

1.

SECONDARY EDUCATION (SCOTLAND).

I.—CIRCULARS.

II.—PAPERS

SET AT THE

EXAMINATION FOR LEAVING CERTIFICATES, 1889,

HELD BY THE

SCOTCH EDUCATION DEPARTMENT.

III.—RESULTS OF THIS EXAMINATION.

IV.—REPORT BY PROFESSOR J. EGGELING.



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INSPECTION OF HIGHER CLASS SCHOOLS, 1889.—
LEAVING CERTIFICATE.

CIRCULARS TO CORRESPONDENTS OF HIGHER CLASS SCHOOLS.

Circular 98.

Scotch Education Department,
7th January 1889.

SIR,

I AM to state that my Lords have had under consideration the arrangements for the leaving certificate examination in connection with the inspection of higher class schools during the forthcoming year.

They propose that the regulations shall, in general, follow those laid down on the last occasion; but any suggestions on this matter will be carefully considered.

They think that Monday, the 24th of June, would be the most suitable date for the beginning of the examination for certificates. But in regard to this they will be guided by the convenience of the majority of schools.

My Lords will be glad to have *at your earliest convenience* any remarks which it is desired to offer on these points, and to be informed whether the managers intend to present pupils at the examination.

I am to remind you that the examination is confined to higher class schools inspected by the Department in virtue of sections 19 and 20 of the Education (Scotland) Act, 1878, and under the Educational Endowments Acts.

I have, &c.
H. CRAIK.

Scotch Education Department,
5th February 1889.

SIR,

ADVERTING to their Lordships' letter of the 7th ultimo (Circular 98), I am to state that in consequence of communications which have been since received my Lords find it necessary, in order to meet the convenience of the larger number of schools from which pupils are to be presented, to fix Monday, the 17th of June, as the day on which the examination for leaving certificates will begin.

Any further information which may be necessary will be subject of further communication.

I have, &c.
H. CRAIK.

Circular 99.

Scotch Education Department,
16th January 1889.

SIR,

ADVERTING to their Lordships' circular letter of 15th January 1886, I am to state that my Lords have had under consideration the arrangements for the inspection of higher class schools.

I am accordingly to request you to inform my Lords, as soon as possible, whether inspection is this year desired for the school which

you represent, and to furnish the Department in due course thereafter with such statistics relating to the school as were asked for in their Lordships' circular letter of 15th January 1886.

In the case of schools from which pupils are presented for the leaving certificate, my Lords do not think that it is necessary to have a detailed examination every year. But, in regard to this, they would be glad to learn the views of the managers.

I have, &c.

H. CRAIK.

Circular 100.

Scotch Education Department,
16th January 1889.

SIR,

WITH a view to the completion of arrangements for the inspection of higher class schools this year, I am directed by my Lords to inquire at what time it will be most convenient that the inspection of the above school, in terms of section 19 (or section 45) of the Educational Endowments (Scotland) Act, 1882, should take place.

My Lords would be glad if you would, at your early convenience, furnish them with such statistics relating to the school as were asked for in their Lordships' circular letter of 15th January 1886.

In the case of schools from which pupils are presented for the leaving certificate, my Lords do not think that it is necessary to have a detailed examination every year. But, in regard to this, they would be glad to learn the views of the governing body.

I have, &c.

H. CRAIK.

Circular 102.

Scotch Education Department,
17th April 1889.

SIR,

I AM directed to remind you that the examination for leaving certificates will begin on Monday the 17th June, and I am to give the following further particulars with respect to it.

About a month before the examination, my Lords will issue a form, on which they will ask for exact information as to the numbers to be examined in the various grades of each subject.

In the present year the examination will be in the following subjects:—English (including questions on Modern History and Geography), Latin, Greek, French, German, Mathematics (including Arithmetic), and Book-keeping with Commercial Arithmetic.

Certificates of three grades,—second, higher, and honours—will be given in each of these subjects except book-keeping and commercial arithmetic, where one grade of certificate only will be given.

The general standard of these three grades has already been stated in their Lordships' circular of 27th April 1888 (No. 94).

For full information as to the examination in mathematics, I am to call your attention to the note as to mathematical papers, a copy of which has already been sent to you.

The papers will not be based upon the professed work of each or of any school, but the profession of the schools will be kept in view in drawing up the papers, and due allowance will be made, both in drawing up the papers and in judging the answers, for the fact that the examination is general and not in prescribed books. In certain subjects, where

this might operate unfairly, as in the subjects of history, literature, and geography, my Lords will endeavour to meet the difficulty by giving a considerable choice of questions relating to different periods. Such an amount of knowledge as will enable a candidate to answer a sufficient number of the questions set in history and geography, may be expected from every pupil. However, their Lordships will consider special cases, in which an unsatisfactory appearance in these subjects is compensated by special excellence in the other branches of English.

In regard to the question whether a certificate of a lower grade will be issued to pupils who may fail to obtain a certificate in the grade in which they are presented, but who may prove that they have the knowledge required for a lower grade, my Lords think it would be undesirable to encourage the candidature of pupils in a grade higher than that in which they are likely to pass. But for the present my Lords are fully conscious that in some subjects allowance may have to be made, and they will in these cases, as last year, issue a certificate in a lower grade, where the circumstances appear to justify this course.

In Latin, Greek, and English two papers will be required in the honours grade. In book-keeping, with commercial arithmetic, two papers will be set, but a certificate will be granted to those candidates only who pass in both branches.

As you have already been informed, my Lords propose that the examination should take place simultaneously in each school, beginning on Monday, June 17. The subjects will be taken in the following order:—

Monday, June 17th -	10 a.m.	Arithmetic.
" " " -	12 noon.	Geometry.
" " " -	3 p.m.	Algebra.
Tuesday, June 18th -	10 a.m.	French.
" " " -	2 p.m.	German.
Wednesday, June 19th	10 a.m.	Latin.
" " " -	2 p.m.	Latin (2nd honours paper).
Thursday, June 20th	10 a.m.	Greek or book-keeping.
" " " -	2 p.m.	Greek (2nd honours paper) or Commercial Arithmetic.
Friday, June 21st -	10 a.m.	English.
" " " -	2 p.m.	English (2nd honours paper).
Monday, June 24th -	10 a.m.	Trigonometry and Logarithms.*
" " " -	12.30 p.m.	Geometrical Conics.
" " " -	3 p.m.	Analytical Geometry.
Tuesday, June 25th -	10 a.m.	Dynamics.
" " " -	12.30 p.m.	Differential Calculus.

On each occasion, the papers for the second grade, the higher grade, and the honours grade certificate, in each subject, will be set simultaneously, except where notice to the contrary is given. The time allowed, except where otherwise stated, for each paper in languages and English will be two hours and a half in the second grade, and three hours in the higher and honours grades. For the time allowed for the various subjects in mathematics, you are referred to the note as to mathe-

* Candidates who take this paper must bring with them a table of logarithms, which must contain no printed or written matter except such as relates to the use of the tables.

mathematical papers. In connexion with this I am to inform you that their Lordships have decided to allow two hours for the *higher grade and honours* examination in *geometry*, instead of one and a half as stated in the note.

The authorities of the school must provide a suitable room or rooms for the examination, and pens, ink, scroll paper (on which no notes of any sort should appear), and blotting paper. The books in which the answers are to be written will be supplied by the Department, and will be forwarded to the head master a few days before the examination. Any candidate introducing any book or note of any kind into the examination room will be instantly dismissed, and the case reported to the Department.

My Lords will endeavour to arrange that the papers in each subject shall be distributed at each school, on the day and at the hour named in the above table, by someone representing the Department; but they will communicate with you further in regard to any help in the way of distribution or supervision which they may have to ask from the authorities of the school.

The selection of candidates from any school rests entirely with the authorities of that school, and, in regard to this, they must act on their own responsibility. At the same time, in order that this examination may form a satisfactory supplement to the inspection of the separate schools (whether this is general or in detail), it is understood that, as a general rule, the pupils of the highest class, or of the highest class and that next to it, in each school, should be presented. It is undesirable, if the examination is to serve as a test of the real merits of a school and the scope of its curriculum, that the candidates should be confined only to a few selected pupils. But, having indicated this view, my Lords do not desire to lay down any strict rule which might interfere with the discretion of the managers.

I have, &c.

H. CRAIK.

LEAVING CERTIFICATE, 1889.

NOTE AS TO MATHEMATICAL PAPERS.

A.

Second Grade Certificate.

All candidates for a second grade certificate in mathematics must take the three following papers:—

1. Arithmetic ($1\frac{1}{2}$ hours), including practice, proportion, per-centage, square root, simple interest, vulgar and decimal fractions (omitting recurring decimals).

2. Algebra ($1\frac{1}{2}$ hours), including fractions, factors, square root, simple equations of the first degree, simultaneous equations of the first degree, easy quadratic equations, problems leading to the above equations.

3. Geometry ($1\frac{1}{2}$ hours). The subject matter of Euclid, Books I., II., and III., with easy deductions. Demonstrations other than Euclid's will be accepted if these assume no propositions which in Euclid's order are subsequent to the proposition under consideration.

B.

Higher Grade Certificate.

All candidates for a higher grade certificate in mathematics must take the four following papers, but deficiency in any one paper may, to a certain extent, be compensated by excellence in others.

1. Arithmetic ($1\frac{1}{2}$ hours). The whole subject.
2. Algebra ($1\frac{1}{2}$ hours), as far as the binomial theorem, inclusive.
3. Geometry ($1\frac{1}{2}$ hours). The subject matter of Euclid, Books I., II., III., IV., VI., and XI., with deductions, and such propositions in modern geometry and mensuration as are usually taught as a sequel to Euclid.
4. Trigonometry and logarithms ($1\frac{1}{2}$ hours), as far as the logarithmic solution of triangles, inclusive.

[The use of a book of mathematical tables is allowed, provided it contain no manuscript notes or printed matter other than such as is given in the introduction to Chambers' Mathematical Tables.]

C.

Honours Certificate.

To obtain an honours certificate in mathematics candidates must pass with credit in the subjects of the higher grade certificate and in at least two of the following subjects:—

[During the year 1889, however, an honours certificate will be awarded to a candidate taking only one of the following subjects, if a sufficiently high standard is reached.]

1. Geometrical conics ($1\frac{1}{2}$ hours). The properties of the parabola, ellipse, and hyperbola, and the sections of the cone treated geometrically.
2. Analytical geometry ($1\frac{1}{2}$ hours). The straight line, the circle, and the conic sections treated by Cartesian co-ordinates, with easy questions in polar and trilinear co-ordinates.
3. Dynamics ($1\frac{1}{2}$ hours). Velocity, acceleration, the motion of a uniformly accelerated particle, the laws of motion, the composition of forces, equilibrium, the centre of mass (gravity), common machines, work and energy, elementary hydrostatics, specific gravity.
4. Differential calculus ($1\frac{1}{2}$ hours). Differentiation, the theorems of Leibnitz, Taylor, and Maclaurin, vanishing fractions, maxima and minima, and the elementary parts of the theory and tracing of curves.

