

## **AR152 DESCRIPTIVE GEOMETRY – I (0-0-6)**

Concept of Orthographic Projection, First-Angle Projection, Projections of Points, Projections of Straight Lines, Projections of Planes, Projections of Solids, Intersection of Surfaces, Development of Surfaces, Isometric Projection

Uses of instruments in architectural drafting, dimensioning. Plan and proportional scales. Lines and angles, proportional, triangles, quadrilaterals, circles and tangents. Circles touching lines, regular, polygons, arches, plane curves. ellipse, parabola and hyperbola. Geometrical construction of mouldings and tracery.

Geometry of lines..and planes, Geometrical shapes (two dimensional)-polygons volutes. Study of solid geometrical forms in various positions including group of forms. Simple Projections and projections of solids, Polyhedron, solids of revolution, solids in simple position, Axis perpendicular to a plane, Axis parallel to both the plane, Axis parallel to one plane and inclined to other. Axis inclined to both the planes, spheres.

Section of solids-Section planes, True shapes of section, sections-of prisms, sections of pyramids, cylinders, cones etc.

Interpenetration of solids and representation in two-dimension. Analysis of complex forms (mouldings, vaults etc) at different intersections. Surface development of simple solid forms leading to complex forms including interpenetration.

Isometric and Axonometric projections.