

Mensuration (*Lectures or Notes to be printed*)

The bases of similar pyramids are in the duplicate ratio of their altitudes. Equality of pyramids (also prisms) on the same or equal bases, and having the same altitude, proved by equality of sections. Trisection of a prism into three equal pyramids. Volume of a pyramid or cone. Truncated right prism on a triangle or parallelogram as base, in terms of its mean altitude. Wedge regarded either as a truncated prism, or as a pyramid and right wedge or semi-parallelopiped. Volume of frustum of pyramid or cone. Volume of a prismoid (defined as a solid bounded by planes between two parallel ends) assumed to be divisible into prisms, pyramids and wedges, all

having the same altitude; mean section $\frac{A + 4M + B}{6}$. Gen.

eral definition of a mean. Application to calculations of earth work. Surface of pyramid or cone. Centre of gravity of pyramid or cone (both volume and surface), omitting proof for former. Surface of a sphere, zone or segment, and centre of gravity of each. Volume of a spherical sector proved by summing the volume between two consecutive sectors, considered as a conical volume. Volume of a sphere. Volume of prolate and oblate spheroids and of paraboloid of revolution (without proofs). Statement and use of Guldin's Theorems; thence determination of the centres of gravity of the arc and area of a semi-circle and quadrant. *Marks, Dec., 200.*

Trigonometry, former course..... *June, 300*
Statics, 3rd Class course, and *Graphic Statics* (*Tracts on Mechanics, Part II.*) Problems 1, 4, 6, 7, 8, 11, 12, 21.
Graphic, Statics. *Marks, March, 100, Statics, June, 300.*
Dynamics and work—(Todhunter's Mechanics for beginners.)
 Velocity. Chapter I.—Angular velocity in terms of cir-

cular measure. $v = ra$; $a = \frac{2\pi n}{t}$.

1st and 2nd laws of motion.—Chapter II.

Uniform acceleration and the equations of motion.—Chapters III, IV, omitting proof in § 37.

Parabola of projection.—Chapters V, VI, omitting § 72, 73, 75-7.

Mass and 3rd law of motion. Chapters VII, VIII. Acceleration obtained directly from $P = mf$, in § 89, 92.

Impact. Chapters IX, X. Omit § 109, proof of loss of Vis Viva in § 108-124, and continuous rebounds, § 122-3.

Motion of centre of gravity of a system $\bar{v} = \frac{\sum (mv)}{\sum (m)}$;