Development of the right circular cylinder, and right circular cone ; the surface of each.

Volume of the cylinder, cone, and sphere.

(THEORETICAL.)

If a straight line is drawn parallel to one side of a triangle, the other sides are divided proportionally ; and the converse.

If two triangles are equiangular, their corresponding sides are proportional ; and the converse.

If two triangles have one angle of the one equal to one angle of the other, and the sides about their equal angles proportional, the triangles are similar.

The internal bisector of an angle of a triangle divides the opposite side internally in the ratio of the sides containing the angle, and likewise the external bisector externally.

The ratio of the areas of similar triangles is equal to the ratio of the squares on corresponding sides.

If two similar polygons have their corresponding sides parallel, the lines joining corresponding vertices are concurrent.

The ratio of areas of similar polygons is equal to the ratio of the squares on corresponding sides.

In equal circles (or in the same circle) the ratio of any two angles at the centre or on any two sectors is equal to the ratio of the arcs on which they stand. The rectangle contained by the diagonals of a cyclic quadrilateral is equal to the sum of the rectangles contained by the two pairs of opposite sides.

(d) Trigonometry : Degrees and radians ; use of protractor or scale of chords ; trigonometrical functions and their fundamental relations ; determinations of their value by graphical methods and setting-out of angles when the value of the sine, cosine, or tangent is given. Approximate solution of right-angled triangles and oblique triangles by drawing to scale ; tracing of trigonometrical functions through the four quadrants ; arithmetical values of the trigonometrical functions of 30°, 45°, 60°, 75°, 90°, &c. Formulæ for finding the sine, cosine, and tangent of the sum or difference of two angles (excluding angles greater than two right angles), and easy derived formulæ ; the sine rule in triangles, or $\sin A/\sin B = a/b$, and other simple properties of triangles ; the area of a triangle. Use of natural and logarithmic tables of sines, cosines, and tangents of four or five figures. Solution of triangles ; heights and distances.

Skill in the transformation of trigonometrical expressions or in the manipulation of formulæ will not be required, except in so far as it is implied in the above syllabus.

(18) (a) Psychology (three-hour paper).—Scope and methods of psychology ; the nervous system ; reactions at different levels ; native and acquired traits ; sensation ; attention ; intelligence ; habit and intelligence in animals ; learning and habit formation in general ; memory ; association and mental imagery ; perception ; reasoning ; imagination ; work ; fatigue ; sleep ; instincts and emotions ; the feelings ; dispositions ; temper ; temperament and moods ; the development of sentiments, the development of the will ; the organization of character ; personality.

Or,

(b) Experimental Pedagogy (three-hour paper).—A knowledge of the chief lines of experimental investigation of educational processes. The practical work in Experimental Pedagogy shall be as follows : (i) Simple statistical methods applied to education—e.g., measure of central tendency (mean, median, mode), degrees of variability (mean and standard deviations, probable error), correlation formulæ, methods of graphical representation. (ii) Physical measurements—e.g., measurements of head, stature, weight, vital capacity, grip, and the calculation of indices ; and the possible relation of these to normal mental and physical development. (iii) Measurement of specific capacities in school-children—such experiments as the following :

(19) History (three-hour paper).—(a) British History from the beginning of the Norman period to the present day with special reference (i) to the following phases in national development : The establishment and decay of the manorial system ; progress in social life and education during the later Middle Ages ; the industrial, political, and social developments during the Tudor and Stuart periods and throughout the 18th and 19th centuries ; the establishment of the British Empire and its development, especially since 1800 ; and (ii) to the relations of Great Britain with other countries at the following points : The Renaissance and Reformation periods ; the colonization period of the 17th and 18th centuries ; the French Revolution and the Napoleonic era ; nationalism and internationalism in the 19th and early 20th centuries ; the development of international rivalries just prior to the