhardwaj Class : BA-II

Designation : Assistant Professor in Maths Subject : Programming in C and Numerical Methods

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| **Sr.no.** | **Topics/chapters** | **Lectures** | **Topics of assignment/test** |
| 1. | Programmer's model of a computer, Algorithms, flowchart, data types, operators and expressions, input/output functions. | Lect 1 to Lect 20 | Assignment of data types and operators and expressions.  Test of programmers model of a computer and flowchart. |
| 2. | Decision statements,logical and conditional statements, implementation of loops, switch statements and case control structures, functions, preprocessor and arrays. | Lect 21 to Lect 40 | Assignment of decisions control structure.  Test of loops and functions. |
| 3. | Strings: character data type, standard string handling functions, arithmetic operations on characters, Structures: definition, using structures, use of structures in arrays and arrays in structures, Pointers: pointers data type, pointers and arrays, pointers and functions. Solution of algebraic and transcendental equations: Bisection method, Regula-falsi method, Secant method, Newton-Raphson's method, Newton's iterative method for finding pth root of a number, order of convergence of above methods. | Lect 41 to Lect 60 | Assignment of pointers.  Test of Bisection method, Regula-falsi method, Newton-raphson's method. |
| 4. | Simultaneous linear algebraic equations:Gauss-elimination method, Gauss Jordon method, LU decomposition method, Crout's method, Cholesky decomposition method, iterative method, Jacobi's method, Gauss-seidal's method, Relaxation method. | Lect 61 to Lect 80 | Assignment of LU decomposition method, Jacobi's method. Test of Crout's method, Gauss-seidal's method and relaxation method. |