

ing, marbling, varnishing, stencilling, oil-gilding. Second term: Sign-writing; gilding and ornamental work on glass; letters, setting out, shading; decorative designs; ornamental glass panels.

*House-decorating.*—One year's course of study. Class meets at Technical Institute, on Thursday, at 7.30 p.m. First and second terms: Art decoration, style, drawing examples and general principles of ornament; ecclesiastical and modern decoration; figures; original design. Text-books: "House-Painting" (Weale's Series), "Elementary Decoration" (Weale's Series), "Grammar of Colour" (Field), "Grammar of Ornament" (Owen Jones), Chevreul on "Colour."

*Department of Chemistry* (Instructor, Mr. W. A. Dixon, F.C.S., F.I.C.).

Two years' course of study. Practical chemistry: Mr. W. A. Dixon, Monday and Friday, 7.30 p.m. Theoretical chemistry: Mr. W. A. Dixon, Thursday, 7.30 p.m. Technical chemistry and metallurgy: Thursday, 8.30 p.m.

The complete course of instruction in chemistry extends over two years. Students who wish to get the certificate of Expert in Chemistry must attend the whole course of instruction, and pass satisfactory examinations in each subject; must also obtain certificates in drawing and physics; mathematics—algebra, simple equations; Euclid, four books; plane trigonometry; applied mechanics; and satisfy the examiner as to his knowledge of English and bookkeeping. A student may, however, attend the course of instruction in chemistry, and, if he pass a satisfactory examination, shall be granted a certificate.

First year: *Chemistry* (Thursday, 7.30 to 8.30 p.m.)—Hydrogen; manipulation, measurement, and properties of gases; fluorine, chlorine, bromine, iodine, oxygen, sulphur, selenium, tellurium, nitrogen, phosphorus, arsenic, antimony, boron, silicon, carbon. Second year: Thursday, 8.30 to 9.30 p.m.—Sodium, potassium, ammonium (rare alkali metals), barium, strontium, calcium, magnesium, zinc, lead, copper, silver, mercury, aluminium (rare earth metals), manganese, iron, cobalt, nickel, chromium, tin, bismuth, gold, platinum. The rare metals will only be mentioned. Technical chemistry and metallurgy: Special instruction to students who have gone through the second year's course.

*Chemical Laboratory—Practical Chemistry.*—First year: First term—Examination of the effect of reagents on known metals, non-metals, and acids: second term—qualitative analysis of simple salts. Second year: First term—Analysis of metals in admixture: second term—analysis of salts and compounds in admixture. Students are supplied with fuel and gas, the use of a set of reagent-bottles, the common reagents, and any of the larger and less-commonly-used apparatus, as balances, burettes, pipettes, measuring-flasks, condensers, &c.; also with a working-bench, cupboard, and drawers; except that in case of the cupboard and drawers being all occupied, short-time students must give place to those of longer time, and provide a box for their apparatus. Students are to supply themselves with what they require of beakers, blowpipes, crucibles, evaporating-basins, flasks, funnels, filter-stand, filter- and test-papers, test-glasses, test-tubes and stands, small tongs, triangles, glass tubing and rod, watch-glasses, platinum wire, foil and crucibles, towels, chloride of platinum, nitrate of silver, iodine and iodide of potassium (for standard solutions), and, if studying metallurgy, all crucibles, scorifiers, cupels, borax-glass, and assay lead and silver. Text-book: Fowne's "Inorganic Chemistry."

*Trades under the Instructor in Chemistry.*—If a student wishes to obtain the certificate of expert in any of the trades under the instructor in chemistry, he must attend the prescribed course of instruction and obtain a certificate for each subject, and must satisfy the examiner as to his knowledge of English and bookkeeping. The student may, however, attend the trade-class only, but he will then only be able to obtain the class-certificate. Students wishing further information or advice should apply to instructor in chemistry.

*Smelters, Amalgamators Brick- and Earthenware-makers, Glass-makers, Aerated-water Makers.*—First year: First term—Mathematics, 1, Wednesday; physics, 2, Tuesday and Friday: second term—the same, in continuation. Second year: First term—Architectural drawing, 1, Wednesday or Friday; chemistry, 2, Monday and Thursday: second term—the same in continuation. Third year: First term—Technical chemistry, 2, Monday and Friday; mechanics, 2, Tuesday and Thursday: second term—practical chemistry, 1, Monday; technical chemistry or metallurgy, 1, Thursday.

*Bakers, Brewers, Sugar-boilers, Starch-makers, Food-preservers, Dyers, Bleachers, Paper-makers, Tanners, Wool-scourers, Glue-, Varnish-, Oil-, and Gas-makers.*—First and second years as above. Third year: First term—practical chemistry, 1, Monday or Friday; mechanics, 2, Tuesday and Thursday: second term—practical chemistry, 1, Monday or Friday; technical chemistry, 1, Thursday; use of microscope, 1, Wednesday.

*Photographers.*—First year as above. Second year: First term—Practical chemistry, 1, Monday or Friday; chemistry, 1, Thursday; freehand drawing, 2, Wednesday and Friday: second term—the same in continuation. Third year: First term—Practical chemistry, 1, Monday or Friday; freehand drawing, 1; photographic processes, 1: second term—practical chemistry, 1, Monday or Friday; freehand drawing, 2; photographic processes, 1.

*Photography* (Teacher, Mr. W. H. Vosper).—Wednesday, at 7.30 p.m. One year's course of study. Syllabus: Lenses and cameras: Wet-plate processes—positives, negatives, opal plates, enlarging, printing, toning, transparencies for lantern, transparencies for enlarging; dry-plate processes—positives, negatives, opal plates, enlarging, printing, toning, transparencies for lantern, transparencies for enlarging; instantaneous photography, carbon process, solar enlarging, retouching, paper negatives, defects and remedies. Course of instruction for Expert in Photography—Mathematics, physics, chemistry (theoretical), chemistry (practical), freehand drawing, photography.