

# Gujarat Technological University

## B.Pharm Semester-I

### Elementary (Remedial) Mathematics

*Theory(2 Hours / Week; 2 Credits)*

#### **1. Algebra:**

Equation reducible to quadratic, simultaneous (linear & quadratic), Determinants, properties of solution of simultaneous equations by Cramer's rule, matrices, definition of special kind of matrices, arithmetic operations on matrices, pharmaceutical applications of determinants & matrices, Evaluation of  $E_{n1}$ ,  $E_{n2}$  &  $E_{n3}$  mensuration & its pharmaceutical applications.

#### **2. Measures of dispersion:**

Range, average deviation, standard deviation, probability & probability distribution.

#### **3. Permutation ,combination, AP GP, Binomial theorem**

#### **4. Trigonometry:**

measurement of angle, T-ratios, addition subtraction & transformation formulae, T-ratios of multiple sub- multiple, allied & certain angles. Application of logarithm in pharmaceutical computation.

#### **5. Analytical plans geometry:**

Certain co-ordinates, distance between two points, areas of triangle, a locus point, straight line slope & intercept from double-intercept form, normal (perpendicular form), slope point & two point form, general equation from first degree.

#### **6. Calculus:**

**Differential:** Limits & functions, definitions of differential coefficient differentiations of standard functions, including a function of a function (chain rule). Differentiation of implicit function, logarithms differentiation, parametric differentiation, successive differentiation.

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

Differential equation of first order & first degree, V.S. method, homogeneous & linear differential equation, pharmaceutical application on differential equation.

**Books Recommended**

1. Remedial Mathematics by Gupta & Prabhakar ; Pragati Prakashan
2. Remedial Mathematics for Pharmacy by R.C.Kachot; Mahajan Prakashan
3. College Mathematics by Kai L. NILSON, Barnes & Noble inc.