

GEOMETRICAL AND BUILDING DRAWING (870)

This subject may not be taken with Geometrical and Mechanical Drawing.

Candidates will be required to reach a minimum standard in the subject as a whole. The use of drawing board, tee-square and set-squares will be required. (Candidates may, if they wish, use a drawing board fitted with parallel motion straight

edge. The use of drafting machines will be permitted). A2 size paper will be used. The recommendations of IS:962-1972 Indian Standard, Code of Practice for Architectural and Building Drawings should be followed.

The use of models is to be encouraged in studying this syllabus.

CLASS XI

There will be two papers in the subject:

Paper I - Theory: 3 hours..... 80 Marks

Paper II - Project Work 20 Marks

PAPER I (THEORY): 80 Marks

SECTION A

Plane Geometry

Construction and use of scales including diagonal scales. Enlargement and reduction of irregular plane figures. Construction of triangles, quadrilaterals and polygons. Similar plane figures. Problems on circles, tangents and normals. Loci such as the paths of points in simple link mechanisms. Methods of construction of ellipse, including its elementary properties, parabola and rectangular hyperbola: cycloidal and involute curves.

SECTION B

Solid Geometry

Orthographic projection. (Diagrams printed in the question papers may be either First or Third Angle projections; the projection used will be stated. Solutions in either First or Third Angle projections will be accepted).

Projection involving use of auxiliary planes: simple problems on auxiliary projection. Simple problems on the intersection of prisms, pyramids, cylinders, right circular cones, and spheres. Determination of true length of a line in space: sections and surface development of prisms, pyramids, cylinders and right circular cone. Helix treated as a locus with applications on the projection of helices. Isometric and oblique projection without the use of isometric scales.

PAPER II (PROJECT WORK): 20 Marks

In addition to the syllabus prescribed above, candidates are also required to be assessed in Project Work.

All candidates will be required to have completed **two projects** from any topic/s covered in theory. The Project work is to be assessed by the subject teacher. For details refer to Class XII.