

LITERATURE. — Candidates will be required to have a general acquaintance with English Literature and its history, and a fuller knowledge of special eras and authors to be prescribed from time to time by the Department.

The subjects prescribed for the examination in 1880 are—

Julius Cæsar—*Shakespeare*.

An Elegy in a Country Churchyard—*Gray*.

The Traveller—*Goldsmith*.

The Spectator—Papers 106, 108, 112, 115, 117, 121, 122, 123, 125, 126, 131, 269, 329, 335, 517—*Addison*.

Johnson's Life of Addison.

Macaulay's Life of Johnson.

No particular editions of these texts are prescribed, but the following good ones are mentioned in order to aid candidates :

The edition of Julius Cæsar in the Clarendon Press series.

Morley's Spectator.

Mathew Arnold's Johnson's Chief Lives of the Poets. This contains both Johnson's Life of Addison and Macaulay's Life of Johnson.

History and Geography.

HISTORY.—A special knowledge of the History of England between 1688 and 1820, as presented in Green's Short History of the English People, and in Hallam's Constitutional History, chapters 15 and 16.

GEOGRAPHY.—North America, Europe and the British Empire.

Mathematics.

ALGEBRA.—Fundamental operations ; Involvement and Evolution ; Resolution into Factors ; Principle of Symmetry ; Theory of Divisors ; Fractions ; Ratio, Proportion and Variation ; Theory of Indices ; Surds ; Arithmetical, Geometrical, and Harmonical Progression ; Scales of Notation ; Permutations and Combinations ; Introduction to Binomial Theorem ; Simple and Quadratic Equations, with relations between Roots and Coefficients ; Problems.

ARITHMETIC AND MENSURATION.—To know the subject in theory and practice. To be able to solve problems with accuracy,

neatness, and despatch. To be familiar with rules for Mensuration of Surfaces and Solids.

GEOMETRY.—Euclid, Books I. to IV. (inclusive), Book VI., and definitions of Book V. Exercises.

Elementary Mechanics.

STATICS.—Equilibrium of Forces acting in one Plane ; Parallelogram of Forces, Parallel Forces, Moments, Couples, Centre of Gravity, Virtual Work, Machines, Friction, Experimental Verifications.

DYNAMICS.—Measurement of Velocities and of Accelerations ; Laws of Motion, Energy, Momentum, Uniform and Uniformly Accelerated Motion, Falling Bodies, Experimental Verifications.

HYDROSTATICS.—Pressure of Fluids, Specific Gravities, Floating Bodies, Density of Gases as depending on Pressure and Temperature, Construction and use of the more simple Instruments and Machines.

Physical Science.

CHEMISTRY.—Definition of Chemistry and of chemical action. Indestructibility of matter. Simple and compound substances. Laws of chemical combination by weight and by volume. Principles of chemical nomenclature. Symbolic and graphic notations. Classification of elements into metals and non-metals, into positive and negative elements.

Theory of atoms and molecules. Empirical, molecular, and constitutional formulæ. Absolute, latent and active atomicity. Classification according to atomicity. Atomic and molecular combination. Graphic formulæ. Definition of simple and compound radicals. Chemical equations.

French and English systems of weights and measures. Their convertibility. Expansion of gases by heat. Reduction of gaseous volume to standard pressure and temperature. Calculation of the weight and volumes of gases. Calculation of chemical quantities by weight. The crith and its uses. Calculation of empirical formulæ from percentage composition.

The preparation and properties of hydrogen, oxygen, nitrogen, carbon, chlorine,