D.

1. When it is desired a separate certificate will be issued in arithmetic, either in the second or higher grade.

2. A separate certificate will also be issued, upon a separate paper, in commercial arithmetic and book-keeping.

3. The person superintending the examination will inform the candidates that quality and style of work is looked to as well as quantity, and that they should rather endeavour to answer a moderate number of questions accurately and fully, than to answer a large number imperfectly. Should any reasonable question be asked by a candidate, the mathematical master may answer the same publicly, provided that the question asked and the answer given are recorded by the representative of the department, and a statement of them is sent up by him along with the written papers.

Scotch Education Department,
26th February 1889.

LEAVING CERTIFICATE, 1889.

EXAMINATION PAPERS.

ENGLISH.

SECOND GRADE.

Friday, 21st June. 10 A.M. to 12.30 P.M.

TEN questions ONLY to be attempted, of which at least ONE must be in Section II., and ONE in Section III.

SECTION I.

1. Write out and punctuate the passage read for dictation.
2. What different forms of comparison are found in English? Explain the origin of each.
3. What do you understand by inflexion in nouns? What traces of it remain in our language?
4. Give three or four ordinary suffixes which are Teutonic in origin, and the same number which are of Romance origin. Explain the exact import of each.
5. Explain and comment upon the following compound words: Forsooth, Unless, Wherewithal, Afraid, Forgive, Foretell, Nathless, Asleep, To-morrow.
6. Give the derivation of the following words: Hnsband, Bishop, Sister, Gossip, Lord, Lady, Curfew, Widow, Puny, Chivalry, Franchise.
7. Explain the origin of *either*
 - (1) The names of the days of the week.
 - or (2) The cardinal numbers to twelve, inclusive.
 - or (3) The names of the months.
8. Give the plot, and name the principal characters, in any one of Scott's novels.
9. Name a leading poet belonging either to the fourteenth, the sixteenth, the seventeenth, or the eighteenth century, stating his chief works, and giving an account of any one of these works which you have read.
10. Arrange in separate columns the italicised words in the following passage according as they are of Teutonic and of Classical origin, stating the derivation of each:—

“ Thus to *relieve* the *wretched* was his *pride*,
 And c'en his *failings* leaned to *Virtue's* side;
 But in his *duty* prompt at every call,
 He *watched* and wept, he *prayed* and felt for all;
 And, as a bird each fond *endearment* tries
 To *tempt* its new-fledged offspring to the *skies*,
 He tried each art, *reproved* each dull *delay*,
Allured to *brighter* worlds, and led the way.”

11. Analyse the following passage :—

“ But if that spirit* in his soul had place,
 It was the jealous pride that shuns disgrace ;
 A pride in honest fame, by virtue gained,
 In sturdy boys to virtuous labours trained ;
 Pride in the power that guards his country's coast,
 And all that Englishmen enjoy and boast ;
 Pride in a life that slander's tongue defied—
 In fact, a noble passion, misnamed pride.”

* “That spirit” is equivalent to “pride.”

SECTION II.

12. State the period of the Roman occupation of Britain. What permanent results did it leave ?
13. When did the Anglo-Saxon kingdoms become united into one? What causes contributed to this ?
14. What were the principal changes produced by the Norman conquest, (1) in government, (2) in language, (3) in the relations between England and the Continent ?
15. Give an account of the work of Simon of Montfort.
16. What can you tell of the relations between the Highlands and Lowlands of Scotland down to the Battle of Harlaw ?
17. Show the effect upon the relations between England and Scotland of the following battles: Halidon Hill, Flodden Field, Solway Moss, Philiphaugh, Dunbar.
18. Give a short account of the following: Cardinal Wolsey, Lady Jane Grey, Cardinal Pole, Archbishop Cranmer, William Cecil (Lord Burleigh).
19. What do you know of the disputes between James I. and his Parliaments ?
20. State what parts in the struggle between the Crown and the Parliament between 1634 and 1660 were taken by Strafford, Pym, Hampden, Fairfax, Cromwell, and Monk.
21. Give a short account of the chief wars in which Britain was engaged in the eighteenth century.

SECTION III.

22. Draw a map, marking thereon the chief rivers and towns, *either of*—
 - (1) Scotland, south of the Forth and Clyde.
 - (2) England, north of the Humber.
 or (3) the counties of England which are bordered by the English Channel.
 23. State the chief centres of coal production in England and Scotland.
 24. Name the chief seaports in Great Britain, stating the principal lines of commerce which are connected with each.
 25. Draw an outline map of Australia, showing thereon the different British colonies, and marking their chief towns.
 26. Show in what way geographical conditions have shaped the industrial and commercial progress of Great Britain.
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ENGLISH.

SECOND GRADE.

Friday, 21st June. 10.45 A.M.

Passage for Dictation.

That there should be fits of discontent and insubordination among men enduring such misery, was inevitable. At one moment it was suspected that the Governor had laid up somewhere a secret store of food, and was revelling in private, while he exhorted others to suffer resolutely for the good cause. His house was strictly examined; his innocence was fully proved; he regained his popularity; and the garrison, with death in near prospect, thronged to the Cathedral to hear him preach, drank in his earnest eloquence with delight, and went forth from the house of God with haggard faces and tottering steps, but with spirits still unsubdued.

ENGLISH.

HIGHER GRADE AND FIRST PAPER FOR HONOURS GRADE.

Friday, 21st June. 10 A.M. to 1 P.M.

TEN questions ONLY to be attempted, of which at least TWO must be in Section II. and TWO in Section III.

SECTION I.

1. Write an Essay, of two or three pages, on *one* of the following subjects:—
 - (1.) The growth of the Drama in England.
 - (2.) The functions of a University.
 - (3.) The advantages and disadvantages of a standing army.
 - (4.) The distinction between wit and humour.
2. Give the derivation of the following words: apology, alert, church, provoke, sympathy, sincere, defeat, loyal, falter, receive, relieve, mayor, sheriff, bailiff, searce, knife, logic, cherish, demure.
3. Name three leading historians living between 1700 and the present day, stating the titles and subjects of their chief works, and the qualities for which each is distinguished.
4. Whom do you consider to be the chief poet of the Victorian age? Name and give an account of his works.
5. "A literature which comprises within itself qualities so transcendent and yet so varied as are to be found in Chaucer, with his humour, his keen observation, his graceful versification, and his subtle appreciation of nature; in Milton, with his stately rhythm, and lofty thought; in the impetuous flow and vigorous satire of Dryden; the delicate mastery of expression, and the luminous thought of Pope; the calm philosophy and subtle observation of Bacon; the quiet humour of Addison; the imperious and yet unstudied force of Swift; and which, after these are named, still contains unreckoned stores as rich—such a

literature can surely hold its own against that of any age or country."

Comment upon and illustrate this passage.

6. Give ten words derived directly from the Classical languages ; and ten others which have come to us through the medium of the Romance languages.
7. Name the chief Scottish writers who flourished in any period of fifty years from the fourteenth to the seventeenth century, and state their chief characteristics.
8. Discuss the various forms in which distinctions of (1) Number, (2) Gender, are marked in English, and explain the origin of each.
9. Analyse the following, explaining the principles upon which you base your analysis :—

" Self-reverence, self-knowledge, self-control,
 These three alone lead life to sovereign power.
 Yet not for power (power of herself
 Would come uncall'd for) but to live by law,
 Acting the law we live by without fear ;
 And, because right is right, to follow right,
 Were wisdom in the scorn of consequence."

SECTION II.

10. Give an account of the principal features of the English Constitution in the tenth century, and the arrangements of local government.
11. Give some account of *one* of the following leading ecclesiasties : Dunstan, Anselm, Becket, Stephen Langton.
12. Give an account of the relations between England and Scotland from the beginning of the reign of Henry VII. to the end of that of Elizabeth.
13. Describe the proceedings of the Long Parliament from 1640 to 1642.
14. Give an account of the chief Ministries under Charles II., and of the policy pursued by each.
15. State the part played by England in the War of the Spanish Succession. What were the objects of her intervention, and how far were they attained ?
16. Give an account of the foreign policy of England under the ministry of the younger Pitt, and the motives by which it was guided.
17. What do you know of the following measures : Catholic Emancipation, Municipal Corporations Reform, the first Reform Act, the Abolition of the Corn Laws ?

SECTION III.

18. Name the various points at which invasions of Great Britain have succeeded or have been attempted.
19. State the chief elements of the commercial importance of Manchester, Glasgow, Sheffield, Birmingham, Leeds, Dundee.

20. Draw a map (*either*) of British India, showing each Presidency and the chief towns therein; (*or*) of our possessions in North America.
21. Name the possessions of Britain in the Mediterranean, and state how each has been attached to the British Crown.
22. State the chief places which would be passed on a voyage by sea from Southampton to India *either* by the Cape of Good Hope, *or* by the Suez Canal.
23. Show how the commercial development of England and Scotland has been affected by the chief navigable rivers of each country.

ENGLISH.

HONOURS.

ADDITIONAL TO THE HIGHER GRADE PAPER.

Friday, 21st June. 2 to 5 P.M.

SECTION I.

1. Discuss and illustrate the influence of style in securing permanency in literature.
2. At what different epochs has foreign influence upon English literature been most strong; and from what source has the influence come at the various epochs?
3. Trace, and account for, the decay of the drama in England.
4. Describe the Renaissance movement in its bearing upon English literature.
5. Enumerate the poets *either* (1) of the age of Elizabeth, *or* (2) of the age of Queen Anne, *or* (3) of the Lake School, and give some account of one poet belonging to the group chosen.
6. Trace the growth of English Prose from the beginning of the sixteenth to the end of the eighteenth century, showing the influence thereon of Bacon, Addison, Johnson, and Burke.

SECTION II.

OPTIONAL QUESTIONS.

7. Give a scheme of the declension of nouns in Anglo-Saxon, with specimens of three or four typical varieties.
8. Translate the following passages into modern English:—

(a.) Seo ylce rod siððan ðe Oswold þær arærde on wurðmynte þær stod. And wurdon fela gehæelde untrumra manna and eae swilee nytena þurh ða ylcan rode, swa swa us rehte Beda. Sum mann feoll on ise, þæt his earm toberst, and læg þa on bedde gebrocod for ðearle, oð þæt man him fette of ðære foresædan rode sumne dæl þæs meoses þe heo mid beweaxen wæs, and se adliga sona on slæpe wearð gehæled on ðære ylcan nihte þurh Oswoldes gearnungum.

(b.) "Hwæt þu, Ælfwine, hafast ealle gemanode,
 þegenas to þearfe : nu ure þeoden lið,
 eorl on eorðan, us is callum þearf
 þæt ure æghwyle operne bylde
 wigan to wige, þa hwile þe he wapen mæge
 habban and healdan, heardne meece,
 gar and god swurd."

