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 En1, En2 & En3 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 faction, 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 & linier 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.