Govt. College for Girls, Padha (Karnal)

Lesson Plan for Even Semester

Name of the teacher- PREETI RANI

Class- B.A.4TH SEM

Subject- MATHEMATICS

Paper- ANALYTICAL GEOMETRY &VECTOR CALCULUS

1st Week	General equation of second degree: Classification of conic sections; centre, asymptotes,
2nd Week	Axes, eccentricity, foci and directrices of conics. Tangent at any point to a conic, chord of contact.
3rd Week	Pole of line to a conic, director circle of a conic. Polar equation of a conic.
4th Week	Tangent and normal to a conic, confocal conics.
5th Week	Sphere: General form, Plane section of a sphere. Sphere through a given circle.
6th Week	Intersection of two spheres, tangent plane and line, polar plane and line, orthogonal spheres.
7th Week	Radical plane of two spheres and co-axal system of spheres. Cone: Equation of a cone.
8th Week	Right circular cone, quadric cone, enveloping cone. Tangent plane and condition of tangency.
9th Week	TEST AND REVISION.
10th Week	Cylinder: Right circular cylinder and enveloping cylinder.
11th Week	Central Conicoids: Equation of tangent plane. Director sphere.
12th Week	Normal to the conicoids. Polar plane of a point. Enveloping cone of a conicoid.
13th Week	Enveloping cylinder of a conicoid, confocal conicoid, reduction of second degree equations.
14th Week	Scalar and Vector product of three vectors, four vectors, reciprocal vectors.
15th Week	Vector differentiation and derivative along a curve, directional derivatives; Gradient of a scalar point function.

16th Week	Divergence and curl of vector point functions, their geometrical meanings and vector identities.
17th Week	Vector integration: line integral, surface integral and volume integral.
18th Week	Theorem of Gauss, Green, Stoke and problems based on these.
19th Week	TEST AND REVISION.