

(II.) SURVEYING AND LEVELLING.

LAND SURVEYING—

- Chain Surveys.
- Compass and Theodolite Surveys.
- Methods of keeping Field Notes.
- Determination of Heights and Distances.
- Determination of the Meridian, Local Time and Latitude.
- Plotting.

LEVELLING—

- Longitudinal and Cross Sections.
- Plotting.

SETTING OUT—

- Setting out Straight Lines and Curves.
- Setting out Levels.

MENSURATION—

- Lines, Surfaces and Solids.
- Timber, Masonry, Iron and Earthwork.
- Capacities of Reservoirs, Discharge of Streams, etc.

Lectures will also be given on the distinctive features of Hydraulic, Mining and Hydrographic Surveying.

Text Books.—Murray's Manual of Land Surveying (a).

Gillespie's Higher Surveying (b), (c).

Henck's or Trautwine's Railway Curves (b).

Fee for Special Students, \$10.

(III.) GEODESY AND PRACTICAL ASTRONOMY.

(Only the more elementary work under this head will be obligatory.).

Field work.

Calculation of the Triangles.

Projections of the Sphere.

Methods of determining Latitude, Local Time, Direction of the Meridian, and Difference of Longitude.

Theory of the Instruments.

Text Books.—Gillespie's Higher Surveying (b), (c).

Chauvenet's Spherical and Practical Astronomy.

Nautical Almanac for 1886 (c).

Chambers' Practical Mathematics (c).

Fee for Special Students, \$15.