

(IV.) APPLIED MECHANICS.

STATICS—

The Calculation of the Stresses in Framed Structures, Solid Beams, Stone Arches, &c. Both Graphical and Analytical Methods used.

THEORY OF THE STRENGTH OF MATERIALS—

DESIGNING OF STRUCTURES in Timber, Iron, and Masonry—Arches, Retaining Walls, Foundations Roofs, Bridges, &c.

DYNAMICS—

Representation and Measurement of Forces and Motions.
Principles of *Work and Energy*.

Efficiency of Machines. Friction.

Transmission of Energy—Belts, Shafts, Crank, and Connecting Rod, &c.

Fly-Wheels, Governors.

Balancing of Machinery.

&c., &c.

STRENGTH OF THE PARTS OF MACHINES.

MACHINE DESIGN.

HYDRAULICS—

Discharge of Water through Orifices, Notches, &c., Flow in Pipes, and Open Channels. Water Power. Water Wheels, Turbines, Pumps, &c.

THERMO-DYNAMICS AND THEORY OF THE STEAM ENGINE.

Text Books and Books of Reference.—Von Ott—Graphic Statics (α).
DuBois—Graphical Statics.
Wood—Resistance of Materials.
“ Bridges and Roofs.
Rankine—Applied Mechanics (b), (c).
Rankine—Steam Engine and other Prime Movers.
Unwin—Elements of Machine Design
Shann—Elementary Treatise on Heat (c).
Jackson—Hydraulic Manual (c).
Neville—Hydraulic Tables and Formulae (c).

Fee for Special Students, \$15.