

## OFFICIAI.

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 Nutices 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.

1II.- Each Secretary of Trustees is instructed and requived to file and preserve the successive numbers of the Journal for the benefit of his fellow 'Lrustees 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 therenfter as may be convenient.

## EXAMINATION PAPERS,

Set for Candidates for Provincial Licenses. JULY, 1886.

## ACADEMIC LICENSES (Grade A.)

## ALGEBRA.

1. A number is represented by 6 digits, of which the left-hand digit is 1 . If the 1 be removed to units place, the others remaining in the same order as before, the new number is 3 times the original number. Find the number.
2. Given $x^{2}-x y+y^{2}=21$

$$
\left.\begin{array}{r}
x^{2}-x y+y^{2}=21 \\
y^{2}-2 w y=-15
\end{array}\right\} \text { find } x \text { and } y .
$$

3. The arithmetical mean between two numbers exceeds the geometrical by 13, and the geometrical exceeds the harmonical by 12. What are the numbers?
4. If $N$ be any number in the scale whose radix is $r$, and $S$ the sum of its digits, $N-S$ is divisible by $r-1$.
5. Find the sum of $1+\frac{a}{2}+\frac{b}{3}+\frac{y}{4}, \& c ., 1, a, b, y, \& c .$, being the co-efficients taken in order of the expansion of $(a+b) n$.
6. Find the amount of an annuity $\mathbf{A}$ for $n$ years, (1) at Simple, (2) at Compound Interest.

## GEOMETRY.

1. On a given straight line to describe a segment of a circle capable of containing an angle equal to a given angle.
2. The least square which can be inscribed in a given square is that which is half of the given square.
3. Find the locus of the middle points of chords in a circle that pass through a given point.
4. Upon a given straight line to describe a rectilinear figure similar and similarly situated to a given rectilinear figure.
5. If from any point in the circumference of the circle described round a triangle perpendiculars be drawn to the sides of the triangle, the three points of intersection are in the same straight line.
6. Every solid angle is contained by plane angles, which are together less than four right angles.
7. If a quadrilateral figure does not admit of having a circle described round it, the sum of the rectangles contained by the opposite sides is greater than the rectangle contained by the diagonals.

## SCHOOL SYSTEM AND SCHOOL MANAGEMENT.

1. Give a summary view of the provisions of the "Act to encourage Academic Education."
2. What do you understand by "the proper correlation of studies?" Gire illustrations of the principle, and of its violation.
3. Discuss the relation of the Principal of a Graded School to the subordinate teachers and their departments,
4. Write a note on "Physical Culture in its relation to the schoolroom."
5. Give an outline of Locke's "Thoughts on Education," and discuss their relation to modern educational theories and practise.

## TEACHING.

1. "Early study should commence with an empirical stage." Explain and illustrate this statement, naming, if you can, its author.
2. Object-lessons. Explain (1) their nature; (2) the advantages resulting from their use; (3) any common errors in modes of conducting them.
3. Discuss the relative value of science and language as instruments of education.
4. Classify the mental faculties, and show the importance to a teacher of a knowledge of the laws of mental science.
5. Give directions to an under-teacher as to the best mode of teaching the elementary principles of Algebra.
6. In a High School or Academy, there are a number of pupils preparing for examination for teachers licenses and for University bursaries.

Discuss broadly the effect on the general work of the school.

## PHYSIOLOGY.

1. Give an outline of the bodily structure, with a short account of the constituents of the skeleton.
2. Name some of the physical qualities of the blood, with a full statement of its chemical eomposition.
