

certified to be his own work. Drawing to be on a sheet of paper, 20 in. by 27 in., and not mounted on cardboard.

The subjects for the final examination will be:—

HISTORY OF ARCHITECTURE.—The leading characteristics, including mouldings, features and ornaments of all styles; and special characteristics, with mouldings, features and ornaments in detail, of any one style or period the candidate may select.

DESIGN.—As illustrated by drawings for a building of moderate dimensions, from particulars given, with details of construction and ornament and with specifications.

NATURE AND PROPERTIES OF MATERIALS.—Limes, cements, stones, bricks, timber.

FOUNDATIONS.—Text book: Foundations, by Geo. T. Powell.

ARCHITECTURAL JURISPRUDENCE.—Text book: The Law Relating to Civil Engineers, Architects and Contractors, by Macassey & Strahan.

PRACTICAL KNOWLEDGE OF BUILDING TRADES.—Sufficient for the purposes of ordinary building.

STRENGTH OF MATERIALS.—Designing structures of an ordinary kind from data, with computation of the strains involved.

HEATING AND VENTILATION.—Text book: Ventilation and Heating, by John S. Billings.

SANITARY SCIENCE.—Text books: Gerhard's House Drainage; Bayles' House Drainage and Water Supply.

QUEBEC ASSOCIATION PROGRAMME OF MATRICULATION EXAMINATION FOR PUPILS.

1. English or French Composition. (A subject to be chosen at the time.)
2. Arithmetic, up to and including fractions.
3. Mensuration of Surfaces and Solids.
4. Algebra.—Simple Equations.
5. Elements of Geometry and 1st and 2nd Books of Euclid.
6. Freehand Drawing (copy to be given.)
7. Linear Drawing—geometrical (Do.)

QUEBEC ASSOCIATION PROGRAMME OF EXAMINATION FOR REGISTRATION AS ARCHITECT.

LISTS OF SUBJECTS, &c.—Preliminary drawings to be sent in previously, and prepared during pupilage, or otherwise, and to be entirely the work of the candidates.

(a) Measured drawings of an existing building, for example the chapter house of Christ Church Cathedral, Montreal, or the newly erected side chapel of the Basilica at Quebec to $\frac{1}{4}$ " scale with mouldings and ornament $\frac{1}{4}$ full size.

(b) An original design of a detached private residence, with complete plans, sections, elevations and details, colored to show materials, and one perspective view drawn by rule, together with complete specifications for the several works and materials required for the carrying out of said design, and a detailed estimate of cost, which must not be less than \$5,000; scale to be not less than $\frac{1}{16}$ inch to 1 ft.

(c) An essay on the history and characteristics of any one style of architecture to be selected by the candidate, giving fullest particulars, illustrated by sketches, and to contain at least 1,000 words.

WRITING, GRAPHIC AND ORAL EXAMINATION.

ART SECTION.—(a) The orders of Greek and Roman Architecture, their origin, development and application; with sketches.

(b) The several varieties of classic ornament.

(c) The development of the different periods of French or English Gothic, commencing with the Normans.

(d) The characteristic mouldings and ornament of each period.

SCIENCE SECTION.—(a) The nature, qualities and defects of ordinary building materials, such as stone, brick, timber metals, etc.

(b) The nature of soils and foundations.

(c) The calculation of strengths of materials and resistances from data and formulae given.

(d) The elementary principles of construction.

(e) Hygiene, drainage, and sanitation of buildings.

(f) Architectural jurisprudence.

(g) Heating, ventilation and acoustics.

BOOKS RECOMMENDED.

ART SECTION.—Fergusson's History of Architecture; Fergusson's Handbook of Architecture; Viollet-le-Duc Dictionnaire d'Architecture, Stuart & Revett's Antiquities of Athens; Sir William Chambers' Civil Architecture; Gwilt's Encyclopædia of Architecture, (1888 edition); Gallhaubaud's l'Architecture du V. au XVII. Siècle; Parker's Introduction to Gothic Architecture; Rickman's Gothic Architecture; Brandon's Analysis of Gothic Architecture.

SCIENCE SECTION.—Notes on Building Construction—South Kensington series; Dobson's Rudiments of the Art of Building; Dobson's Foundation and Concrete Works; Tredgold's Elementary Principles of Carpentry; Baillairge's Stereometricon; Rankin's Manual of Applied Mechanics and Civil Engineering; Park's Manual of Hygiene, and Works by Latham, Putnam, Bailey-Denton, Hellyer, &c.; Civil Code of the Province of Quebec; Gwilt's Encyclopædia of Architecture (1888 edition), etc., etc.

The announcement is made in the advertisement of the Toronto Pressed Brick Co. that the Company's office and show rooms have been removed from Adelaide street east to No. 139 Yonge street. It is gratifying to be told that the necessity for enlarged space consequent upon the growth of the business has rendered this removal to larger premises necessary.



COLORING AND ENAMELING FACING BRICKS.

When coloring white burning clay, for 100 parts of material are required, according to the behavior of the basis material:—

OXIDE USED.	PER CENT. OF OXIDE USED.
Chromic oxide.....	0.010 to 1.50 per cent.
Chromic oxide.....	0.005
Chromic and cobaltic oxide.....	0.006
Chromic and cobaltic oxide.....	0.25
Chromic oxide.....	0.50
Cobaltic oxide.....	0.005
Cobaltic oxide.....	0.05
Cobaltic oxide.....	0.50
Nickel oxide.....	0.200
Nickel oxide or uranic oxide.....	0.500
Uranic oxide.....	0.150
Chromic ferric and cobaltic oxides, or manganese with (or without uranium).	up to 6.17

For glaze coloring, 1.5 to 20 per cent. more of coloring matter will be required in proportion to the depth of the respective tone and the developing capacity of the coloring power of the respective oxides, as well as the height of the burning temperature. The many-sidedness of the subject is shown by the following compilation, there being considerable variation in the coloration, especially according to the more oxidizing or more reducing nature of the flame.

Should yield according to the quantity used.	May also turn out.
Yellow or brown.....	Yellow, brownish, medium brown, red-brown, orange-red, blood red, violet brown, red.
Blue.....	Bluish, water-blue, sky-blue, fiery blue, black-blue.
Yellow or green.....	Pure yellow, medium, deep, in yellowish, greenish, yellowish, with yellow reflection, greenish, pale green, sap green.
Blue or green.....	Greenish blue, perceptibly green blue, azure blue.
Yellow.....	Yellowish, yellow, brown, yellow.
Yellow.....	Sulphur-yellow, brownish, straw-color, greenish to green.
Brown or violet.....	Medium brown, dark brown to blackish.
Brown.....	Earth color, medium brown, red-brown, sap brown, greenish brown.

The Brickmaker.

TO PRESERVE WOODWORK.—Enquiries are being made in Indian Engineering as to whether coal tar or Burmese "earth oil" forms the best preservative for woodwork. Having tried both, observes *Invention*, we may state that when wood is exposed to air only, the earth oil is the cheapest and less offensive. For wood wholly or partially buried in the ground, or inserted in brickwork, the coal tar is much superior.