

No. 141.

New Zealand, No. 95.

MY LORD,—

Downing Street, 10th March, 1911.

With reference to my despatch, No. 50, of the 10th February, I have the honour to request you to inform your Ministers that I have had under my consideration, in conjunction with the Council of the Surveyors' Institute, the question of the matters to be considered at the Conference of Surveyors-General to be held in May next.

2. I assume that in deciding to take part in this conference your Government may be taken to be prepared to consider favourably the question of reciprocity, provided always that suitable arrangements can be made for carrying it out in the different parts of the Empire.

3. The most important of these arrangements must be the adoption of a standard of qualification acceptable by the different parties to the agreement. The following is suggested as a possible basis for discussion. It is divided into three parts:—

*Preliminary.*—Candidates should be required to pass, or to have passed, the Matriculation Examination of a recognized university, or an examination accepted by such a university as equivalent to the Matriculation Examination.

*Intermediate.*—Candidates should be required to pass as assistants or as articled pupils two years in the office of a member of the Surveyors' Institution or the Institution of Civil Engineers in the United Kingdom, or of a licensed surveyor in the dominion, of which period not less than one year should be in outdoor work.

*Final.*—Candidates should be required to pass an examination in the following subjects, viz:—

A. Theory,—

- (1.) Algebra.
- (2.) Geometry.
- (3.) Plane trigonometry.
- (4.) Mensuration.
- (5.) Spherical trigonometry.
- (6.) Practical astronomy.
- (7.) Co-ordinate geometry.
- (8.) Theory of surveying and levelling.
- (9.) Optics, light and heat.
- (10.) Elements of geology.
- (11.) Elements of physics.

B. Practical Land-surveying,—

Part I (written examination)—

- (1.) The determination and computation of azimuth, latitude, and time.
- (2.) The projection of maps.
- (3.) The construction, manipulation, and adjustment of all surveying and levelling instruments.
- (4.) Methods of base-measurement and the application of corrections.
- (5.) The observation of angles, horizontal and vertical, the application of corrections, and the reduction of small errors of position.
- (6.) The computation of a geodetic triangulation (principal and secondary), the computation and reduction of a traverse, and the computation and plotting of co-ordinates.
- (7.) The computation of areas.
- (8.) Detailed surveying.
- (9.) Contouring and representation of land-forms, and measurement of capacity from contours.
- (10.) Computation of heights and reductions of level observations.
- (11.) Setting out curves, laying out roads, making cross-sections, and calculation of quantities.

Part II (practical examination)—

Trial survey (not less than 100 acres).