

The description and dissection of commonly occurring native and introduced flowering-plants (technical descriptions will not be demanded).

The candidate will be required to forward, before the date of examination, a certificate in the prescribed form that he has carried out satisfactorily a course of practical instruction based on the above syllabus.

(12) *Dairy Science.*

The constituents of milk; causes of variations and of defects in the composition of milk; the physical and chemical properties of milk; the coagulation of milk; the composition of skimmed milk, separated milk, buttermilk, and cream; the uses and value of separated milk, buttermilk, and whey; methods of determining the fat in milk; acidity and the estimation of acidity; sampling; the care of milk; influence of temperature on milk; pasteurizing and sterilizing milk; objections to the use of chemical preservatives; conveyance of milk; milk as a medium for conveying disease.

Methods of raising and separating cream; the ripening of cream; use of starters; the process of churning; composition of butter; washing, working, and salting butter; common faults in butter.

A very elementary knowledge of the general anatomy and physiology of the cow, with special reference to the parts concerned in nutrition and milk-production; the care, management, and feeding of dairy cows and calves.

The candidate will be expected to show that during the course he has acquired a knowledge of elementary chemistry and physics sufficient to enable him to understand (a) the principles of the apparatus and appliances, and (b) the processes used in the study of milk.

The candidate will be required to forward before the date of examination a certificate in the prescribed form that he has carried out satisfactorily a course of practical work based on the above syllabus.

GROUP III.

(13) *History.*

(Reasonable choice of questions will be permitted.)

1. The various racial elements contributing to the formation of the British nation; the story of their fusion. The Union of England and Scotland (1707) and of Great Britain and Ireland (1801); their subsequent relationship.

2. Constitutional progress and the development of democratic government. Suggested headings: Magna Charta; the Model and First Parliaments; Tudor despotism; progress during the seventeenth and eighteenth centuries, as marked by the struggle with the Stuarts and by the development of party government and the Cabinet system; the work of the great Prime Ministers; the Reform Bills, 1832, 1867, 1884.

3. The growth of the Empire from the age of discovery.

4. Leading recent developments in the Pacific.

5. History of New Zealand:—

(a) The Maori before the advent of the white man.

(b) Early explorers, traders, missionaries.

(c) Commencement of systematic colonization; leading colonizers.

(d) Chief conflicts with the Maoris.

(e) Crown colony period; Provincial Government; present Constitution.

(f) Discovery of gold; development of primary industries.

(g) Work of early Governors; policy of leading Premiers.

(h) Features of modern progress.

6. Landmarks of industrial and social progress during the eighteenth and nineteenth centuries.

7. An elementary knowledge of civics under the following headings: The Crown, Privy Council, Parliament, local governments, franchise, and elections. Executive functions of Government; Law Courts, methods of preventing and punishing crime; taxation, customs, the national debt; principal State Departments; land-settlement; co-operation; methods of industrial peace; causes and prevention of poverty.

(14) *Geography.*

(a) Physical and mathematical geography, as follows: The approximate size and form of the earth; its daily rotation; the north and south line; latitude and longitude, meridians and parallels, local time; annual revolution of the earth round the sun; the altitude of the sun at the equinoxes and at the solstices; the inclination of the earth's axis to the plane of its orbit; the length of the day; the zones, the seasons, winds, and currents (treated in an elementary way), trade winds, monsoons. Rainfall and its distribution; controlling factors. Temperature; its distribution; isotherms.