9. State the chief dialects in English of the thirteenth century, and explain their chief distinctive features.

10. Translate the following passages into modern English :—

(a.) Þe last ende of mans lyfe *es* hard,
 þat *es*, when he drawes to *ded-ward*.
 For when he *es* seke, and *bedreden* lys,
 And *swa* feble þat he may nocht rys,
 þan *er* men in dout and nocht certayn,
 Wethir he *sal* ever eover agayn.
 Bot ylit ean som men, þat *er* *sleghe*,
 Witte if he *sal* of þat yvel deghe
 By certayne takens, als yhe *sal* here,
 þat byfalles when þe *ded* *es* nere.

(b.) But lordes and knyghtes and othere noble and worthi men, that *conne* Latyn but litylle, and han ben bezonde the see, *knownen* and undirstonden, 3if I seye trouthe or no, and 3if I erre in devisynge, for for3etynge, or *elles*; that thei *move* redresse it and amende it. For thinges passed out of longe tyme from a *mannes* mynde or from his syght, turnen sone into for3etynge: because that mynde of man *ne* may not ben comprehended *ne* withholden, for the *freeltie* of mankynde.

11. Explain and comment upon the words in italics in the above passages.

LATIN.

SECOND GRADE.

Wednesday, 19th June. 10 AM. to 12.30 PM.

Candidates should in all cases attempt Question 6.

[Whilst besieging Pompey at Dyrrachium, Cæsar sends an envoy to Scipio, who was commanding for Pompey in Macedonia, to treat for peace.]

Translate :—

Hæc quum in Achaia atque apud Dyrrhachium gererentur, Scipioneumque in Macedonia venisse constaret, non oblitus pristini instituti Cæsar mittit ad eum A. Clodium, suum atque illius familiarem, quem, ab illo transditum initio et commendatum, in suorum necessariorum numero habere instituerat. Huic dat litteras mandataque ad eum, quorum hæc erat summa: sese omnia de pace expertum: nihil adhuc arbitrari factum vitio eorum, quos esse auctores eius rei voluisset, quod sua mandata perferre non opportuno tempore ad Pompeium vererentur. Scipionem ea esse auctoritate, ut non solum libere, quae probas-

set, exponere, sed etiam magna ex parte compellere atque errantem regere posset: pracesse autem suo nomine exereitui, ut, praeter auctoritatem, vires quoque ad coereendum haberet.

2. Give the reason for the mood of: *gererentur, arbitrari, voluisset, perferre, posset*; and for the case of: *instituti, familiarem, numero, vitio, auctoritate*.
3. Write down the 1st person singular pluperfect subjunctive active, and the future participle active, of: *reperio, discerno, percipio, veto, pango, faveo*.
4. Give the meaning, gender, and genitive plural of: *arbor, magister, aes, quereus, palus, iter, senex*.
5. Write short phrases in Latin to show what construction should be used with the following words: *similis, dono* (the verb), *placeo, careo, consulo*; and distinguish between: *decies, deni, decimus; quidam, quidem, quisquam, quisquis, quisque; alibi, aliter, alias, aliunde*.
6. Translate into Latin:—

The news of the battle arrived in the evening, about six o'clock. Crowds of excited citizens at once thronged (*celebrare*) the streets. Some denounced the Senate, others blamed the consuls; the greater number declared that the anger of the gods had been roused by the violation of the auspices (*contra auspicia esse, facere, or fieri*). The Senate was at once convened by the magistrates, and sat in deliberation all through the night. The consuls implored the assembly not to fear: they still hoped that all would yet go well. After considering every plan, within hearing of the mob outside, the Senate determined to resist to the last, and ordered the consuls to provide for the safety of the state.

LATIN.

HIGHER GRADE.

Wednesday, 19th June. 10 A.M. to 1 P.M.

Candidates must in all cases attempt Question 1.

1. Translate into Latin:—

The mob seemed for a moment taken by surprise at the loss of their general; but, before they had time to recover, the young king boldly rode up to them, begged them not to be concerned for the loss of an unworthy leader, and declared that he would henceforth lead them whithersoever they wished. Then, turning his horse, he rode quickly towards the open country at the head of the multitude; they followed him unconsciously, as if scarcely knowing who he was, or why they had obeyed his command. A cry meanwhile had arisen inside the city that the king had fallen into the hands of the rebels. A thousand brave men flew to rescue him; terrified at the sight, the mob fell on their knees to ask for pardon; and, had not the king at once promised to spare them, they would have been all cut to pieces.

2. Translate into English :—

Hæc inter seniores morti destinatos iactata solatia. Versæ inde adhortationes ad agmen iuvenum, quos in Capitolium atque in arcem prosequabantur, commendantes virtuti eorum iuventutæque urbis per trecentos sexaginta annos omnibus bellis victricis, quæcumque reliqua esset, fortunam. Digredientibus, qui spem omnem atque opem secum ferebant, ab iis, qui captæ urbis non superesse statuerant exitio, quum ipsa res speciesque miserabilis erat, tum muliebris fletus et concursatio incerta, nunc hos nunc illos sequentium, rogitantiumque viros natosque, cui se fato darent, nihil quod humanis superesset malis relinquebant. Magna pars tamen earum in arcem suos prosequutæ sunt, nec prohibente ullo, nec vocante : quia, quod utile obsessis ad minuendam imbellem multitudinem, id parum humanum erat.

3. Translate the following, and account for the moods and tenses employed :—

- (1.) Peccasse mihi videor qui a te discerserim.
- (2.) Sunt qui non habeant, est qui non curat habere.
- (3.) Melius erat si dimicasset.
- (4.) Quid de præda faciendum censerent ?

And correct the following :—

Invidentur divites—parcendi sunt hostes—primus erat Romanorum Danubium flumen traicere—contempsi Catilinæ gladios, non eos Antonii pertimescam—dixi tibi quid vitare—optimus quisque speravit Cleopatram interfectam iri.

4. Translate into Latin :—

- (1.) He gave me his name unwillingly.
- (2.) The sooner you come, the better shall I be pleased.
- (3.) He died at Carthage ten months before his eldest son.
- (4.) I hope you will ask his mother for her forgiveness.
- (5.) He has come back to Rome to stand for the Consulship.

LATIN.

HONOURS.

FIRST PAPER.

Wednesday, 19th June. 10 A.M. to 1 P.M.

Translate :—

1. Dixerat; at clipeum, tot ferri terga, tot aeris, quem pellis totiens obeat circumdata tauri, vibranti medium cuspis transverberat ictu, loricaeque moras et pectus perforat ingens. Ille rapit calidum frustra de vulnere telum : una eademque via sanguis animusque sequuntur. Corruit in vulnus ; sonitum super arma dedere ; et terram hostilem moriens petit ore cruento. Quem Turnus super assistens :
 "Arcades, hæc" inquit "memores mea dicta referte Evandro : qualem meruit, Pallanta remitto. Quisquis honos tumuli, quidquid solameu humandi est, largior. Haud illi stabuit Aeneia parvo hospitia." Et laevo pressit pede, talia fatus,

exanimem, rapiens immania pondera baltei,
 impressumque nefas : una sub nocte iugali
 eaea manus iuvenum foede thalamicque eruenti,
 quae Clonus Eurytides multo eaelaverat auro ;
 quo nunc Turnus ovat spolio gaudetque potitus.
 Neseia mens hominum fati sortisque futurae,
 et servare modum, rebus sublata seeundis !
 Turno tempus erit, magno enim optaverit emptum
 intactum Pallanta, et eum spolia ista diemque
 oderit. At socii multo gemitu laerimisque
 impositum sento referunt Pallanta frequentes.

2. Quid mihi Celsus agit ? monitus multumque monendus,
 privatas ut quaerat opes et tangere vitet
 scripta, Palatinus quaecumque recepit Apollo ;
 ne, si forte suas repetitum venerit olim
 grex avium plumas, moveat eornicula risum
 furtivis nudata eoloribus. Ipse quid audes ?
 quae eircumvolitas agilis thyma ? Non tibi parvum
 ingenium, non ineultum aetis, seu turpiter hirtum :
 seu linguam eausis aetis, seu eivica iura
 respondere paras, seu eondis amabile earmen,
 prima feres hederac vietrieis praemia. Quodsi
 frigida eurarum fomenta relinquere posses,
 quo te eaelestis sapientia dueret, ires.
 Hoc opus, hoc studium parvi properemus et ampli,
 si patriae volumus, si nobis vivere cari.
 Debes hoc etiam rescribere, si tibi eurac,
 quantae conveniat, Munatius : an male sarta
 gratia nequidquam eoit et reseinditur ? At vos,
 seu calidus sanguis seu rerum insectia vexat,
 indomita eerviee feros, ubieumque loeorum
 vivitis, indigni fraternum rumpere foedus,
 paseitur in vestrum reditum votiva iuveneac.

3. Sed non alienum esse arbitror, quo minus saepe aut interpellare
 nonnullis, aut tacitorum existimatione reprehendar, explicare
 breviter, quae mihi sit ratio et caussa eum Caesare. Ae primum
 illud tempus familiaritatis et consuetudinis, quae mihi eum illo,
 quae fratri meo, quae C. Varroni, consobrino nostro, ab omnium
 nostrum adolescentia fuit, praeternitto. Posteaquam sum pe-
 nitus in rempublicam ingressus, ita dissensi ab illo, ut, in
 disiunctione sententiae, eoniuncti tamen amicitia maneremus.
 Consul ille egit eas res, quarum me participem esse voluit : quibus
 ego si minus assentiebar, tamen illius mihi iudicium gratum esse
 debebat. Me ille, ut quinqueviratum acciperem, rogavit : me in
 tribus sibi eoniunctissimis consularibus esse voluit : mihi lega-
 tionem, quam vellem, quanto eum honore vellem, detulit. Quae
 ego omnia non ingrato animo, sed obstinatione quadam sententiae
 repudiavi. Quam sapienter, non disputo : multis enim non
 probabo ; eonstanter quidem et fortiter eerte : qui quum me fir-
 missimis opibus contra seelus iuimicorum munire et populares
 impetus populari praesidio propulsare possem, quamvis excipere
 fortunam, subire vim atque iniuriam malui, quam aut a vestris
 sanctissimis mentibus dissidere aut de meo statu declinare.
4. Ipse euriam ingreditur, summamque rem publicam agi obtestans
 veniam dicendi ante alios exposcit orditurque ; gravissimos prin-

cipis labores, quis orbem terrae capessat, egere adminiculis, ut domestica cura vacuus in commune consulat. Quod porro honestius censoriae mentis levamentum quam adsumere coniugem, prosperis dubiisque sociam, cui cogitationes intimas, cui parvos liberos tradat, non luxui aut voluptatibus adsuefactus, sed qui prima ab inventa legibus obtemperavisset. Postquam haec favorabili oratione praemisit multaue patrum adscntatio sequebatur, capto rursus initio, quando maritandum principem cuncti suaderent, deligi oportere feminam nobilitate puerperis sanctimonia insignem. Nec diu anquirendum quin Agrippina claritudine generis anteiret; datum ab ea fecunditatis experimentum et congruere artes honestas. Id vero egregium, quod provisu deum vidua iungeretur principi sua tantum matrimonia experto. Audivisse a parentibus, vidisse ipsos abripi coniuges ad libita Caesarum: procul id a praesenti modestia. Statueretur immo documentum, quo uxorem imperator a patribus acciperet. At enim nova nobis in fratrum filias coniugia: sed aliis gentibus sollemnia, neque lege ulla prohibita; et sobrinarum diu ignorata tempore addito percrebruisse. Morem accommodari prout conducat, et fore hoc quoque in iis quae mox usurpentur.

