SARDAR PATEL UNIVERSITY
Programme & Subject: B.Sc (Mathematics)
Semester: IV
Syllabus with Effect from: November/December-2012

Paper Code: US04EMTH05	Total Credit: 2
Title Of Paper: Calculus & Algebra - II	

Unit	Description in detail	Weighting (%)
I	Maxima and Minima for a function of two variables and its Examples and property.	
II	Definitions of vector and scalar functions ; Differentiation of scalar and vector fields ;Gradient of scalar field ; Directional derivative of scalar field; Tangent and normal plane to a surface ;	
III	Divergence and Curl of vectors fields ; Their Properties , relations and examples .	
IV	Definition of Boolean algebra ; Simplification of Boolean function Application of Boolean algebra to switching circuits.	

Basic Text & Reference Books:-

- D. J. Karia, N. Y. Patel, B. P. Patel, M. L. Patel, Introduction to calculus and di®erential equations.
- M.S.Spiegel , Vector Analysis, Schaum's series .
- Shanti narayan , Di®erential Calculus, Ninth edition, S. chand and Co.Ltd.1991
- J.E.Whitesitt , Boolean Algebra .
- B.S.Grewal, Higher Engineering Mathematics.