(25.) *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; acidity and the estimation of acidity; sampling; influence of temperature on milk; pasteurizing and sterilizing milk; objections to the use of chemical preservatives; experimental proof that souring of milk is due to bacterial activity; sources of bacterial contamination; injurious bacteria of milk; milk as a medium for conveying disease. The examination will include also a knowledge of the construction, manipulation, and principles of working of the apparatus used for testing milk and its products. Methods of raising and separating cream; the ripening of cream; use of starters; the process of churning; the composition of butter; washing, working, and salting butter. Rennet—how prepared, its action on milk, and the determination of its strength; composition of whey; process of cheddar-cheese making; ripening of cheese, with the changes that occur and the agents at work. Chief breeds of dairy cows; anatomy and physiology of the cow in so far as bearing on nutrition and milk-production; principles involved in breeding dairy cattle. Care and management of dairy cows and of calves; food-crops; other animals as economic adjuncts to a dairy-farm; the commoner diseases of cows—parturient apoplexy (milk-fever), septic metritis, contagious mammitis, contagious abortion and sterility, tuberculosis, variola (cowpox); selecting and judging dairy cattle; improvement of the dairy herd; milk and butter-fat yields. General principles to be observed in the construction of buildings used in connection with dairying—farm buildings, creameries, and butter-factories—with a knowledge of their equipment and its uses; care of milk; conveyance of milk. Dairy legislation in New Zealand; sale of milk; adulterations in milk and its products; defects in butter and cheese; an elementary knowledge of book-keeping for dairy farms and factories.

The examination may include also practical work based on the foregoing syllabus.

A candidate in Dairy Science will be required to forward to the Education Department, before the examination, a certificate on the form supplied by the Department that he has gone through a sufficient course of practical work in the subject occupying at least eighty hours.

(26.) *General History.*—Outlines of general history from 1815 to 1890, with special reference to the main lines of the social and political development of the Great Powers of Europe and the United States of America and Japan; the partitioning of Africa; and the establishment and development of colonies by European Powers.

(27.) *English Constitutional History.*—(*a.*) Outlines of the British Constitution from 1485, including a general knowledge of the leading cases in Constitutional Law and of the chief constitutional documents.

(*b.*) A general knowledge of the present working of the Constitution, including the constitutional relations between the United Kingdom and oversea dominions, colonies, and dependencies.

(28.) *Economics.*—(*a.*) The general economics of the production, consumption, distribution, and exchange of wealth; the law of population; emigration and immigration; problems of industrial organization; overproduction; monopolies and combinations; proposed remedies for low wages; trade-unions; strikes; land-tenures; land nationalization; land rating and taxation.

(*b.*) The more fundamental treatment of—Money, credit, interest, the banking functions, international trade, foreign exchange, balance of trade, freetrade and protection, preferential trade, economic functions of Government, socialist theories, State and municipal socialism, State regulation of labour, and labour disuptes.

(29.) *Economic History.*—The outlines of the industrial and commercial development of Great Britain, the questions being mainly chosen so as to deal with the period subsequent to 1760, and to include—the effects of the introduction of machinery upon industry and trade; changes in industrial organization; the development of transport and the distribution of products; the economic effect of the Napoleonic wars; movements of foreign trade; the effects of protective tariffs upon production and distribution; trade unionism and its effects in raising or lowering the standard of wages and industrial efficiency;