SYLLABUS

SEMESTER - I

PS 1106 REMEDIAL MATHEMATICS

1. **Algebra:** Equations reducible to quadratics, simultaneous equations (linear and quadratic), Determinants, properties of solution of simultaneous equations by Cramer's rule, matrices, definition of special kinds of matrices, arithmetic operations on matrices, inverse of a matrix, solution of simultaneous equations by matrices, pharmaceutical applications of determinants and matrices. Evaluation of Enl, En2, and En3, mensuration and its pharmaceutical applications.
2. **Measures of Central Value:** Objectives and pre-requisites of an ideal, measure, mean, mode and median.
3. **Trigonometry:** Measurement of angle, T-ratios, addition, subtraction and transformation formulae, T-ratios of multiple, submultiple, allied and certain angles. Application of logarithms in pharmaceutical computations.
4. **Analytical Plans Geometry:** Certain co-ordinates, distance between two points, area of triangle, a locus of point, straight line, slope and intercept from, double - intercept form, normal (perpendicular form), slope-point and two-point form, general equation of first degree.
5. **Calculus: Differential:** Limits and functions, definition of differential coefficient, differentiation of standard functions, including function of a function (Chain rule). Differentiation of implicit functions, logarithmic differentiation, parametric differentiation, successive differentiation.

Integral: Integration as inverse of differentiation, indefinite integrals of standard forms, integration by parts, substitution and partial fractions, formal evaluation of definite integrals.

Recommended Books:

1. A Textbook of mathematics for XI-XII Students, NCERT Publications, vol. I-IV.
2. Sinha: “A Text Book of Algebra and Coordinate Geometry,” Students Friends Publications.
3. Agarwal : “Senior Secondary School Mathematics,” Bharti Bhawan Publications.
2. Boltons, Pharmaceutical Statistics. Practical and Clinical Applications, MeeceI Dekker, N Y.
3. Daniel W W, Biostatistics. A Foundation for Analysis in Health Sciences, John Wiley, NY.