

by volume and weight of the constituents of air and water; the more commonly occurring non-metallic elements and their chief compounds; the quantitative investigation of well-known chemical reactions; the more important chemical researches of Black, Priestley, Cavendish, and Lavoisier; vapour densities; specific heats; determination of equivalents; the atomic theory; atomic and molecular weights, methods of determination; the preparation and purification of chlorides, nitrates, and sulphates of common metals; sodium, potassium, and iron, and the chief compounds into which they enter; volumetric analysis restricted to acidimetry and alkalimetry. [No candidate can take this subject who does not also take elementary experimental science.]

Botany, including Practical Work.—The elements of chemistry, physics, and mechanics, as far as they are necessary for the intelligent study of elementary botany. The main outlines of the structure of the following organisms as far as they illustrate the fundamental facts of vegetable morphology: torula, spirogyra, fucus, pteris, selaginella, pinus, helianthus; elementary vegetable physiology and anatomy. The processes of nutrition and fertilisation of plants; the principles of classification of main groups. Candidates will also be required to describe actual specimens from the more common natural orders, and to know their leading characteristics.

The Laws of Health.—The elements of chemistry, physics, and mechanics, as far as they are necessary for the intelligent study of elementary physiology. The general structure of the heart; the circulation of the blood; the main features of the alimentary and respiratory systems; classification of food-stuffs; the action of the various secretions upon them; bread, meat, and milk as articles of diet; adulteration of food; detection of adulterants; the composition of air and water; storage of water; the detection of impurities in air and water; ventilation; the spread of disease by impure water; bacteria.

Drawing.—Any two of the following: (1.) Model: Outline drawing of objects to illustrate acquaintance with practical perspective. The groups may be placed either above or below the level of the eye. (2.) Shading from simple cast of ornament, or from a group of any selected common objects, such as oranges, eggs, books, &c. (3.) Freehand: Design, on the basis of a common plant, to fill a given space. A plant, or a drawing showing the characteristic growth of the plant, will be placed before each candidate. (4.) Mechanical drawing: To make plan, elevation, and section of a simple piece of mechanism.

Cookery and Domestic Economy.—Theoretical: Use of food to the body, its digestion and assimilation; effect of heat on food-stuffs. Nutritive value and digestibility of various foods. Suitable diet for children and invalids and for persons of various occupations. Different ways of cooking food; instances of each; main rules to be observed in cooking. Washing bed- and body-linen, flannels, and coloured materials. Use of soap and soda, ammonia, starch, borax, blue, turpentine, &c., in washing and ironing. Hard and soft water, advantages of each for drinking or for cleansing. Importance of fresh air and sunlight to health. Ventilation. Destruction of refuse. Dustbins, sinks, drains. Stimulants, their use and abuse. Alcohol, tea, coffee, &c. House-cleaning. Care of stoves, iron, tin, brass, and copper utensils. Cleaning wooden and painted tables, boards, &c. Washing glass and china. Practical: Cooking and dishing-up simple dishes; cleaning of the utensils used. [Candidates taking cookery and domestic economy must take the practical examination.]

Needlework and Dressmaking.—Theoretical: Stitches used in plain sewing, appropriate use of each. Various modes of joining materials, appropriate use of each. Setting on bands, gathering and plaiting materials. Patching dress materials, calico, and flannel. Darning linen, calico, knitted and woven woollen materials. Right and wrong way of cutting materials for various parts of garments. Suitable materials for linings. Rules for tacking lining to dress material, and for tacking together various parts of lined bodice. Practical: Drawing or folding, and cutting out under-garments to given measure. Drawing pattern of dress-bodice from given measurements, showing by lines the direction of the materials. Tacking on patches, making a button-hole, or other practical needlework. [Candidates taking needlework and dressmaking must take the practical examination.]

Manual Training in Wood-work or Metal-work.—Candidates who select this subject must send, attached to their application forms, a syllabus of the course of study which they have pursued, and the practical examination to which they will be submitted will be based on this syllabus, if approved by the examiner.

Wood-work.—Candidates must be able to make working drawings of the exercises they construct, and the examination will consist of two parts—viz., workshop drawing and the use of tools. In the drawing examination candidates will be required to make, from memory, plane elevations, and sections, properly projected, of simple solids or ordinary joints. They will also be expected to make plane elevations, and sections from isometric or other conventional drawings submitted to them. Candidates will be expected to answer questions upon the structure of ordinary timber-trees, the behaviour of timber in seasoning, and the most common defects in ordinary timber; the nature and use of glue and other materials used for fastenings, such as nails and screws. Candidates must have a knowledge of the construction and principles involved in the use of the more common bench-tools, and will be expected to sharpen their own chisels and gouges and to sharpen and adjust their planes. Accurate workmanship in a limited field will be regarded as of greater importance than a wide extent of training.

SIDNEY WEBB, Chairman of the Board.
WM. GARNETT, Secretary of the Board.

St. Martin's Place, W.C., October, 1897.

REGULATIONS FOR SENIOR COUNTY SCHOLARSHIPS (1898).

1. The Technical Education Board will be prepared in July, 1898, to award not more than five senior county scholarships of the annual value of £60, in addition to the payment of college