

SARDAR PATEL UNIVERSITY
Programme & Subject: B.Sc (Mathematics)
Semester: VI
Syllabus with Effect from: November/December-2013

Paper Code: US06CMTH02	Total Credit: 3
Title Of Paper: Complex Analysis	

Unit	Description in detail	Weighting (%)
I	Functions of complex variable ; Limits and their properties ; Limits Involving the point at infinity ; Continuity; Derivatives; Differentiation for mula.	
II	Cauchy-Riemann equations , Su±cient conditions for analyticity ,Analytic and harmonic function .	
III	The exponential function and its properties; Trigonometric , hyper-bolic and Logarithmic functions , Branches of Logarithmic function ;Inverse trigonometric and hyperbolic functions .	
IV	Linear transformations , The transformation $1/z$, Linear fractional transformations , Mappings of the upper half plane , The transformations $w = \exp z$ and $w = \sin z$.	

Recommended Texts :

- R.V.Churchill, J.W.Brown, Complex Variables and Applications,Fifth edition, McGraw-Hill Book Co.,1990.
- Articles 9,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,29,64,65,66,67,68(exponent only),69.

Basic Text & Reference Books:-

- J.B.Conway, Functions of one complex variables, Narosa publ. House, New Delhi,1973.