LATIN PROSE.

HONOURS.

SECOND PAPER.

Wednesday, 19th June. 2 P.M. to 5 P.M.

I. Translate into Latin :—

I set boldly forward the next morning. Every day lessened the burden of my movables, like Æsop and his basket of bread; for I paid them for my lodgings to the Dutch as I travelled on. When I came to Louvain I was resolved not to go to the lower professors, but openly tendered my talents to the Principal himself. I went, had admittance, and offered him my service as a master of the Greek language, which I had been told was a desideratum in his University. The Principal seemed at first to doubt of my abilities; but of these I offered to convince him, by turning a part of any Greek author into Latin. Finding me perfectly earnest in my proposal, he addressed me thus: "You see me, young man; I never learned Greek, and I don't find that I have ever missed it. I have had a doctor's cap and gown without Greek; I eat heartily without Greek; and, in short," continued he, "as I don't know Greek, I do not believe there is any good in it."

II. Translate and comment on the following :—

- (1.) Daphnis et Armenias curru subjungere tigres
Instituit.
- (2.) Mortis fraternae fervidus ira.
- (3.) Demens ! qui Rutulum in medio non agmine regem
Viderit.

- (4.) Vana feror. Aut ego veri
 (5.) Sensit medios delapsus in hostes.
 (6.) Socii cesserunt aequore iusso.
 (7.) Ludum insolentem ludere pertinax.
 (8.) Nil mortalibus ardui est.
 (9.) Otia divitiis Arabum liberrima muto.
 (10.) Vera cano : sic usque sacras innoxia laurus
 Vescar, et aeternum sit mihi virginitas.
 (11.) Tibi deserit Hesperus Oetam.
 (12.) Satis ut in re trepida impavidus fuit.
 (13.) Quid vellent ? quid expectarent ? Festinarent modo :
 utinam salvi essent.
 (14.) HS. septies millies hereditatibus acceptum retuli.

III. How far were the agitations about land in Roman history similar to those of the United Kingdom at the present time ?

IV. Give an account of the life of Virgil, with dates. Enumerate his works and state shortly the subject of each. Compare the *Æneid* with the *Iliad*.

GREEK.

SECOND GRADE.

Thursday, 20th June. 10 A.M. to 12.30 P.M.

I. Translate :—

Καὶ ὁ Σακράτης ἔφη· Ἐἴτα οὐ λέγεις αὐταῖς τὸν τοῦ κυνὸς λόγον ; φασὶ γάρ, ὅτε φωνήεντα ἦν τὰ ζῷα, τὴν οἶν πρὸς τὸν δεσπότην εἰπεῖν, Θαυμαστὸν ποιεῖς, ὃς ἡμῖν μὲν ταῖς καὶ ἑρία σοὶ καὶ ἄρνας καὶ τυρὸν παρεχούσαις οὐδὲν δίδως, ὃ τι ἂν μὴ ἐκ τῆς γῆς λάβωμεν, τῷ δὲ κυνί, ὃς οὐδὲν τοιοῦτόν σοι παρέχει, μεταδίδως ὅπερ αὐτὸς ἔχεις σίτου. Τὸν κύνα οἷν ἀκούσαντα εἰπεῖν, Ναὶ μὰ Δία· ἐγὼ γάρ εἰμι ὁ καὶ ὑμᾶς αὐτὰς σώζων, ὥστε μῆτε ὑπ' ἀνθρώπων κλέπτεσθαι μῆτε ὑπὸ λύκων ἀρπάζεσθαι, ἐπεὶ ὑμεῖς γε, εἰ μὴ ἐγὼ προφυλάττομι ὑμᾶς, οὐδ' ἂν νέμεσθαι δύναισθε, φοβούμεναι μὴ ἀπόλησθε. οὕτω δὴ λέγεται καὶ τὰ πρόβατα συγχωρῆσαι τὸν κύνα προτιμάσθαι. καὶ σὺ ἂν ἐκεῖνας λέγε ὅτι ἀντὶ κυνὸς εἶ φύλαξ καὶ ἐπιμελητής, καὶ διὰ σέ οὐδ' ὑφ' ἐνὸς ἀδικούμεναι ἀσφαλῶς τε καὶ ἡδέως ἐργαζόμεναι ζῶσιν.

φωνῆεις, "endowed with voice"; ἔριον, "wool"; ἄρνες, "lambs"; τυρός, "cheese"; νέμεσθαι, "to feed"; πρόβατα, "sheep"; συγχωρεῖν, "to agree"; ἐπιμελητής, "custodian."

Parse fully : φασί, εἰπεῖν, δίδως, ἀκούσαντα, δύναισθε, ἀπόλησθε, κυνός, Δία, ἐνός.

Account for the moods : εἰπεῖν, δύναισθε, ἀπόλησθε.

Decline in full : φωνῆεις (in all genders).

II. Give the stem, the genitive and dative singular, and the accusative plural of : ποῦς, ἡχώ, θρίξ, σοφιστής, ἰχθύς, ἦπαρ, λαγώς.

Parse : ἴθι, ἴσθι, εἴσεσθαι, ἔσεσθαι, ἀπειή, ἀφείη. Decline in full : οὔτος, πολύς, τίς.

Give from λείπω, πράσσω, ἴστημι :—

2nd plur. perfect indic. act.

3rd plur. aor. indic. passive.

2nd sing. pres. indic. passive.

III. Translate into Greek :

- (1.) Thirty tyrants once ruled Athens.
- (2.) He said that he himself, and not his brother, killed the man.
- (3.) Do you think that anyone will believe (πιστεύειν) you?
- (4.) Do not disobey (ἀπειθεῖν) the laws of your country.
- (5.) If you say this you will seem to everyone to be mad (μαίνεσθαι).

GREEK.

HIGHER GRADE.

Thursday, 20th June. 10 A.M. to 1 P.M.

I. Translate :—

Καὶ μὴν, ᾧ Σώκρατες, φιλήκοος μὲν ἔγωγε καὶ ἠδέας ἂν τι μανθάνοιμι, κινδυνεύω μὲντοι κάγω εἰς εἶναι τῶν οὐχ ὁμοίων Εὐθυδήμῳ ἀλλ' ἐκείνων, ὃν δὴ καὶ σὺ ἔλεγες, τῶν ἠδίων ἂν ἐξελεγχόμενων ὑπὸ τῶν τοιούτων λόγων ἢ ἐξελεγχόντων. Ἀτὰρ γελοῖον μὲν μοι δοκεῖ εἶναι τὸ νουθετεῖν σε, ὅμως δέ, ἃ γ' ἤκουον, ἐθέλω σοι ἀπαργεῖλαι. τῶν ἀφ' ὑμῶν ἀπόντων οἶσθ' ἔτι προσελθάν τις μοι περιπατοῦντι, ἀνὴρ οἴόμενος πάνυ εἶναι σοφός, τούτων τις τῶν περὶ τοὺς λόγους τοὺς εἰς τὰ δικαστήρια δεινῶν, ᾧ Κρίτων, ἔφη, οὐδὲν ἀκροᾷ τῶνδε τῶν σοφῶν; Οὐ μὰ τὸν Δία, ἦν δ' ἐγώ· οὐ γὰρ οἶός τ' ἦ προστάς κατακοῦει ὑπὸ τοῦ ὄχλου. Καὶ μὴν, ἔφη, ἄξιόν γ' ἦν ἀκοῦσαι. Τί δέ; ἦν δ' ἐγώ. Ἴνα ἤκουσας ἀνδρῶν διαλεγόμενων, οἱ νῦν σοφώτατοί εἰσι τῶν περὶ τοὺς τοιούτους λόγους. Κάγω εἶπον, Τί οὖν ἐφαίνοντό σοι; Τί δὲ ἄλλο, ἦ δ' ὅς, ἦ οἶά περ αἰεὶ ἂν τις τῶν τοιούτων ἀκοῦσαι ληρούντων καὶ περὶ οὐδενὸς ἀξίον ἀναξίαν σπουδὴν ποιουμένων; οὐτωσὶ γὰρ πως καὶ εἶπε τοῖς ὄνομασι. Καὶ ἐγώ, Ἀλλὰ μὲντοι, ἔφη, χαρίεν γέ τι πραγμά ἐστιν ἢ φιλοσοφία. Ποῖον, ἔφη, χαρίεν, ᾧ μακάριε; οὐδενὸς μὲν οὖν ἀξίον. ἀλλὰ καὶ εἰ νῦν παρεμένου, πάνυ ἂν σε οἶμαι αἰσχυνθῆναι ὑπὲρ τοῦ σεαυτοῦ ἐταίρου· οὕτως ἦν ἄτοπος, ἐθέλων ἑαυτὸν παρέχειν ἀνθρώποις, οἷς οὐδὲν μέλει ὅ τι ἂν λέγωσι, παντὸς δὲ ῥήματος ἀντέχονται.

II. Translate one of the two following passages :—

Lycæon entreats Achilles to spare his life.

(α.) Γουνοῦμαί σ', Ἀχιλλεῦ· σὺ δέ μ' αἶδεο καὶ μ' ἐλέησον· ἀντί τοί εἰμ' ἰκέταιο, διοτρεφέες, αἰδοῖοιο·
 πὰρ γὰρ σοὶ πρώτῳ πασάμην Δημήτερος ἀκτῆν,
 ἤματι τῷ ὅτε μ' εἶλες εὐκτιμένη ἐν ἀλωῇ,
 καὶ μ' ἐπέρασσας ἀνευθεὶ ἄγων πατρός τε φίλων τε
 Λῆμνον ἐς ἠγαθέην· ἐκατόμβιοιόν δέ τοι ἦλφον.

νῦν δὲ λύμην τρίς τάσσα πορών· ἤως δὲ μοί ἐστιν
 ἦδε δωδεκάτη, ὅτ' ἐς Ἴλιον εἰλήλουθα
 πολλὰ παθών· νῦν αὖ με τεῆς ἐν χερσὶν ἔθηκεν
 μοῖρ' ὀλόη· μέλλω που ἀπέχθεσθαι Διὶ πατρί,
 ὅς μὲ σοι αὐτίς ἔδωκε· μινυθάδιον δέ με μήτηρ
 γείνατο Λαοθόη, θυγάτηρ Ἄλταο γέροντος.

