OFFICIAL.

The following Regulations supersede those formerly in force respecting the JOURNAL OF EDUCATION:—

I.—The JOURNAL OF EDUCATION shall hereafter be published semi-annually, in the months of April and October respectively, and shall continue to be the medium of Official Notices in connection with the Department of Education.

II.—The JOURNAL will be furnished gratuitously, according to law, to each Inspector, Chairman of Commissioners, and Board of Trustees, and will be supplied to other parties wishing it at the rate of ten cents per copy.

III.—Each Secretary of Trustees is instructed and required to file and preserve the successive numbers of the JOURNAL for the benefit of his fellow Trustees and the Teacher or Teachers of his section, and their successors, and to inform his associates in office and the Teacher or Teachers of its receipt, so soon thereafter as may be convenient.

EXAMINATION PAPERS,

Set for Candidates for Provincial Licenses.

JULY, 1888.

ACADEMIC LICENSES (Grade A.)

ALGEBRA.

1. Discuss the meaning of the algebraic symbols 0 and ∞, and shew that $\frac{0}{0}$ may be equal to any finite quantity.

2. If p be greater by unity than a square number, and q be less by unity than the next square number following it, shew that $\ldots - p = 2\sqrt{p-1} - 1$.

3. A vintner draws a certain quantity of wine from a full vessel holding 256 gallons, and then, filling the vessel with water, draws off the same quantity of liquid as before, and so on for four draughts, when there are only 81 gallons of pure wine left; how much wine was drawn off each time?

4. State the Binomial Theorem and expand $(a+b)^{-1}$ to the sixth term.

5. A is the arithmetical and G the geometrical mean between two quantities. Prove that these quantities are given by the formula

$$A \pm \sqrt{(A+G)(A-G)}$$

6. There are two globes of gold whose radii are r and r_1 respectively. They are melted and formed into a single globe. Find radius of latter.

GEOMETRY.

1. Construct a triangle, having given the base, the difference of the angles at the base, and the difference of the remaining sides.

2. To divide a given straight line into two parts so that the rectangle contained by the whole and one of the parts shall be equal to the square on the other part.

3. To describe a circle which shall touch a given circle and touch a given straight line at a given point.

4. Trisect a triangle by lines drawn from a point in one of its sides.

5. In equal circles, angles, whether at the centre or the circumference, have to one another the same ratio as the arcs which subtend them, and so also have the sectors.

6. If two straight lines be at right angles to the same plane, they must be parallel to one another.

7. Inscribe a square in a given triangle.

SCHOOL MANAGEMENT AND TEACHING.

1. State and discuss the purpose of a recitation.

2. Define Education, and distinguish between education as a Science and as an Art.

3. School Hygiene. Explain the scope of this expression, and state your proposed methods of dealing with the more important matters involved.

4. State and discuss the educational maxims and theories of Jacotot.

5. Write notes of a class lesson on the Latin Subjunctive.

6. Discuss the following branches of study as means of mental discipline. (1) The Ancient Classics. (2) Mathematics. (3) The Natural Sciences.

7. Give illustrations of the methods by which you would endeavor in teaching Algebra to cultivate the habit of generalization in your pupils.

PHYSIOLOGY.

1. Explain the mechanism of the respiratory movements.

2. What is a pivot joint? Describe the bones of the forearm.

3. Describe the teeth.

4. Write a note on the cerebral nerves, their functions and distribution.

5. Describe (1) the conditions influencing the coagulation of the blood, (2) the nature of the process.

6. State the effects of (1) excess in diet, (2) deficiency of diet.

(Candidates are at liberty, as per Syllabus of Examination, to write on such two of the three subjects given below as they may choose. No credit will be given to papers on all subjects from the same candidate.)

CHEMISTRY.

1. Give the sources, modes of preparation and properties of the chief compounds of Nitrogen.

2. By what different processes may substances be obtained in a crystalline form? Name the different crystallographic systems, giving examples of each.