The exercises for the practical examination will be such as are included in the following syllabus, and candidates should be able to complete any of the exercises mentioned, but they will be required to pass in two only of the divisions A, B, and C.

Division A: Vice-work.—The form and use of flat and cross-cut chisels; flat, round, square, and half-round files; scrapers; taps, stocks, and dies; screw-plates; measuring and other tools, including calipers, square, centre-punch, scribing and V blocks, straight-edges and surface-plates. Different forms of vices for bench-work, and the grinding and keeping in order of the tools used. Chipping, filing, and scraping cast-iron, wrought-iron, steel, brass, and gun-metal to simple forms and given dimensions. Cutting keyways and holes from plates or blocks to fit a given gauge, and preparing and fitting taper- and headed-key, or other piece. Cutting out and filing up a hexagon or octagon gauge from thin plate, filing and preparing a straight-edge. Drilling, tapping, and filing to shape a square or hexagonal nut; screwing round bar with screw-plate and stocks and dies to fit a given nut.

Division B: Bench-work.—Composition of soft solders; use of copper soldering-bit; composition and use of ordinary fluxes; soldering simple joints in tin- and brass-work. The connection of plates and bars, and of joints, with rivets, single- and double-countersunk, hammered cold.

Division C: Forge-work.—The form and use of the ordinary forge tools, management of fire, precautions to be observed in heating metals, drawing out bars to square and round ends, parallel, and taper; bending iron to simple curves, or to square or circle of given size; jumping-up. Forging of simple examples, as headed-key, spike-nail, &c.; forging and tempering centre-punch, drill, and small chipping-chisel. Connection of pieces of bar by welding. Case-hardening with prussiate of potash. Annealing.

Final Examination.

Candidates for the final examination must produce a certificate of having passed the first year's examination. They will be required to undergo an examination in practical work, and also a written examination and a drawing examination.

1. *Practical Work.*—Exercises may be selected from the first year syllabus A, B, and C, only that greater accuracy and finish will be expected; or more difficult exercises of the same character, including examples in brazing, may be set.

Candidates will also be required to work exercises requiring a use of the simple lathe and drilling-machine to the following syllabus: Form and use of hand-tools for turning iron and brass; centreing of work and fixing in lathe; turning of plain cylindrical rod; simple taper and collar turning; use of V centre for drilling; turning of simple curved pieces to template. Chasing screw-threads. Use of slide-rest and back gear; and of shifting headstock for taper-turning. Methods of screw-cutting. Exercises may be set involving forge, vice- and lathe-work, and drilling.

2. *Written Examination.*—Forms and angles of cutting-edges of tools as used for vice- and bench-work, and for lathes and drilling-machines. Construction and use of simple lathes and drilling-machines, including the use of change-wheels for screw-cutting. The working of steam-engines and gas-engines, and the arrangement of shafting, pulleys, and belting, with some knowledge of speed and methods of running, so far as relate to their use for driving purposes in school workshops. The fitting and equipment of a school workshop and arrangement of lessons. Workshop methods and properties of materials, so far as relating to the exercises of the practical examination.

3. *Drawing Examination.*—Making freehand dimensioned sketches in plan and elevation of hand- and machine-tools, and other workshop fittings, and of exercises for practical work. Making working drawings to scale, in pencil, from dimensioned sketches.

Candidates must pass in each of the three subjects 1, 2, and 3, in order to obtain a certificate. The practical work will receive four times the marks of either of the other subjects.

Certificates will be granted on the result of each examination, but the teacher's certificate will be given to those candidates only who have passed the final examination.

Works of Reference.—"Principles of Fitting" (Whittaker and Co.); "Metal-turning" (Whittaker and Co.); "Workshop Appliances," by C. P. B. Shelley (Longmans).

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7. REPORT OF THE SCHOOL BOARD FOR LONDON, MARCH, 1895, CHAPTER VII.

Work of the Joint Committee, Consisting of Representatives of the School Board for London, the City and Guilds of London Technical Institute, and the Worshipful Company of Drapers.

In the month of April, 1886, the Minuting and Educational Endowments Committee of the School Board for London considered that technical classes might, with great advantage to the public, be established in certain suitable Board schools without charging the cost upon the rates. The decision of the Committee was communicated to the Board.

A list of unused buildings and class-rooms, suitable in respect of accommodation and locality, which were not required at that time for ordinary school purposes, was prepared.

The Committee, being of opinion that some of the principal city guilds were in sympathy with the objects they had in view, recommended the Board to appeal to the guilds, and to express the hope that those bodies would be willing to make grants towards the cost of maintaining the proposed