

DETAILED SYLLABUS—IV CLASS—GEOMETRICAL DRAWING—(OBLIGATORY).

Subjects—General rules for the use of instruments, construction and use of ordinary, comparative and diagonal scales and verniers. Explanation of the problems contained in the plates.

Fair Notes—On the whole of the above subjects.

Plates—The following is a list of the plates :

I. Printing plate.

II. To bisect a finite straight line. To draw perpendiculars and parallels to a given straight line.

III. To bisect a given angle. To draw a straight line through a given point to the intersection of two given straight lines, this intersection being unattainable. To plot an angle by means of a table of chords. To plot an angle equal to a given angle. To divide a finite straight line into  $n$  equal parts.

IV. Ordinary scales.

V. Comparative scales

VI. Verniers.

VII. To draw a circle of given radius to pass through two points. To draw a circle to pass through three points. To inscribe a circle in a given triangle. To draw the segment of a circle, subtending a given chord, and containing a given angle.

VIII. To draw a tangent to a given circle. To draw a tangent to two given circles. To draw circles tangent to given straight lines, various conditions.

IX. To draw circles tangent to given circles, and straight lines, various conditions.

X. To find a fourth, third, or mean proportional to given finite straight lines. To divide a given finite straight line in extreme and mean ratio.

XI. To draw triangles from various given conditions. To reduce an irregular rectilinear figure to a triangle of equal area.

XII. To inscribe a square regular pentagon or hexagon in a given circle. To draw the same regular polygons given the length of side.

XIII. To inscribe a regular polygon of any number of sides in a given circle. To draw a regular polygon of any number of sides, given the length of side. To circumscribe a regular polygon of any number of sides about a given circle. To draw a figure similar to a given irregular figure, given the proportion between the sides.

XIV. To find  $\sqrt{2}$ ,  $\sqrt{3}$ , etc.,  $\sqrt{\frac{1}{2}}$ ,  $\sqrt{\frac{1}{3}}$ , etc., of a given finite straight line. To draw rectilinear figures of given area.

XV. To draw an ellipse given the major and minor axis. To draw an ellipse given the conjugate diameters. To draw a tangent to an ellipse. To draw a normal to an ellipse.

Exercises.—Various exercises to teach use of instruments. Laying flat washes of colour.

Subjects for each examination, December.—From beginning up to plate VII. March.—From plate VIII to plate XV. June.—The whole course.

Marks—For work during term.....	260
“ “ For examinations, December.....	60
“ “ “ March.....	60
“ “ “ June.....	120

Total.....500

GEOMETRICAL DRAWING (VOLUNTARY).

Subjects. Explanation of the problems contained in the plates.

Fair Notes.—Of the above explanations.

Plates.—The following is a list of the plates:—

XVI. To draw a parabola. To draw a tangent to a parabola. To draw an hyperbola. To draw a tangent to an hyperbola.