The speaker is Macaria, daughter of Heracles, who has offered to die herself in order to save her brothers and sisters.

(b.) Καὶ τὸν γέροντα τὴν τ' ἔσω γραῖαν δόμων
 τιμᾶτε πατρὸς μητέρ' Ἀλκμήνην ἐμοῦ
 ξένους τε τοῦσδε. κὰν ἀπαλλαγὴ πόνων
 καὶ νόστος ὑμῖν εὐρεθῆι ποτ' ἐκ θεῶν,
 μέμνησθε τὴν σώτειραν ὡς θάψαι χρεῶν·
 κάλλιστά τοι δίκαιον· οὐ γὰρ ἐνδεὴς
 ὑμῖν παρέστη, ἀλλὰ προὔθανον γένους.
 τάδ' ἀντὶ παίδων ἐστὶ μοι κειμήλια
 καὶ παρθεναίης, εἴ τι δὴ κατὰ χθονός·
 εἴη γε μέντοι μηδέν. εἰ γὰρ ἔξομεν
 κάκεῖ μερίμνας οἱ θανούμενοι βροτῶν,
 οὐκ οἶδ' ὑποί τις τρέψεται· τὸ γὰρ θανεῖν
 κακῶν μέγιστον φάρμακον νομίζεται.

III. Translate into Greek :—

- (1.) As soon as you have done what you are doing you may leave the city.
- (2.) I am in doubt whether to come or not.
- (3.) Would that I had paid attention to all that you taught me.
- (4.) Nothing could ever prevent him from telling what he knew to be the truth.
- (5.) Do not go away till you hear from me what has happened at Athens.

IV. Correct the Greek of the following sentences :—

- (1.) δεῖ ὑμῖν σκοπέσθαι τί οὗτος λέγει.
- (2.) φυσικὸν φαίνει πάντοis ἀνθρώποις τὰ ἀλότρια ἐπιθυμεῖν.
- (3.) εἰ δυνοίμεθα, θέλομεν ἀνδρείους εἶναι ἐν ταύτῳ πράγματι.
- (4.) εἰάν ἀφικνεῖται ὡς τὴν πόλιν, ἀγγελήσει ἔσσα ἂν ἐπίσταιτο.
- (5.) οἱ βασιλῆες ἀγαθοὶ τοὺς ὑπ' αὐτοῖς ἀρχομένους ἐλβιοτέρους γίνεσθαι βούλουσι.

V. What is an Irregular Verb? Parse fully : δραμεῖται, ἔδομαι, ἀνεφύθη, ἔωσα, κέχηγε, κατεαγώς, εἶλον, εἶπε.

Conjugate fully : ὄμνυμι, γίγνομαι, ὀνύνημι, κτείνω, πνέω, ἀφλισκάνω, ἀλίσκομαι, ἐλαύνω.

VI. Give the stem of: γάλα, στρατιάτης, γυνή, ὄρις; and give nominative and genitive singular and dative plural from the following stems : τριχ, τείχεσ, ὕδατ, κυν, νυκτ.

Give the comparative and superlative of : σώφρων, πατωρός, ὀλίγος, σαφής, πίων.

GREEK.

HONOURS.

FIRST PAPER.

Thursday, 20th June. 10 A.M. to 1 P.M.

I. Translate:—

(1.) Πείθεσθαι ὃ ἐστὶ τῷ νομοθέτῃ χρεῶν τὰ τε ἄλλα καὶ λέγοντι ψυχὴν σώματος εἶναι τὸ πᾶν διαφέρουσαν, ἐν αὐτῷ τε τῷ βίῳ τὸ παρεχόμενον ἡμῶν ἕκαστον τοῦτ' εἶναι μὴδὲν ἄλλ' ἢ τὴν ψυχὴν, τὸ δὲ σῶμα ἰνδαλλόμενον ἡμῶν ἕκαστοις ἔπεσθαι καὶ τελευτησάντων λέγεσθαι καλῶς εἶδαλα εἶναι τὰ τῶν νεκρῶν σώματα, τὸν δὲ ὄντα ἡμῶν ἕκαστον ὄντως ἀθάνατον, εἶναι ψυχὴν ἐπονομαζόμενον, παρὰ θεοῦς ἄλλους ἀπιέναι δάσονται λόγον, καθάπερ ὁ νόμος ὁ πάτριος λέγει, τῷ μὲν ἀγαθῷ θαρραλέον, τῷ δὲ κακῷ μάλα φοβερὸν, βοήθειάν τε αὐτῷ μή τινα μεγάλην εἶναι τετελευτηκότι. ζῶντι γὰρ ἔδει βοηθεῖν πάντας τοὺς προσήκοντας, ὥπως ὅ τι δικαιοτάτος ὢν καὶ δσιώτατος ἔξῃ τε ζῶν, καὶ τελευτήσας ἀτιμώρητος ἂν κακῶν ἀμαρτημάτων ἐγένετο τὸν μετὰ τὸν ἐνθάδε βίον. ἐκ δὲ τούτων οὕτως ἐχόντων αὐδέποτε οἰκοφθορεῖν χρεὶ, διαφερόντως νομίζοντα τὸν αὐτοῦ τοῦτον εἶναι τὸν τῶν σαρκῶν ἔγκον θαπτόμενον, ἄλλ' ἐκεῖνον τὸν υἱὸν ἢ ἀδελφόν, ἢ ὄντινά τις μάλισθ' ἡγείται ποθῶν θάπτει, οἴχεσθαι περαίνοντα καὶ ἐμπηλάντα τὴν αὐτοῦ μοῖραν, τὸ δὲ παρὸν δεῖν εὖ ποιεῖν, τὰ μέτρα ἀναλίσκοντα ὡς εἰς ἀψυχον χθονίων βωμόν· τὸ δὲ μέτριον νομοθέτης ἂν μαντεύσαιο οὐκ ἀσχημονέστατα.

Write a grammatical note on the clauses ὥπως ὅ τι δικαιοτάτος το τὸν ἐνθάδε βίον.

(2.) Ἐπιτιμᾶς δέ μοι, εἰ μὴ συνεχῶς, ἀλλὰ διαλείπων πρὸς τὸν δῆμον προσέρχομαι, καὶ τὴν ἀξίωσιν ταύτην οἶμι λαμβάνειν ἡμᾶς μεταφέρειν οὐκ ἐκ δημοκρατίας, ἀλλ' ἐξ ἑτέρας πολιτείας. ἐν μὲν γὰρ ταῖς ὀλιγαρχίαις οὐχ ὁ βουλόμενος, ἀλλ' ὁ δυναστεύων δημηγορεῖ· ἐν δὲ ταῖς δημοκρατίαις, ὁ βουλόμενος καὶ ὅταν αὐτῷ δόξη. καὶ τὸ μὲν διὰ χρόνου λέγειν σημειῶν ἐστὶν ἐπὶ τῶν καιρῶν καὶ τοῦ συμφέροντος ἀνδρὸς πολιτευομένου· τὸ δὲ μηδεμίαν παραλείπειν ἡμέραν, ἐργαζομένου καὶ μισθοαρνούτος. ὑπὲρ δὲ τοῦ μηδέπω κεκρίσθαι ὑπ' ἐμοῦ, μηδὲ τῶν ἀδικημάτων τιμωρίαν ὑποσχεῖν, ὅταν καταφεύγῃς ἐπὶ τοὺς τοιούτους λόγους, ἢ τοὺς ἀκούοντας ἐπιλήσιμονας ὑπολαμβάνεις, ἢ σαυτὸν παραλογίζῃ. τὰ μὲν γὰρ περὶ τοὺς Ἀμφισσέας ἡσεβημένα σοι, καὶ τὰ περὶ τὴν Εἰβόιαν δωροδοκηθέντα, χρόνων ἐγγεγενημένων ἐν οἷς ὑπ' ἐμοῦ φανερῶς ἐξηλέγχου, ἴσως ἐλπίζεις τὸν δῆμον ἀμνημονεῖν· τὰ δὲ περὶ τὰς τριήρεις καὶ τοὺς τριηράρχους ἀρπάγματα, τίς ἂν ἀποκρίψαι χρόνος δύναται ἂν, ὅτε νομοθετήσας περὶ τῶν τριακοσίων καὶ σαυτὸν πείσας Ἀθηναίους ἐπιστάτην τάξαι τοῦ ναυτικοῦ, ἐξηλεγχθῆς ὑπ' ἐμοῦ ἐξηκόντα καὶ πέντε νεῶν ταχυναντουσῶν τριηράρχους ὑφρηρημένους πλέον τῆς πόλεως ἡμῶν ἀφανίζων ναυτικόν, ἢ ὅτε Ἀθηναῖοι τὴν ἐν Νάξῳ ναυμαχίαν Λακεδαιμονίους καὶ Πόλλιν ἐνίκησαν;

(3.) Τὸν δ' ἀπαμειβόμενος προσέφη, Εὐμαιε συβῶτα·
 ξεῖν, οὐ μοι θέμις ἔστ', οὐδ' εἰ κακίων σθένος ἔλθοι,
 ξεῖνον ἀτιμῆσαι· πρὸς γὰρ Δίος εἰσὶν ἅπαντες

ξεῖνοι τε πτωχοὶ τε· δόσις δ' ὀλίγη τε φίλη τε
 γίγνεται ἡμετέρη· ἡ γὰρ δμῶν δίκη ἐστὶν
 αἰεὶ δευδιότων, ὅτ' ἐπικρατέωσιν ἄνακτες
 οἱ νέοι· ἡ γὰρ τοῦγε θεοὶ κατὰ νόστον ἔδησαν,
 ὅς κεν ἔμ' ἐνδυκέως ἐφίλει καὶ κτήσιν ὅπασσεν,
 οἷά τε ᾗ οἰκῆτι ἄναξ εἴθυμος ἔδακεν,
 οἴκῳ τε κλήρον τε, πολυμνήστην τε γυναικά,
 ἣς οἱ πολλὰ κάμησι, θεὸς δ' ἐπὶ ἔργον ἀέξῃ,
 ὡς καὶ ἔμοι τόδε ἔργον ἀέξεται, ᾗ ἐπιμίμνω·
 τῷ κέ με πόλλ' ὤνησεν ἄναξ, εἰ αὐτόθ' ἐγήρα·
 ἀλλ' ὄλεθ—ὡς ᾗφελλ' Ἑλένης ἀπὸ φῦλον ἰλέσθαι
 πρόχῳ, ἐπεὶ πολλῶν ἀνδρῶν ὑπὸ γούνατ' ἔλυσεν·
 καὶ γὰρ κείνος ἔβη Ἀγαμέμνονος εἴνεκα τιμῆς
 Ἴλον εἰς εὐπαλον, ἵνα Τρώεσσι μάχοιτο.

