Government College, Alewa (Jind)

Weekly Lesson Plan with Assessment (Session 2025-26)

Teacher: Dr. Manoj Kumar (Assistant Professor, Mathematics)
Subject: Analytical Geometry & Vector Calculus (B-23 MAT-401)
Class: B.A. & B.Sc. Semester - IV

Week & Dates	Topics to be Covered	Test / Assignment
Jan 29 – Jan 31	Classification of conic sections; Centre of conics	Introduction
Feb 02 – Feb 07	Asymptotes, axes, eccentricity, and foci of conics	Assignment-1 (Conics)
Feb 09 – Feb 14	Directrices; Tangent at any point and chord of contact	Oral Quiz
Feb 16 – Feb 21	Pole of line to a conic and Director circle	Class Test (Unit-I)
Feb 23 – Feb 28	Polar equation of a conic; Tangent, normal, and confocal conics	Problem Solving
Mar 02 – Mar 07	Sphere: General form, Plane section, and Sphere through a circle	Assignment-2 (Sphere)
Mar 09 – Mar 14	Intersection of spheres; Tangent plane and polar plane	Revision Class
Mar 16 – Mar 21	Orthogonal spheres; Radical plane and co-axal system	Unit Test (Sphere)
Mar 23 – Mar 28	Cone: Right circular, quadric, and enveloping cone	Seminar on Cones
Mar 30 – Apr 04	Tangent plane and Cylinder: Right circular and enveloping	Assignment-3 (Cylinder)
Apr 06 – Apr 11	Central Conicoids: Tangent plane, Director sphere, and Normal	Unit Test (Unit-III)
Apr 13 – Apr 18	Enveloping cone/cylinder; Scalar and Vector product of vectors	Practice Sheet
Apr 20 – Apr 25	Vector differentiation; Gradient, Divergence, and Curl	Assignment-4 (Vectors)
Apr 27 – Apr 30	Vector integration; Theorems of Gauss, Green, and Stoke	Comprehensive Test

Note:

- Course Code: B-23 MAT-401.
- Syllabus coverage according to NEP standards for both B.A. and B.Sc. students.

Signature of Assistant Professor **Signature of Principal**