

SUMMARY OF INSTRUCTION IN MATHEMATICS AND MECHANICS.

4TH CLASS.

OBLIGATORY, 1,500 MARKS.

MATHEMATICS.

Arithmetic to Interest, Discount, Stocks, Proportional parts and extraction of square root and cube root. (Printed notes and other authorized text books.) *Dec., Marks 300.*

Euclid (*Todhunter*) to Book II.; III.; IV.

Algebraical explanations will also be given of the propositions in Book II. *Marks, Dec., 100; March, 100; June, 200.*

Algebra (*Todhunter's for beginners, and printed notes*) to Quadratics and Evolution, *Dec.*; to Progressions, *April*; to Permutations and Combinations, Binomial Theorem and Interest, omitting scales of Notation and the harder examples in Quadratics. Capters I. to XXXII.; to XL.; to end.

Marks, Dec., 100; June, 100; March, 200.

Plane Trigonometry (*Todhunter and lectures or printed notes.*) 1st. Initial line. Terminal line. Angles of any size. The rules of signs. Trigonometrical ratios. Reasons for their names. Elementary formulæ proved from definitions. Formulæ connecting each with every other. Construction of angles when the ratios are given, also by the table of chords. Changes of the ratios in sign and magnitude. Circular measure. Logarithms. Chaps. I to V, omitting § 5-9; proof of § 14; proof of § 51, 53; § 66-75, *Dec.* Formulæ of two angles. Chap. VI, omitting § 79, 80. Chap. VII, § 95, 98; the angles 18° , 36° , 54° , 72° . Chap. VIII, § 107-10, and note process of 113. Relation of $\sin \theta : \theta : \tan \theta$, Chap. IX, § 116-18. Complete use of Logarithms and the Natural Tables, *April*. Solution of triangles, Chap. XIII, XIV, omitting alternative methods § 231, 2, 7, and § 219-221, 238.

Marks, Dec., 50; March, 50; June, 200.

Notes and recitations.

Marks, 100.

VOLUNTARY, 500 MARKS.

Qualification, one-third for any section.

SECTION A.

Euclid III, IV.—*Algebra*, (*Todhunter's, for beginners, and printed notes.*) Quadratics, Evolution, Indices, Surds, Ratio