

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

<b>Paper Code: US04EMTH01</b>	<b>Total Credit: 2</b>
<b>Title Of Paper: Boolean Algebra &amp; Laplace Transforms</b>	

Unit	Description in detail	Weighting (%)
I	Definition of Boolean algebra Properties of Boolean function; Simplification of Boolean function ; Application of Boolean algebra to switching circuits.	
II	Solution of algebraic and transcendental equations - Bisection method; Iteration method; Aitkin's $\frac{1}{2}$ - process, Method of False position Newton - Rap son method.	
III	Laplace transforms; Laplace transforms of elementary functions Properties of Laplace transforms; differentiation and integration of the transform; Laplace transforms of derivatives and integrals.	
IV	Inverse transforms ; Method of Partial fractions ; Table of some Laplace transforms ; Shifting Property for inverse Laplace transforms ; convolution theorem (statement only)	

**Basic Text & Reference Books:-**

- J.E.Whitesitt , Boolean Algebra .
- S.S.Shasri, Introductory methods of Numerical analysis, Prentice Hall Of India .
- B.S.Grewal, Elementary Engineering Mathematics , Khanna Publishers.
- Kreyszig E., Advanced Engineering Mathematics .
- B.S.Grewal, Higher Engineering Mathematics , Khanna Publishers.