- II. What do you know of (1) the religion, (2) the social manners, of the Heroic Age?
 III. What were the functions of the Chorus in Greek Tragedy and Comedy?
 IV. State concisely the political reforms of Cleisthenes.

GREEK.

HONOURS.

SECOND PAPER.

Thursday, 20th June. 2 P.M. to 5 P.M.

I. For Greek prose:—

The king wondered to hear me talk of such chargeable and expensive wars. He asked what business we had out of our own islands, unless upon the score of trade or treaty, or to defend the coasts with our fleet? Above all, he was amazed to hear me talk of a mercenary standing army, in the midst of peace, and among a free people. He said, if we were governed by our own consent in the persons of our representatives, he could not imagine of whom we were afraid, or against whom we were to fight; and would hear my opinion, whether a private man's house might not be better defended by himself, his children, and family, than by half a dozen rascals picked up at a venture in the streets for small wages, who might get a hundred times more by cutting their throats.

II. Translate, with grammatical notes:—

- (1.) οὐκ ἂν δύνασαι μὴ καμῶν ἐνθαμνοεῖν.
- (2.) οὐ λήξω μὴ οὐ πᾶσι προφωγεῖν.
- (3.) οὐχ ἴσιόν σοι μὴ οὐ βοηθεῖν δικαιοσύνη.
- (4.) ΧΟ. ἄμφω γὰρ αὐτὰ καὶ κατακτείναι θέλεις;
ΚΡ. οὐ τὴν γε μὴ θηροῦσαν.
- (5.) οὐκ ἔστιν ὅστις πλὴν ἐμοῦ κείραιτό νιν.
- (6.) οἶσθ' ὅτι οὐκ ἂν ἔχοις ἔ τι χρήσαιο σαυτῷ.
- (7.) οἱ δ' ᾗκτερον, εἰ ἀλώσονται.

Express in Greek :—

- (a) *utinam hoc faciat.*
 (b) *utinam hoc faceret.*
 (c) *utinam hoc fecisset.*
 (d) *oportebat hoc facere.*
 (e) *oporteret hoc facere.*
 (f) *tu, si potuisses, id fecisses : ego faciam, si potero.*

FRENCH.

SECOND GRADE.

Tuesday, 18th June. 10 A.M. to 12.30 P.M.

I. Translate into English :—

Un homme qui se piquait¹ d'être économe, apprit² qu'un de ses voisins³ l'était plus que lui⁴; il voulut⁵ s'en convaincre.⁶ " Mon cher voisin," lui dit-il un soir en entrant chez lui, " j'ai entendu que personne n'était meilleur économe que vous ; et comme je me fais gloire de l'être un peu moi-même, je voudrais m'entretenir⁸ avec vous sur les divers moyens que vous employez.⁹" " Si c'est là le motif qui vous amène chez moi," lui répondit¹⁰ l'avare, " donnez-vous la peine de vous asseoir¹¹ et nous en parlerons."

En même temps, il éteignit¹² sa chandelle, et dit, " Nous n'avons pas besoin de lumière pour parler ; nous en serons plus distraits." " Ah ! cette leçon¹³ me suffit," s'écria l'autre ; " je m'aperçois que je ne suis qu'un élève auprès de vous " ; et il se retira en tâtonnant. Néanmoins,¹⁴ celui-ci était si ménager, que pour épargner son¹⁵ encre, il ne mettait pas de points sur les *i*, lorsqu'il écrivait.

La plupart des avares sont de¹⁶ trop bonnes gens ; ils ne cessent d'amasser des biens pour ceux qui souhaitent leur mort.

II. Grammatical questions on this passage :—

- (1.) Give the present throughout of this verb.
- (2.) The future indicative of this verb.
- (3.) The feminine of this substantive.
- (4.) The feminine of this pronoun.
- (5.) The present subjunctive of this verb.
- (6.) The conditional of this verb.
- (7.) What is cut off here ?
- (8.) The past indefinite of this verb throughout.
- (9.) The future indicative of this verb throughout.
- (10.) The present of this verb throughout.
- (11.) The past participle of this verb.
- (12.) The infinitive of this verb.
- (13.) When is the cedilla employed ?
- (14.) What part of speech is this word ? Name three others.
- (15.) What is the feminine of this word ?
- (16.) Why not des trop bonnes gens ?

III. Translate into French :—

Harpagon is a miser : he loves and adores money : he loves it not for the pleasures he can procure by its means, but for the sole pleasure of handling it (palper) and possessing it. He is

always afraid of being robbed. He is not a little puzzled (embarrassé) how to find a sure hiding place (caché) in his house: for in his eyes strong boxes are suspected, and he will not trust them. He looks upon them simply as a plain bait (une franche amorce) for robbers, and according to him they are always the first thing to be attacked. He has quite recently buried in his garden ten thousand crowns of gold; which involves (plonge) him in the greatest anxiety (inquiétude). If Harpagon loves to receive money, he does not love to give it away.

FRENCH.

HIGHER GRADE.

Tuesday, 18th June. 10 A.M. to 1 P.M.

I. Puis Septembre arriva, l'armée sous Metz, le blocus, et cette longue halte dans la boue où les canons se rouillaient, où les premières troupes du monde, démoralisées par l'inaction, le manque de vivres, de nouvelles, mouraient de fièvre et d'ennui au pied de leurs faisceaux. Ni chefs, ni soldats, personne ne croyait plus; seul, Hornus avait encore confiance. Sa loque tricolore lui tenait lieu de tout, et tant qu'il la sentait là, il lui semblait que rien n'était perdu. Malheureusement, comme on ne se battait plus, le Colonel gardait le drapeau chez lui dans un des faubourgs de Metz; et le brave Hornus était à peu près comme une mère qui a son enfant en nourrice. Il y pensait sans cesse. Alors, quand l'ennui le tenait trop fort, il s'en allait à Metz tout d'une course, et rien que de l'avoir vu toujours à la même place, bien tranquille contre le mur, il s'en revenait plein de courage, de patience, rapportant, sous sa tente trempée, des rêves de bataille, de marche en avant, avec les trois couleurs toutes grandes déployées flottant là-bas sur les tranchées prussiennes.

Un ordre du jour du Maréchal Bazaine fit écrouler ses illusions. Un matin, Hornus, en s'éveillant, vit tout le camp en rumeur, les soldats par groupes, très-animés, s'excitant, avec des cris de rage, des poings levés tous du même côté de la ville, comme si leur colère désignait un coupable. On criait, "Enlevons-le! . . . Qu'on le fusille! . . ." Et les officiers laissaient dire. . . Ils marchaient à l'écart, la tête basse, comme s'ils avaient eu honte devant leurs hommes. C'était honteux, en effet. On venait de lire à cent cinquante mille soldats, bien armés, encore valides, l'ordre du Maréchal qui les livrait à l'ennemi sans combat.

"Et les drapeaux?" demanda Hornus en pâlisant. . . Les drapeaux étaient livrés avec le reste, avec les fusils, ce qui restait des équipages, tout.

DAUDET.

II. Oh ! que j'honore en sa misère,
Cet aveugle errant sur la terre,
Sous le fardeau des ans pressé,
Jadis si grand par la victoire,
Maintenant puni de sa gloire,
Qu'un pauvre enfant déjà lassé
Quand le jour est presque effacé,
Conduit pieds nus pendant l'orage.

DU CIS.

III. Translate into French :—

The fleet put to sea in March, 1513, under the command of the Lord Admiral Sir Edward Howard. The French fleet was far superior in numbers, and prepared to prevent the English from landing on the French coast. Sir Edward Howard was burning with desire for a decisive engagement, and on 25th April attacked the French galleys as they lay in shallow water. He boarded them with his boats, and himself leapt on to the ship of the French Admiral; but before his men could follow him, their cable was cut away, and he was left almost alone. Seeing that there was no hope of support, he took his whistle from his neck and cast it into the sea; and then with his shield upon his arm he fought till the enemy thrust him overboard, and he was drowned. The English attack was driven back; but its gallantry, and the bravery of Sir Edward Howard, made a great impression. It was clear that after all the Englishmen had not forgotten how to fight.

iii. (1.) Give the plurals of the following and their meanings: ton chapeau neuf; cet heureux garçon; la belle fleur; cette eau douce.

(2.) Give the French for the following: (a) He has no bread; (b) the brother and sister are dead; (c) Sophie, you are idle; (d) I have no friends; (e) she is the oldest of the three.

(3.) What is the difference between *il y a du pain*, and *voilà du pain; aussi bien que, si bien que; j'ai lu de nouveaux livres, j'ai lu des livres nouveaux; j'ai lu un livre neuf*?

(4.) Write down (a) the first person imperfect active of *rendre, célébrer, réussir, apercevoir*; and the whole of the present tense of *mener*.

(b.) The imperative of *appuyer, dire, se tromper, se lever*.

(c.) The past indefinite of *se cacher*, conjugated negatively and interrogatively.

5. Give the French for (a) do you see that man? (b) can that be true? (c) some presents have been given them; (d) I think of you; (e) I believe what you tell me.

FRENCH.

HONOURS.

Tuesday, 18th June. 10 A.M. to 1 P.M.

I. Translate into English :—

Je ne puis ouvrir les yeux sans admirer l'art qui éclate dans toute la nature. Le moindre coup d'œil suffit pour apercevoir la Main qui fait tout. Les hommes les moins exercés au raisonnement et les plus attachés aux préjugés des sens, peuvent d'un seul regard découvrir Celui qui se peint dans tous ses ouvrages. La sagesse et la puissance qu'Il a marquées dans tout ce qu'Il a fait se font voir comme dans un miroir à ceux qui ne le peuvent contempler dans son essence. C'est une philosophie sensible et populaire, dont tout homme sans passions et sans préjugés est capable.



Toute la nature montre l'art infini de son Auteur. Quand je parle d'uu art, je veux dire un assemblage de moyens choisis tout exprès pour parvenir à une fin précise. C'est un ordre, un arrangement, une industrie, un dessein suivi. Le hasard est tout au contraire une cause aveugle et nécessaire qui ne prépare, qui n'arrange, qui ne choisit rien, et qui n'a ni volonté, ni intelligence.
—FÉNELON.

