REMEDIAL MATHEMATICS

THEORY 3 hours / week Module - I

Algebra: Equations reducible to quadratic, simultaneous equation (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 matrix, solution of simultaneous equations by matrices, pharmaceutical applications of determinants and matrices. Evaluation of En1, En2 and En3 mensuration and its pharmaceutical applications.

Module - II

Measures of Central Value: Objectives pre-requisites of an ideal, measure mean, mode and median

Trigonometry: Measurement of angle, T-ratios, addition, subtraction and transformation formulae, T-ratios of multiple, sub-multiple, allied and certain angles, Application of logarithms in pharmaceutical computations.

Module - III

Analytical Plans Geometry : Certain co-ordinates, distance between two points, area of triangle, a locus of point, straight line, slope and intercept form double-intercept form, normal (Perpendicular form), slope-point and two point form, general equation of first degree.

Module - IV

Calculus:

(i) **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.

Module - V

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 Text Book of Mathematics for XI, XII students, NCERT Publications, Vol-I to IV
2. Elements of Mathematics (Vol.-I & II), Orissa State Bureau of Text Book Preparation and Production, Bhubaneswar
3. Topics in Mathematics by G. Das, R.S. Rath, B.P. Acharya, P. Mohapatra, S. Padhy (Part-I & II) (Kalyani Publisher, New Delhi)
4. Intermediate Mathematics (Vol.-I & II) by V. Venkateswara Rao, N. Krishnamurthy, B.V.S.S. Sarma. (S. Chand, New Delhi)
5. Higher Engineering Mathematics by Dr. J.S. Grewal (Khanna Publishers, New Delhi)