

## **Syllabus for remedial classes Mathematics session 2014-2015**

**Class- B.Sc III (Non Med and C.Sc)**

**Teacher- Ms. Ruchika Jain**

Sequence: Cauchy's convergence criterion. Series of non-negative terms. Comparison tests. Cauchy's integral tests. Ratio tests. Cauchy's root test. Raabe's test logarithmic test. De'morgan's and Bertrand's tests. Kummer's test, Cauchy Condensation test, Gauss test, alternative series. Leibnitz's test, absolute and conditional convergence. Improper integrals and statements of their conditions of existence. Test of the convergence of improper integrals.

Pole and polar, pair of tangents at a point, Chord of contact, equation of the chord in terms of mid point and diameter of conic. Parabola and ellipse and their properties. Sphere, Section of a sphere by a plane, spheres of a given circle. Intersection of a line and a sphere. Tangent line, tangent plane, power of a point w.r.t. a sphere, radical planes.