II. Translate (Le Roi Alphonse) :—

Certain roi qui régnait sur les rives du Tage,
Et que l'on surnomma le Sage,
Nou parce qu'il était prudent,
Mais parce qu'il était savant,
Alphonse fut surtout un habile astronome ;
Il connaissait le ciel bien mieux que son royaume,
Et quittait souvent son conseil
Pour la lune ou pour le soleil.
Un soir qu'il retournait à son observatoire,
Entouré de ses courtisans,
Mes amis, disait il, enfin j'ai lieu de croire
Qu'avec mes nouveaux instruments
Je verrai cette nuit des hommes dans la lune.
Votre Majesté les verra,
Répondait-on ; la chose est même trop commune :
Elle doit voir mieux que cela.
Pendant tous ces discours, un pauvre, dans la rue,
S'approche, en demandant humblement, chapeau bas,
Quelques maravédís ; le roi ne l'entend pas,
Et sans le regarder, son chemin continue.
Le pauvre suit le roi, toujours tendant la main,
Toujours renouvelant sa prière importune ;
Mais les yeux vers le ciel, le roi, pour tout refrain,
Répétait " Je verrai des hommes dans la lune."
Enfin le pauvre le saisit
Par son manteau royal, et gravement lui dit :
Ce n'est pas de là-haut, c'est des lieux où nous sommes
Que Dieu vous a fait souverain.
Regardez à vos pieds : là vous verrez des hommes,
Et des hommes manquant de pain.

FLORIAN.

III. Translate into French :—

A young man called Peter had lost his father and mother at the early age of six years. As he had always been ill-treated by his uncle, he determined to escape from his home and see the world. He arrived at the court of a certain prince, whom he had the good fortune to please. This prince took him into his service, promising to advance him in good time to the highest honours of his court, should he fulfil his duties satisfactorily, but should he neglect them to hang him. But, as he had the misfortune to displease the princess, he was driven from the palace after a fortnight. In this extremity he determined on endeavouring to find a friend who lived some fifty leagues off. But, alas! on arriving there he found that his old friend was dead. Penniless, and friendless, he was in despair: and, to add to his afflictions, he fell ill. His situation became desperate; he was unable to summon a doctor or an apothecary, and still he re-

covered after a few days. He then started for America, where he had a cousin living who was very rich.

IV.—

1. From what language is French derived, and what dialect of French formed the classical French of the present day?
2. In what cases does the past participle of a reflexive verb agree in gender and number with the pronoun? Illustrate your answer by translating into French the following sentences :—
 - (a.) She has taken a walk (se promener).
 - (b.) We should have risen earlier.
 - (c.) We should have spoken to each other.
 - (d.) Here are the letters which we wrote to each other.
3. Explain shortly the relation between the primary and secondary tenses of the English verb and those of the French subjunctive mood, and translate :—
 - (a.) I doubt whether she knows it.
 - (b.) I am afraid he will die.
 - (c.) I feared he would die.
 - (d.) I fear he his dead.
 - (e.) I feared he would have died.
4. When must *chacun* be followed by *son*, *sa*, *ses*? and when by *leur*, *leurs*?
5. In what way has French utilised its genders to give different significations to the same word?
6. Turn the following expressions into French :—
 - (a.) I have had a good ride.
 - (b.) I am very dull here.
 - (c.) He has been making fun of me.
 - (d.) My eyes have got used to the darkness.
 - (e.) Still waters run deep.

And the following into English :—

- (a.) Cela ne te regarde pas.
- (b.) Il recule pour mieux sauter.
- (c.) Il y a une anguille sous roche.
- (d.) Dire le fin mot.
- (e.) Il chasse de race.

GERMAN.

SECOND GRADE.

Tuesday, 18th June. 2 P.M. to 4.30 P.M.

I. Translate into English :—

Eine arme Frau sprach zu ihrem Sohne : „Hans, wir haben kein Holz mehr ; geh' in den Wald und hole uns einen Schlitten (sledge) voll ! Bleib' aber nicht zu lange !“ Der Knabe, welcher erst neun Jahre alt war, antwortete : „In zwei Stunden bin ich wieder hier, Mutter.“ Er zog seinen Schlitten aus dem Stalle und trabte mit Liras, dem großen Hofs Hund, hinaus. Es war mitten im Winter, und ein kalter Wind wehte über die Felder. Sie waren noch nicht weit

gegangen, da fing es an zu schneien; und als sie in den Wald kamen, war schon alles mit Schnee bedeckt. Ihr könnt euch denken, daß es nicht leicht war für den kleinen Kerl, einen Haufen trocknes Holz zu sammeln. Es dauerte auch länger als er gedacht hatte. Als er endlich genug hatte, band er es mit einem Strick fest auf sein kleines Fuhrwerk. Nun aber war er ganz müde und setzte sich unter einen Baum, um ein wenig zu ruhen. Der treue Hund war jedoch weiser als sein junger Herr; er faßte ihn mit den Zähnen an der Jacke und ließ ihn nicht los, bis er aufstand. Es wurde schon dunkel, als sie das Haus sahen. Die Mutter stand in der Thüre; wie freute sie sich, als sie ihren Liebling erblickte!

J. G.

II. Translate into German:—

Do you know that gentleman? I saw him yesterday on the street. He was speaking with your brother. Yes, I know him very well. Who is he? It is Dr. Ward, the best physician in the town. He is very good to (say, with) poor people. He has written many books. Where does he live (say, dwell)? His house is not far from us. Has he (any) children? Yes, he has two daughters, who are very pretty. The younger, Mary, is a friend of my sister(s). She often comes to our house. She is there now. Come in, and you will see her. No, thank you, I must go home. It is already half-past three o'clock.

III.—

- (1.) Give the German words—in the nominative and genitive singular, and nominative plural, with the definite article—of any ten of the following:—girl, tree, bed, cow, plate, stone, day, year, carriage, coat, apple, horse, man, cloud, name.
- (2.) Decline (singular and plural) the German for “my friend,” and the first and second personal pronouns.
- (3.) Compare (and give meanings of):—groß, jung, gut, hoch, nahe, wenig, viel, hart.
- (4.) Give the 2nd person singular present, imperfect and perfect indicative active of:—gehen, stehen, liegen, thun, trinken, nehmen, bitten, verlieren.
- (5.) Write out the future indicative active, and the perfect indicative passive of lieben.

GERMAN.

HIGHER GRADE.

Tuesday, 18th June. 2 P.M. to 5 P.M.

I. Translate into English:—

a. Ein Herr kam in übler Laune nach Hause und setzte sich zum Mittagessen. Aber die Suppe war entweder zu heiß oder zu kalt, zu viel gesalzen oder zu wenig;—kurz, er faßte die Schüssel und warf sie durch das offene Fenster in den Hof hinab. Was that der Diener? Er nahm das Fleisch, welches er gerade auf den Tisch stellen wollte,

und warf es auch aus dem Fenster hinaus; dann das Brot, dann den Wein und endlich das ganze Tisch Tuch mit allem, was noch darauf war.—„Trecher Mensch! was soll das heißen?“ fragte der Herr und sprang zornig von seinem Stuhle auf. Aber der Bediente erwiderte ruhig: „Verzeihen Sie, wenn ich Sie mißverstanden habe. Ich glaubte, Sie wollten heute in dem Hofe speisen. Die Luft ist so sonnig, und der Himmel so blau; und sehen Sie nur, wie lieblich der Apfelbaum blüht, und wie fröhlich die Bienen ihr Mittagsmahl halten!“—Der Herr erkannte seinen Fehler und wurde wieder heiter beim Anblick des schönen Frühlingshimmels. Heimlich lächelte er über den guten Einfall seines Dieners und dankte ihm in seinem Herzen für die gute Lehre.

J. B. Hebel.

b. 's war damals, als der alte Fritz
 Noch stritt um Schlesiens Bestiz;
 Hier in den Schluchten lag sein Heer,
 Der Feind dort auf den Höh'n umher.
 Da sah's im Dorf gar übel aus,
 Die Scheuern leer, kein Brot im Haus,
 Im Stalle weder Pferd noch Kuh,
 Und vor dem Feind die Furcht dazu.
 So hatt' ich eben eine Nacht
 Mit Sengzen und Gebet durchwacht
 Und stieg beim ersten Morgengrau'n
 Den Turm hinauf, um auszuschau'n,
 Wie's draußen stünd; 's war still umher
 Und ich sah keine Feinde mehr.
 Da zog ich still mein Käpplein ab,
 Dem lieben Gott die Ehre gab.
 Horch! plötzlich trabt's ins Dorf hinein, —
 Der Himmel woll' uns gnädig sein!

J. Sturm.

II. Translate into German :

After Henry's death his son Richard came to (say, on) the throne. He was a brave, but not a (say, no) very wise prince. He liked better to go out, like a knight, and seek dangers, than to reign in peace. He went to the Holy Land, and fought there with great zeal. His brother John, a sly and bad man, ruled meanwhile for him, and did much mischief by his wicked schemes. When the king heard of this, he made up his mind to return home. The fleet in (say, on) which he sailed was struck by a storm, and he had to land at the Island of Corfu. But Richard was a proud man, who would have his own way in all things. As the Greeks did not like this, he quarrelled with them, and left them. But soon it fared (say, went) worse with him. The Duke of Austria was his greatest enemy, and when Richard passed (ziehen) through his land, he was seized, and shut up in a castle. He was not set free until a large (say, high) ransom (Lösegeld) was sent from England.

III.—

- (1.) Give the German words—in the nominative and genitive singular, and nominative plural, with the definite article—of any ten of the following :—king, queen, pupil, thief, meadow, letter, valley, thought, bird, egg, sword, sound, ear, student, neighbour.
- (2.) Decline (singular and plural) the German for :—*red wine* and *this good wine*.
- (3.) Give the German for 11, 14, 31, 54, 117 ; the 101st, 103rd ; 1889.
- (4.) Give the second singular present, imperfect, and perfect indicative active (with the meaning) of :—*verstehen*, *aufstehen*, *gewinnen*, *ansehen*, *beweisen*, *abschreiben*, *übersetzen*, *übersetzen*.
- (5.) Translate idiomatically :—
 - a. He could have done it.
 - b. He ought to do it.
 - c. He ought to have done it.
 - d. I must not do it.
 - e. I have not been able to do it.
 - f. It is not a quarter to seven, but a quarter-past seven.
- (6.) Give the German for the conjunctions :—because, whilst, though, if, since, as soon as.

 GERMAN.

HONOURS.

Tuesday, 18th June. 2 P.M. to 5 P.M.

I. Translate into English :—

a. Gegen das Frühjahr, als der Zustand des Königs einige Besserung hoffen ließ, hatte sich Friedrich nach Rheinsberg begeben. Da rief ihn ein Bote, der die Nachricht von dem nahe bevorstehenden Tode des Vaters brachte, wieder zurück. Friedrich eilte nach Potsdam, wo der König die größere Zeit der Krankheit zugebracht hatte. Doch war die Lebenskraft Friedrich Wilhelms noch einmal aufgeflackert. Friedrich fand ihn auf öffentlichem Plage neben dem Schlosse, auf seinem Rollstuhl sitzend. Er sah der Grundsteinlegung eines benachbarten Hauses zu. Sobald er den Sohn von weitem erblickte, streckte er die Arme nach ihm aus, in die der Prinz sich weinend stürzte. In dieser Umarmung verharrten sie lange Zeit, ohne zu sprechen. Der König unterbrach endlich das Schweigen. Er sei zwar immer, so sagte er zu dem Sohne, streng gegen ihn gewesen, gleichwohl habe er ihn stets mit väterlicher Zärtlichkeit geliebt ; es sei für ihn ein großer Trost, daß er ihn noch einmal wiedersehe. Friedrich erwiderte mit Worten, welche den erregten Gefühlen seines Innern angemessen waren. Der König ließ sich hierauf in sein Zimmer bringen und unterhielt sich über

eine Stunde lang mit seinem Sohne über die Angelegenheiten des Reiches.

