Different types of climate; climatic regions of the world. Connection between temperature, moisture, and resultant vegetation. Variation of vegetation with altitude and latitude. Typical animal life in different parts of the earth. Distribution of industries and products as controlled by physical conditions (treated on very broad lines). The work of rain, rivers, ice, wind, and sea. Scales of maps; contours; easy map-reading.

(*b*) The physical, political, and economic geography of the British Empire.

(*c*) An elementary knowledge of the geography of the lands bordering upon the Pacific and of the rest of the world (including great geographical discoveries and the chief trade routes of the world).

(15) *Mathematics.*

(*a*) Algebra.

Fundamental operations; easy fractions; factors of expressions that are the product of two binomial factors, and of such expressions as $a^3 \pm b^3$ and $a^3 \pm 3a^2b + 3ab^2 \pm b^3$, only numerical coefficients being used; common multiples and divisors to correspond; simple equations involving one or two unknown quantities; the solution by factors of easy quadratic equations involving one unknown quantity; easy problems; graphs of simple algebraical functions within the limits of the foregoing work, and graphical methods of solving simple equations involving two unknown quantities.

(*b*) Geometry.

No formal proofs shall be required for examination purposes of the theorems in Part I. The truth of these should be established by intuition and experiment, and the teaching of formal geometry should be based upon the quasi-axiomatic acceptance of these results.

Every candidate shall be expected to answer questions in both theoretical and practical geometry. The questions in theoretical geometry shall consist of theorems contained in subsection (*a*), Part II, together with questions upon these theorems; easy deductions from them and arithmetical illustrations. The questions in practical geometry shall be set on the constructions, &c., contained in subsections (*b*) and (*c*), Part II, together with easy extensions of them. All figures should be drawn accurately. The constructions in subsection (*b*) are those of which formal proofs shall be expected.

Any proof of a proposition shall be accepted which appears to the examiners to form part of a systematic treatment of the subject.

PART I.

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

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

When a straight line cuts two other straight lines, if a pair of corresponding angles are equal, the two straight lines are parallel; and the converse.

When a straight line cuts two other straight lines, if (i) a pair of alternate angles are equal, or (ii) a pair of interior angles on the same side of the cutting line are supplementary, then the two straight lines are parallel; and the converse.*

Straight lines which are parallel to the same straight line are parallel to one another.*

If two triangles have two sides of the one equal to two sides of the other, each to each, and also the angles included by those sides equal, the triangles are congruent.

If two triangles have two angles of the one equal to two angles of the other, each to each, and also a side of one equal to the corresponding side of the other, the triangles are congruent.

If two triangles have three sides of the one equal to three sides of the other, each to each, the triangles are congruent.

The area of a rectangle is measured by the product of the measures of its sides.

There is one circle and only one circle which passes through three given points not in the same straight line.

(NOTE.—The theorems marked * may serve in the class-room as a useful introduction to the process of logical deduction.)