SRI GURU TEGH BAHADUR KHALSA COLLEGE
North Campus, University of Delhi - 110007

Teacher : Jasvinder Kaur Bhalla
Department : Mathematics
Course : B.A (P)
Subject : Analysis
Semester : V

Text Books

[1] Introduction to Real Analysis by R.G. Bartle and D.R. Sherbert
[2] Introduction to Calculus and Analysis I by Richard Courant and Fritz John A. Tucker
[3] Real Analysis by S.K. Berbarian

Week	Topics to be covered
1.	● Order completeness property of real nos. Supremum and infimum
2.	● Intervals, Bounds of a set ● modulus/Absolute value of Real nos. ● Archimedean property of Real nos.
3.	● Sequences, Limit of a sequences ● Convergent and divergent of real sequences
4.	● Limit theorems for sequences
5.	● Monotonic sequences and related theorems
6.	● Cauchy's Sequences ● Cauchy's general principle of convergence
7.	● Subsequences, related theorems and problems
8.	● Bolzano weierstrass theorem and problems
9.	● Infinite series, positive term series ● Comparison test, D'Alembert's ratio test
10.	● Absolute and conditional convergence
11.	● Cauchy's n^{th} root test ● Raabe's test ● Alternative series
12.	● Riemann Integral
13.	● Integrability and improper integrals

14.	● Beta & Gamma functions and their properties
15.	● Pointwise convergence, Uniform convergence and continuity
16.	● Power series, radius of convergence ● Fourier Series
17.	● Revision