Course Code	Course Title	C	H	I	E	T
17U1MAC1	Allied Mathematics – I **(I Phy. and I Chem.)**	3	6	25	75	100

Unit I Theory of Equations **18 Hrs**

Formation of Equations – Relation between roots and Coefficients- Reciprocal equation – Transformation of Equation – Approximate solutions of Numerical Equations – Newton's Methods – Horner's Method.

Unit II Differential Calculus **18 Hrs**

Curvature – Radius of Curvature – p-r equation – Evolutes.

Unit III Integral Calculus **18 Hrs**

Integration – Evaluation of definite integrals – Integration by parts – Reduction Formulae – Evaluation of Double and Triple Integrals.

Unit IV Trigonometry **18 Hrs**

Applications of Demoivre's Theorem – Expression for sinnθ, cosnθ and tannθ – Expression for $\sin^n\theta$, $\cos^n\theta$ and $\sin^m\theta\cos^n\theta$ - Problems - Expansionof sinθ, cosθ, tanθ in powers in θ – Hyperbolic functions – Inverse Hyperbolic functions.

Unit V Trigonometric series **18 Hrs**

Logarithm of a complex number – Summation of Trigonometric Series – Difference Method – Angles in arithmetic progression method – C+iS method (Excluding Gregory's series).

Text Book:

1. S. Arumugam and A. Thangapandi Isaac, Allied Mathematics Paper – I, Edition 2014, New Gamma Publishing House.

Chapters: Part I, Part II & Part III.

Reference Books:

1. M. K. Venkataraman andManorama Sridhar, Allied Mathematics Vol. I by 1st Edition 2005, Agasthiar Publications.
2. P. R. Vital, Allied Mathematics, Margam Publications (2009).