F.Y.I.T. (Sem-II)
Course Code: USIT2P4
Course Name: Numerical and Statistical Methods Practical

	List of Practical
1	**Iterative Calculation**
a.	Program for iterative calculation.
b.	Program to calculate the roots of a quadratic equation using the formula.
c.	Program to evaluateing infinite series. e^x
2	**Solution of algebraic and transcendental equations:**
a.	Program to solve algebraic and transcendental equation by bisection method.
b.	Program to solve algebraic and transcendental equation by false position method.
c.	Program to solve algebraic and transcendental equation by Secant method.
d.	Program to solve algebraic and transcendental equation by Newton Raphson method.
3	**Interpolation**
a.	Program for Newton's forward interpolation.
b.	Program for Newton's backward interpolation.
c.	Program for Lagrange's interpolation.
4	**Solving linear system of equations by iterative methods**
a.	Program for solving linear system of equations using Gauss Jordan method.
b.	Program for solving linear system of equations using Gauss Seidel method.
5	**Numerical Differentiation**
a.	Programing to obtain derivatives numerically.
6	**Numerical Integration**
a.	Program for numerical integration using Trapezoidal rule.
b.	Program for numerical integration using Simpson's $1/3_{rd}$ rule.
c.	Program for numerical integration using Simpson's $3/8_{th}$ rule.
7	**Solution of differential equations**
a.	Program to solve differential equation using Euler's method
b.	Program to solve differential equation using modified Euler's method.
c.	Program to solve differential equation using Runge-kutta 2_{nd} order and 4_{th} order methods.
8	**Regression**
a.	Program for Linear regression.
b.	Program for Polynomial Regression.
c.	Program for multiple linear regression.
d.	Program for non-linear regression.
9	**Random variables and distributions**
a.	Program to generate random variables.
b.	Program to fit binomial distribution.
c.	Program to fit Poisson distribution.
10	**Distributions**
a.	Program for Uniform distribution.
b.	Program for Bernoulli distribution
c.	Program for Negative binomial distribution.

Miss. Aayesha Ansari
J.M.P College of Commerce