carrying the product to the term containing x^4.

2. The Dividend is y^3. $y^{\frac{1}{2}} + 2y^2 - 3y - 2$, the Quotient is $\dot{y}.y^{\frac{1}{2}} - y^{\frac{1}{2}} - 1$, and the Remainder is $3y^{\frac{1}{2}} - 1$. Find the Divisor.

3. What must be added to $(a+b+c)(ab+bc+ca)$ to make it evenly divisible by $a+b$?

4. Put $4\,a^2b^2 - (a^2+b^2-c^2)^2$ into four factors.

5. Put into four factors

$(x+2)(x+6)(x+4+\sqrt{6})(x+4-\sqrt{6})-15$.

6. Find the H. C. F. of

$2x^4+x^3-3x^2-x+1$ and $x^4-2x^3+x^2+2x-2$.

7. Simplify

$$\frac{(1+ab)\,(1+ac)}{(a-b)\,(a-c)} + \frac{(1+bc)\cdot(1+ba)}{(b-c)(b-a)} + \frac{(1+ca)\,(1+cb)}{(c-a)\,(c-b)}.$$

8. Find x when $(x-a)^2(1+ax)=(x+a)^2(1-ax)$; and prove that the value you get satisfies the equation.

9. How much are eggs a dozen when a rise of 20% in their price makes a difference of 50 eggs in the number sold for $5?

10. (a) From a given point draw a line equal to a given finite line.

(b) Make the foregoing construction when the given point is the middle point of the given line.

11. (a) Bisect a given rectilineal angle.

(b) Show that the bisector of the vertical angle of an isosceles triangle bisects the base at right angles.

12. (a) An exterior angle of a triangle is greater than either of the interior opposite angles.

(b) The line ECA meets the two lines AB and CD so as to make the angle BAE equal to the angle DCE. Show that AB and CD will not meet if produced ever so far.

13. (a) If ABC and $A'B'C'$ be two triangles having $AB=A'B'$, and $AC=A'C'$, but the angle A greater than the angle A', then BC is greater than $B'C'$.

(b) If AB be made to coincide with $A'B'$, show that B does not lie on the perpendicular from A to CC'.

ENGLISH GRAMMAR AND RHETORIC.

Examiners: W. J. Alexander, Ph.D.; J. E. Bryant, M.A.; F. H. Sykes, M.A.

NOTE.—In section A candidates will take numbers 1, 2 and 3, and any two of numbers 4, 5 and 6. In section B candidates will take number 7 and either 8 or 9.

A.

Pansies, Lilies, Kingcups, Daisies,
Let them live upon their praises;
Long as there's a sun that sets,
Primroses will have their glory;
Long as there are Violets,
They will have a place in story;
There's a flower that shall be mine,
'Tis the little Celandine.

Wordsworth: "To the Small Celandine."

1. Analyze the above sentence so far as to shew the various clauses of which it is composed. Indicate the grammatical relations of the clauses, and assign to each clause its appropriate grammatical name, shewing why it is appropriate.

2. Describe clearly the grammatical relation of:—

"Pansies" (line 1), "them" (line 2), "sun" (line 3), "there" (line 5), "They" (line 6), "mine" (line 7), "'T" (line 8), "Celandine" (line 8).

3. (a) Define what is meant by Phrase in grammar.

(b) Pick out the phrases to be found in the extract (other than the verb-phrases). Shew clearly what grammatical functions these phrases respectively perform. Attach to each phrase selected its appropriate grammatical name, shewing clearly why it is appropriate. Where possible give for each phrase a one-word equivalent.

4. (a) Define what is meant by verb-phrase. Why are verb-phrases needed in English?

(b) Pick out the verb-phrases to be found in the extract. Describe the particular grammatical function which each verb-phrase in the extract performs. Thence assign to each verb-phrase used its appropriate grammatical name.

(c) Write out a scheme, using the verb *to strike*, shewing to what extent verb-phrases