

struggle with Spain under Elizabeth. The chief points of conflict between King and people during the struggle with the Stuarts. Great Britain's colonies in America, and her struggle to retain them. Industrial developments of the eighteenth and nineteenth centuries. Chief humanitarian movements of the same period. Parliamentary reform. French Revolution. British colonial expansion in South Africa and in India, in brief outline. Foundation and settlement of Australia—leading features in the history of New Zealand. Efforts to secure the peace of the world—League of Nations.

Citizenship: Based on the work prescribed in the Syllabus of Instruction for Public Schools.

- (h) *Arithmetic*.—Numeration and notation; fundamental rules; factors and multiples; compound quantities; metric system and decimal fractions; decimal approximations; vulgar fractions; unitary method, ratio, and proportion; percentages; profit and loss; simple interest, compound interest, and bankers' discount; rates, taxes, and premiums; shares and stocks; exchange (simple cases); partnerships; bankruptcies; averages; square root; cube root of numbers reducible to prime factors not greater than 11; areas of plane rectilinear figures and of circles; mensuration of the prism, pyramid, sphere, circular cylinder, and circular cone.

In the solution of problems dealing with the metric system the operations will involve only such denominations as are commonly used in actual life. Full use should be made of rough preliminary estimates, and these, where made, should be shown. Special importance will be attached to orderly and logical setting-out of work, and consideration will be given also to choice of method where such selection is possible. Candidates are at liberty to make free use of algebraical symbols and processes, of graphical methods, and of logarithms.

- (i) *Algebra and Geometry*.—Algebra: Fundamental operations, factors, fractions, simple equations involving one or two unknown quantities, and easy quadratic equations involving one unknown quantity; easy problems; graphs of simple rational integral algebraic functions; and graphical methods of solving equations. Geometry: The paper in geometry will contain questions on practical and on theoretical geometry. Every candidate will be expected to answer questions in both branches of the subject:—

(1) *Practical.*

Bisection of angles and of straight lines. Construction of perpendiculars to straight lines. Construction of an angle equal to a given angle. Construction of parallels to a given straight line. * Simple cases of the construction from sufficient data of triangles and quadrilaterals. * Divisions of straight lines into a given number of equal parts or into parts in any given proportions. Construction of a triangle equal in area to a given polygon. Construction of a square equal in area to a given polygon. * The construction or plotting of the loci of points subject to simple geometrical conditions. * Determination by measurement of the ratio of the circumference of a circle to its diameter. * Approximate determination of the area of a circle. Construction of tangents to a circle and of common tangents to two circles. * Simple cases of the construction of circles from sufficient data. * Construction of a fourth proportional to three given straight lines and a mean proportional to two given straight lines. * Construction of regular figures of three, four, six, or eight sides in or about a given circle.

No formal proofs will be required of the constructions marked *. Every candidate must provide himself with a ruler graduated in inches and tenths of an inch and in centimetres and millimetres, set squares, a protractor, compasses, and a fine pencil. All figures should be drawn accurately.

(2) *Theoretical.*

The following theorems, together with questions upon them, easy deductions from them and arithmetical illustrations:—

Angles at a Point:—

If a straight line stands on another straight line, the sum of the two angles so formed is equal to two right angles; and the converse.

If two straight lines intersect, the vertically opposite angles are equal.