

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

Paper Code: US06CMTH01	Total Credit: 3
Title Of Paper: Real Analysis - III	

Unit	Description in detail	Weighting (%)
I	Rolle's theorem , Lagrange's and cauchy's mean value theorems ,Higher order derivatives , Generalized Mean value theorem	
II	Extreme values of function of one variable, Investigation of the points of maximum and minimum values.	
III	Riemann integrals definitions and existence , inequalities for inte-grals , Re- nement of partitions , Darboux's theorem for integrals , conditions of integrability , integrability of the sum , di@ference , product , quotient and modulus of functions.	
IV	Integral as the limit of sums (Riemann sums) , Some integrable Functions , Integration and differentiation , the primitive , the fundamental theorem of integral calculus , mean value theorems of integral , second mean value theorem.	

Recommended Texts:

- S.C.Malik, Principles of Real Analysis, Revised Edition, New Age International, New Delhi, 2000
 Chapter : 1(Except article 1,4.3,4.4,4.6.) , 2, 5,6(Except article 8.4,8.5,8.6), 7(Except article 2),
 8(except 1), 9.

Basic Text & Reference Books:-

- S.C.Malik, and Savita Arora, Mathematical Analysis, second Edition New Age International Pvt. Ltd., New Delhi 2000.
- R.R.Goldberg, Principles of Mathematical analysis.

