

7. MATHEMATICS AND NATURAL PHILOSOPHY.

Professor, ALEXANDER JOHNSON, LL.D.

MATHEMATICS. (*First Year*)—Arithmetic.—Euclid, Books, 1, 2, 3, 4, 6, with Definitions of Book 5 (omitting propositions 27, 28, 29, of Book 6). Galbraith and Haughton's Edition.—Colenso's Algebra, part 1 to end of Quadratic Equations.—Galbraith and Haughton's Plane Trigonometry to end of Solution of Plane Triangles.—Nature and use of Logarithms.

MATHEMATICS.—(*Second Year*)—Arithmetic, Euclid, Algebra, and Trigonometry as before.—Remainder of Galbraith and Haughton's Plane Trigonometry.—Conic Sections treated Geometrically. (The Parabola as in Drew's Conic Sections, the definitions of the Ellipse and Hyperbola, with the fundamental properties of their tangents.) Euclid, Book XI, Props. 1 to 21; Book XII. Props. 1, 2.

The course for the Intermediate University Examination consists of the Mathematics for the first two years, except Conic Sections and Solid Geometry,

MATHEMATICAL PHYSICS AND ASTRONOMY.—(*Third Year*)—Galbraith and Haughton's Mechanics (omitting chap. 5, of Statics), Hydrostatics, Optics and Astronomy.

At the Ordinary Examinations, answers to questions in Mechanics, on the Chapters on Friction, Collision of Bodies and Projectiles, will be taken into account only in determining the relative positions of those whose other answers shall entitle them to be placed in the First Class.

EXPERIMENTAL PHYSICS.—(*Third and Fourth Years*)—1.—*Light*.—Theories.—Reflection.—Refraction.—Dispersion.—Interference and Diffraction.—Double Refraction.—Polarisation. 2. *Heat*.—Dilatation of Solids, Liquids and Gases.—Specific and latent Heat.—Radiation and Conduction.—Mechanical Theory of Heat. 3. *Electricity*.—Statical and Dynamical; including Electro-Magnetism—Magneto-Electricity.—Thermo-Electricity.—Diamagnetism.—Electric Measurements.—Practical Applications to Telegraphy, &c. 4. *Magnetism*. 5. *Acoustics*.—Theory of Undulations.—Production and Propagation of Sound.—Vibrations of Rods and Plates.—Vibrations of Fluids.—Musical Sounds. Text-Books—Lardner's Hand-Books and Tyndal on Heat. This Course extends over two years.

The Subjects for the Session 1868-9 are Electricity, Magnetism, and Acoustics.

The Lectures in Mathematical and Experimental Physics will be illustrated by Apparatus.

HONOUR COURSES.

MATHEMATICS.—(*First Year*) Mulcahy's Modern Geometry, first five chapters.—Townsend's Modern Geometry.—Wood's Algebra.

MATHEMATICS.—(*Second Year*) Todhunter's Theory of Equations.—Hind's Plane and Spherical Trigonometry.—Salmon's Analytic Geometry, first thirteen chapters.—Hall's Calculus, Chapters 1, 2, 3, 4, 6, 7, of Diff. Cal.; Chapters 1, 3, 4, 5, of Integ. Cal.

MATHEMATICAL
Chap. 13.)—San
Hydrostatics Ch
Problems.—Parki
(selected course)

PURE MATHEMA
or Todhunter's Th
—Boole's Differ
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Salmon's Geometr

MECHANICS.—To
Griffin's Dynamics
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ASTRONOMY.—Mi
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Theory.

Newton's Princip

LIGHT.—Lloyd's

HEAT.—Lardner's
motion."

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