boundaries. Calculations in connection with setting-out of circular and parabolic curves. Mensuration of surfaces and solids. Questions on data of *Nautical Almanac* and mathematical tables. All classes of road secants.

No. 5. Computations B.—Computations connected with triangulation surveys, three-point and similar problems. Calculation of heights and distances, stadia surveying. Calculations in connection with mine surveying. Adjustment of discrepancies in surveys. Problems connected with setting-out of areas, &c. Spherical trigonometry. Simple adjustment of figures.

No. 6. Engineering surveying.—Method of determination of mean tidal levels on the coast ; barometric measurement of heights ; levelling, contouring, stadia surveying, tacheometry, and preparation of relevant plans and sections. Location, grading and setting-out of roads, railways, irrigation works, drainage and water-supply channels ; setting-out of banks, cuttings, and other earthworks, setting-out vertical curves (parabolic and circular) at change of grades. Gauging of streams, rivers, and other waterways, and the use of current meters for determining velocity of current and discharge of rivers ; elementary theory of hydraulics ; hydraulic terms and constants ; the use of pipe, channel, and mean flow-velocity formulæ. Calculation of run-off and flood discharge. Determination of waterways for bridges and culverts. Simple problems relating to irrigation, reclamation, and land drainage.

No. 7. Astronomy and geodesy.—Solution of spherical triangles ; azimuth, altitude, hour angle, right ascension, declination, and the relations between them ; use of ephemerides ; time ; corrections to star or sun observations ; effect of errors of adjustment of instruments ; determination of latitude, azimuth, and time.

The figure of the earth ; reduction of length to sea-level, correction for curvature and refraction, trigonometric height of stations ; spherical excess ; computation of geodetic positions, formulæ for difference of latitude, longitude, and reverse azimuth (convergence of meridians) ; laying down parallels of latitude.

Except in questions on its figure, the earth will be considered as a sphere.

Projection of maps and charts.

No. 8. Land-surveying design.—The design of areas not included in the planning of towns such as suburban, industrial, or country lands, subdivisions, access, reservations for public needs and amenities. Generally the application of planning principles to design for subdivisions.

No. 9. Preparation of field notes and plan therefrom.—The taking and recording of observations and notes in the field for the purpose of preparing plans for title surveys, underground, engineering, topographical, trigonometrical, and standard traverse surveys.

No. 10. Town-planning.—The elementary principles of regional-planning and of town-planning ; zoning ; communications and transport ; the design and allocation of open spaces and recreational areas ; by-laws ; public services ; amenities ; preparation of civic survey and scheme plans inclusive of details of town design.

RULE VII.—SUBJECTS OF EXAMINATION (ORAL AND PRACTICAL).

The subjects of oral and practical examination shall be the following :—

No. 11. Field practice.—The practice of surveying with a knowledge of the Acts and regulations bearing on same. A practical field test may be required.

No. 12. Adjustment and use of instruments.—The principles of construction and practical tests in the adjustment and use of all instruments required in modern field practice and office work.

No. 13. Practical field astronomy.—Practical determination of time latitude and azimuth in the field.

No. 14. Practical levelling.

RULE VIII.—ORDER OF EXAMINATION.

(1) No candidate shall present himself for examination in subjects numbered 1 to 4 inclusive until he has completed to the satisfaction of the Board not less than two years of his term of articles, less any exemption to which he may be entitled under Rule IV hereof.

(2) No candidate shall present himself for examination in subjects numbered 5 to 10 inclusive until he has completed to the satisfaction of the Board the whole of his term of articles, less any reduction to which he may be entitled under Rule IV hereof.