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### 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, 1887.

### ACADEMIC LICENSES (Grade A.)

#### ALGEBRA.

1. A banker has two kinds of change; there must be  $a$  pieces of the first to make a crown, and  $b$  pieces of the second to make the same; now a person wishes to have  $c$  pieces for a crown. How many pieces of each kind must the banker give him?

2. Find the values of  $x$  and  $y$  from the Equations  $2y + 5y + 3 = 1$   

$$x^2 + 5x + y(y-1) = 24.$$

3. Find corresponding integral values of  $x$  and  $y$  in the Equation  $20x - 9y = 683.$

4. According to natural philosophy a body falling in a vacuum describes in the first second of its fall  $16\frac{1}{2}$  feet, and in each succeeding second  $32\frac{1}{2}$  ft. more than in the second immediately preceding. If a body has fallen 20 seconds, how many feet has it fallen in the last second, and how many in the whole time?

5. Show generally how to divide an odd integer into two other integers, of which the product shall be the greatest possible.

6. Free from radicals the Equation

$$\frac{\sqrt{x} + \sqrt{x-a}}{\sqrt{x} - \sqrt{x-a}} = \frac{a^2}{x-a}$$

7. Give one solution of the Equations

$$\begin{aligned} y^2 - x^4 &= 68 \\ x^2 + \sqrt{x} &= y \end{aligned}$$

#### GEOMETRY.

1. If a straight line be bisected and produced to any point, the square on the whole line thus produced and the square on the part of it produced are together double of the square on half the line bisected, and of the square on the line made up of the half and the part produced.

2. Show that the perimeter of an isosceles triangle is less than that of any triangle of equal area on the same base.

3. Through a given point without a circle draw a chord such that the difference of the angles in the two segments, into which it divides the circle, may be equal to a given angle.

4. The rectangle, contained by the diagonals of a quadrilateral inscribed in a circle, is equal to the sum of the rectangles contained by its opposite sides.

5. Produce a given straight line, so that the given line may be a mean proportional between the whole line and the part produced.

6. If a solid angle be contained by three plane angles, any two of them must be together greater than the third.

7. Similar polygons inscribed in circles are to one another as the squares on the diameters of the circles.

#### SCHOOL SYSTEM AND SCHOOL MANAGEMENT.

1. State the principles which regulate the apportionment of the County Fund to Trustees, and show in what respect they tend to secure, (1) School privileges in a Section, and (2) a good attendance.

2. Discuss the nature and extent of the teacher's authority over his scholars outside the school room.

3. State the physiological reasons rendering necessary careful regulation of the school room in respect of (1) temperature, (2) cleanliness, (3) ventilation.

4. Discuss broadly the question of "punishment," stating as fully as you can the principles by which you propose to regulate your own practice

5. Give outlines of the career and system of Pestalozzi.

6. State fully, with reasons, your views as to the proper order of scientific studies in an academic course of study.

#### TEACHING.

1. Discuss "the educational value of memory," and state principles which should regulate the development and training of that faculty.

2. Explain your method of unfolding to a class of beginners the principles of declension in Latin.

3. What is meant by "Aesthetic Culture?" Explain methods by which it may be promoted both directly and indirectly in connection with school work.

4. Describe the teaching of any lesson in English Grammar that has specially impressed you, either favorably or unfavorably. Discuss with particular reference to effect on pupil's growth (1) in knowledge, (2) in mental power.

5. Furnish detailed directions for teacher of Preparatory Department (8th Grade Common School Course) in teaching the fundamental principles of composition (without text book).