CMG Govt. College for Women, Bhodia Khera (Fatehabad)

Lesson Plan 2022-23

Name of Asstt. /Associate: Mr. Sonu Ram

Class and Section: BA-I, 1st semester.

Subject- Mathematics (Solid Geometry)

Month	Week	Topics
August	3rd	Distance formula, section formula, midpoint formula, area of tringle, collinearity of points, centroid, slope of line, intercept of two points, Slope intercept form, one-point formula, two-point formula, normal form, length of perpendicular, pair of lines, taking doubts. Revision.
	4th	Distance formula in spaces, section formula, midpoint formula in 3D space, Centroid in 3D space, Directions cosines and direction ration of lines, angle find between two lines, transformation of coordinates axis, shifting of origin, taking doubts. Revision.
Month	Week	
September	1st	General equations of second degree, tracing of conics, tangent at any point to the conic, chord of contact, classification of conics, general equations of second degree represent a conic section, center of conic section, summary of results. To find the asymptotes of the conic section. pole of the line to the conic, system of conic, confocal conics, system of conics, polar equation of conics,
	2nd	Find the focus of the conic, the parabola in general, general conic, pole and polar, introduction of conics, tracing of conics, tracing of parabola, tracing of hyperbola, conics through five points, intersection of two conics, taking doubts. Revision.
	3rd	pole of the line to the conic, system of conic, confocal conics, system of conics, polar equation of conics, confocal parabolas, confocal ellipse, confocal hyperbola. Taking doubts and revision.
	4th	tangent and normal to the conic. Polar equations of a conic, angle between two lines, taking doubts and revision.
Month	Week	
October	1st	Sphere: plane section of the sphere, equations of sphere in standard form, central equation of sphere, radius and center of the sphere, examples of equation of sphere, sphere through the given circle, intersection of two sphere, co-axal system of sphere,
	2nd	Cones: Right circular cone, general equation of cone, equation of the cone with vertex at the origin, equation of a cone, examples of equation of cone enveloping cone, reciprocal cone, cylinder: Right circular cylinder, and enveloping cylinder.

	3rd	Central conicoid: equation of tangent plane, Director sphere, Normal to the conicoid, symmetry about axis of plane, ellipsoid of revolution, normal forms of conicoid, number of normal, pole of a given line, enveloping cylinder, diameter of a plane property. Taking doubts. Revision.
	4th	polar point to the plane. Enveloping cone of a conicoid. Enveloping cylinder of a conicoid. Area of the plane section condition for the section to be a rectangular hyperbola. Taking doubts. Revision.

November	1st week	Paraboloids: Circular section, plane section of conicoid,
	2nd week	Generating lines. Generating lines of hyperboloid of sheet, some properties of generating lines of hyperploid sheet, generating lines of a hyperboloid paraboloid sheet. Taking doubts. Revision.
	3rd week	Confocal conicoid, confocal conicoid of the ellipsoid and paraboloid, the confocal through a given point. the confocal through a given line. Confocal cut right angles. Elliptic co-ordinates, Taking doubts, Revision.
	4th week	Reductions of second-degree equations. Intersection of line and conicoid, diameter plane, , Reduction of a general equation to the standard form and to discuss the nature of the conicoid. Taking doubts. Revision.
Month	week	
December	1st	the principal plane, center of the surface, revision
	2nd	parametric of confocal through a point on a conicoid, reduction of second degree equations and revision