The aim of education should be to teach us rather how to think than what to think; rather to improve our minds so as to enable us to think for ourselves than to load the memory with the thoughts of other men.

It will be very illiberal and ungenerous on your part if, through your permission, I am allowed to be suspected and regarded as having all along foreseen the disastrous issue which has been the result of your unfortunate speculation.

Imagination should not be indulged too freely; it requires to be restrained by the exercise of a sound judgment.

DRAWING.

NOTE.—Only seven questions are to be attempted, two of which must be selected from group A, two from B, two from C, and the one in D.

Α.

1. Draw a pair of plain scissors, opened to full extent; length 6 inches.

2. Draw a square, length of side 6 inches; draw diameters; place in first small square a Maltese Cross; in second, a unit of a design in reversed curves; in third, a natural maple leaf; in fourth, same conventionalized.

3. Draw a simple object, derivable from the ellipse or the oval.

4. Shew, by the drawing of an ordinary kitchen table, the application of elevations.

B.

5. Draw a rhombus, whose sides shall be 2 inches in length, and whose acute angles $37\frac{1}{2}^{\circ}$.

Inscribe a circle in the rhombus.

6. Draw a triangle, whose sides are 2, 3, and 4 inches respectively; produce any two sides and describe a circle to touch the third side and the produced parts of the other two.

7. Draw three circles, diameters 2 inches each; each circle to be in contact with two others; about these circles draw the circumscribing circle.

8. The diagonal of a square is 2½ inches; construct it; divide it into three equal parts by lines drawn from an angular point.

C.

NOTE.—In following problems consider height of spectator's eye, 6 ft. Distance from the picture plane 4 ft. Scale $\frac{1}{4}$ in. equals; ft.

9. Draw a circle, diameter 4 ft., plane of circle perpendicu'ar to both P.P. and G.P., and touching both, centre of circle to be 4' to the left of spectator.

10. Draw a regular hexagon, whose sides are each \therefore ft.; hexagon to be parallel to G P. and 8 ft. above it; two sides of the hexagon are to be perpendicular to the P.P.; centre of hexagon to be 4 ft. to the right and 4' within the P.P.

11. Draw the frustum of a square pyramid; edge of end: 3 and 4 inches respectively; height 5 ft.; the pyramid rests on the G.P. and touches the P.P. four ft. to the right.

On this frustum, place centrally a sphere so as to touch the P.P.

12. Driw a squire whose sides are each 4 ft. in length; the square is perpendicular to and touches the G.P. 4 ft. to the left and 2 ft. within the 1° .P.; the horizontal sides of the square retire towards the right, and make an angle of 45° with the P.P.

D.

13. Draw, in outline only, the object presented to you. Height of drawing four inches. Use no instruments.

PHYSICS.

Examiners: John Seath, B.A.; W. H. Ballard, M.A.

NOTE — Only seven questions are to be attempted. Candidates will omit one question in each of the groups A, B, C, D.

А.

I. A piece of ice is forcibly kept at the bottom of a beaker, and the latter is then filled with water at 15° C.

(a) Describe accurately the changes which the water undergoes with respect to temperature; and

(b) S'ate clearly what difference (if any) it will make if the ice is in the middle, instead of at the bottom of the water.

2. A person who has two fires to light in the morning finds that on lighting the second