

2 TO 4 P. M., TUESDAY, 6TH JULY.

## USEFUL KNOWLEDGE.

(Only ten questions to be answered)

1. Name as many plants as you can, which flower in each of the months, April, May and June.
2. Give as full a description as you can of any one of them with the object of showing how thoroughly you know all about it, making sketch drawings of the various parts.
3. Tell what you know about either (a) the cause of summer frosts, or (b) their effects, or (c) how to guard against their bad effects.
4. Name, or give the color, size or other peculiarity of as many of the butterflies, moths, beetles, flies, and other insects as you have seen and can think of.
5. Describe any one of them with drawings showing what you know about it.
6. What do you know about either (a) fungus plants which are injurious to the farmer or gardener, or (b) insects which are injurious to his interests.
7. Name the Nova Scotian minerals which you have examined, making a note of the color of each, its value, where found, and its importance.
8. Why does a stove or chimney draw? What arrangements tend to produce the strongest draughts, and why?
9. Explain the burning of wood as fully as you can, accounting for the heat, flame, light, smoke, soot and ash.
10. Explain why you think young people learn to smoke although they are told it will be injurious to them; or why some people use alcoholic drinks although they have been advised against it. Take either subject, but explain it as fully as you can.
11. Write the music of any Jubilee song you have sung, in the tonic sol-fa notation, and explain the signs indicating the lengths of the various notes. (Or tonic sol-fa Certificate.)
12. Discuss the advantages of knowing and practising while of school age, either (a) military drill, (b) swimming, (c) sewing, (d) cooking, or (e) the use of tools.
13. Describe any experiment you have conducted in physics, or chemistry, or wood-work, or any practical work done showing skill acquired in using the hand or the mind.

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## PROVINCIAL HIGH SCHOOL EXAMINATION.

(See *Comments and Regulations of the Council of Public Instruction, J.—1 to 14, pages xxxi to xxxix, Manual of 1895 and Amendments in later JOURNALS OF EDUCATION.*

### GRADE D, (IX.)

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9 to 10 A. M., WEDNESDAY, 7TH JULY.

## ALGEBRA, D.

1. (a) If  $a=0, b=1, c=-2, d=3$ , find the value of  $(3abc-2bcd)\sqrt[3]{a^3bc-c^3bd+3}$ .
- (b) Simplify  $4\left\{a-\frac{2}{3}(b-\frac{4}{3}c)\right\}-\frac{1}{2}(2a-b)+2(b-c)$ .
2. (a) Write down five consecutive numbers, of which  $x$  is the middle one.
- (b) Given the equation  $\frac{x+.75}{.125}-\frac{x-.25}{.25}=15$ , find the value of  $x$ .
3. The width of a room is two-thirds of its length. If the width had been 3 feet more and the length 3 feet less, the room would have been square; find its dimensions.
4. Given 
$$\left. \begin{aligned} x-\frac{y}{5} &= 6 \\ y-\frac{z}{7} &= 8 \\ z-\frac{x}{2} &= 10 \end{aligned} \right\}, \text{ find } x, y, \text{ and } z.$$
5. (a) Simplify  $\sqrt[5]{(-32x^{10}y^{15})}$ ; and
- (b) Extract the cube root of  $108x+90x^2-8x^3+48x^4-60x^5-80x^6+27$ .