After Kugler's Geschichte Friedrichs des Großen.

- b. Also sprachen die Männer, sich unterhaltend. Die Mutter
Ging indessen, den Sohn erst vor dem Hause zu suchen,
Auf der steinernen Bank, wo sein gewöhnlicher Sitz war.
Als sie daselbst ihn nicht fand, so ging sie, im Stalle zu schauen,
Ob er die herrlichen Pferde, die Hengste, selber besorgte,
Die er als Fohlen gekauft und die er niemand vertraute.
Und es sagte der Knecht: Er ist in den Garten gegangen.
Da durchschritt sie behende die langen doppelten Höfe,
Ließ die Ställe zurück und die wohlgezimmerten Scheunen,
Krat in den Garten, der weit bis an die Mauern des Städtchens
Reichte, schritt ihn hindurch und freute sich jeglichen Wachstums;
Stellte die Stützen zurecht, auf denen beladen die Äste
Ruhten des Apfelbaums, wie des Birnbaums lastende Zweige,
Nahm gleich einige Raupen vom kräftig strogenden Kohl weg;
Denn ein geschäftiges Weib thut keine Schritte vergebens.

Goethe.

II. Translate into German:—

The relations between the King and his son became every day worse. At last, Frederick could bear the harsh treatment no longer, and resolved to flee to England. A journey to the Rhine on which he had to accompany his father, seemed to offer the wished-for opportunity for carrying out his intention. But the plan was accidentally betrayed to the King at (say, in) the last hour. A letter from the Prince to his friend, Lieutenant Von Katte, was insufficiently addressed, and fell into the hands of the King, who learnt therefrom what was to happen. The King's fury was terrible. He caused his son at once to be taken on (board) a ship, and treated as a prisoner. At Wesel he had him brought before him; called him a cowardly deserter (*Außreißer*), and even drew his sword against him. But General Mosel placed himself between them, held back the King's arm, and called out: "Kill me, Sire, but spare your son!" The unfortunate youth was then taken as a prisoner to the fortress of Küstrin: and from his window there he saw his friend Katte being led to his execution. "My dear Katte," he cried, "forgive me for having plunged you into this misfortune!"—"If I had ten lives," answered Katte, "I would willingly give them up for you!"

III.—

(1.) Give the German words—in the nominative and genitive singular, and nominative plural, with the definite article—of any twelve of the following:—virtue, vice, state, reason, painting, letter (of the alphabet), visit, peasant, fear, favour, banquet, monument, error, subject (of a king), difficulty.

(2.) Distinguish between:—

- a. Der Verdienst—das Verdienst.
- b. Der Thor—das Thor.
- c. Kindlich—kindisch.

d. Die Bänke—die Banken.

e. Die Schilde—die Schilder.

f. Nun ich ihn sehe—nun sehe ich ihn.

- (3.) Give three adjectives (with meanings) formed with each of the following affixes:—bar, haft, sam.
- (4.) Give three abstract nouns (with meanings) formed with each of the affixes:—tum, schaft, niß, heit.
- (5.) State what cases or prepositions are required with the following adjectives and verbs (adding the meaning of each):—fähig, geneigt, überbrüßig, gewachsen, froh; gedenken, erwähnen, gehören, leid thun, es graut.
- (6.) Give the English or German equivalents of any *three* of *each* of the following two sets of idiomatic expressions:—
- a. Er hat gut reden.
 b. Da ist guter Rat teuer.
 c. Heraus mit der Sprache!
 d. Es versteht sich.
 e. Was sich liebt, das neckt sich.
- a. On my part.
 b. He kept me waiting.
 c. I cannot help laughing.
 d. Take it to heart!
 e. To be on one's guard.

ARITHMETIC.

SECOND (OR LOWER) GRADE.

Monday, 17th June. 10 A.M. to 11.30 A.M.

Candidates are not expected to attempt more than about three-fourths of this paper. But any omissions, whether of reasoning, explanation, or calculation, will be treated as errors. Additional marks will be given for neatness and good style.

- Reduce 100,000 square feet to acres, roods, &c., giving the result in a form free from fractions.
- Find the cost of 126516 articles at £2 3s. 6d. per dozen.
- Explain the terms Greatest Common Measure and Least Common Multiple of two numbers.

Find the G.C.M. and the L.C.M. of 195, 546, and 286.

- Simplify the expressions

$$(1) \frac{(2\frac{9}{7} + \frac{11}{28}) \div (7\frac{7}{7} - \frac{9}{14})}{(\frac{1}{2} - \frac{1}{6}) \times \frac{5}{24} - \frac{1}{120}},$$

$$(2) \frac{3}{4 + \frac{3}{4 + \frac{3}{4}}},$$

- 175 of a ton + ·195 of a cwt. + ·145 of a quarter, giving the result in pounds and decimals of a pound.

5. Express as a single decimal $(47 + \cdot 047) \times (47 - \cdot 047) \div \cdot 0047$.
6. Find the simple interest on £5006 13s. 4d. for $2\frac{3}{4}$ years at $3\frac{1}{4}$ per cent.
7. Find the value of a property when a person who possesses $\frac{3}{7}$ of it sells $\frac{1}{3}$ of his share for £620 8s.
8. When the number 2566524 is divided by a certain divisor, the quotient is 875, and the remainder 149: find the divisor.
9. A person, having £5, pays away $\cdot 05$ of his money, and then $\cdot 15$ of the remainder. Express the money he now has as a decimal of £10.
10. A tradesman by selling an article for 6s. 9d. gains 35 per cent. What would he have gained per cent. if he had sold it for 8s. 3d.?
11. Find the square root of 46362481.
12. A piece of work can be done in 48 days by 15 men, but after 9 days' work two of the men leave off working. How many additional days will the men who remain require to finish the work?

ARITHMETIC.

HIGHER GRADE AND HONOURS.

Monday, 17th Junc. 10 A.M. to 11.30 A.M.

Candidates are not expected to attempt more than about three-fourths of this paper. But any omissions, whether of reasoning, explanation, or calculation, will be treated as errors. Additional marks will be given for neatness and good style.

1. Which is the greatest, and which is the least, of the following expressions:—

$$\frac{\frac{1}{3}}{1 - \frac{1}{67}}, \quad \frac{1}{2 + \frac{1}{1 + \frac{1}{8\frac{5}{7}}}}, \quad \cdot 34?$$

2. A square field contains an acre. Find the length of one side in yards to three places of decimals.
3. Simplify the expressions

(1) $\frac{\cdot 015}{\cdot 423 - \cdot 423}$ of $(\frac{385}{407} - \frac{14}{15})$;

(2) $\cdot 83$ of a shilling + $\cdot 03$ of a half-crown + $\cdot 05416$ of a pound.

4. A hundred pfennige = one mark, and £1 is worth 20 marks 35 pfennige. Calculate, in marks and pfennige, the value of a bill of exchange for £476 15s.
5. Show that, in finding the Greatest Common Measure of two numbers by the method of division, it is permissible to reject from each remainder, before using it as a divisor, any factors which do not divide the preceding divisor.

Find, by this method or otherwise, the G.C.M. of 976239 and 742343.

6. Four months before the half-yearly dividend is payable, an investor buys stock in the $2\frac{1}{2}$ per cents. at $93\frac{5}{8}$, paying also $\frac{1}{8}$ th per cent. for brokerage. Immediately after the dividend is paid, he sells out at $93\frac{1}{8}$ (no charge for brokerage). Find the rate of interest per cent. per annum which he obtains on the transaction.
7. Assuming that the ratio of the diameter of a circle to the circumference is as 113 to 355, and that the diameter of the earth is 7912 miles, and that 10,000,000 mètres are equal to one-fourth of the earth's circumference, find the value of a mètre in inches to two places of decimals.
8. Find, by Horner's method or otherwise, the cube root of 10 to four places of decimals.
9. State and prove the rule for finding whether a number is divisible by nine, without actual division. If the basis of our system of notation were seven instead of ten, what would be the tests of divisibility by 2, 3, and 4?

ALGEBRA.

SECOND (OR LOWER) GRADE.

Monday, 17th June. 3 P.M. to 4.30 P.M.

Candidates are not expected to attempt more than about three-fourths of this paper. But any omissions, whether of reasoning, explanation, or calculation, will be treated as errors. Additional marks will be given for neatness and good style.

1. Add together $a(a-b+c+d) + b(a+b-c+d) + c(a+b+c-d) + d(-a+b+c+d)$, and divide $x^4 - x^3y - xy^3 + y^4$ by $x^2 + xy + y^2$.
2. Simplify the expressions :—
 - (i) $x - [\{2x - \overline{x - 3(2x + y)}\} - 6(x + 2y)]$;
 - (ii) $(\sqrt{x^2 + y^2} + z)(\sqrt{x^2 + y^2} - z)(\sqrt{x^2 + z^2} + y)(\sqrt{x^2 + z^2} - y)$.
3. Resolve into elementary factors :—
 - (i.) $x^2 - 11x + 18$;
 - (ii.) $a^3 + a^2b - ab^2 - b^3$;
 - (iii.) $mnx^2 + (m-n)xy - y^2$;
 - (iv.) $(2a + b)^3 + (a + 2b)^3$.
4. Find both the highest common factor and the lowest common multiple of :—
 $x^3 - 4ax^2 + 5a^2x - 2a^3$ and $x^3 - 2a^2x - 4a^3$.
5. Solve the equations :—

$$(i.) \frac{2x+1}{5} - \frac{3x+1}{11} = x-6;$$

$$(ii.) \frac{x-a}{b} + \frac{x+b}{a} = \frac{a^2-b^2}{ab};$$

$$(iii.) \begin{aligned} 3x-2y &= 19, \\ 2x+4y &= 2. \end{aligned}$$

6. Extract the square root of :—

$$4x^4 - 12x^3 + 5x^2 + 6x + 1.$$

7. Simplify the expressions :—

$$(i.) \frac{\frac{a}{a+b} + \frac{b}{a-b}}{\frac{a}{a-b} - \frac{b}{a+b}};$$

$$(ii.) \frac{x}{(x-y)(x-z)} + \frac{y}{(y-z)(y-x)} + \frac{z}{(z-x)(z-y)};$$

$$(iii.) \frac{4}{x^2+2x} - \frac{3}{x^2+x-2} + \frac{1}{x^2-x}.$$

8. In an election there were two candidates A and B ; A was elected by a majority of 200, and obtained $\frac{1}{3}$ of the whole votes. How many votes did each obtain?

9. Solve the equations :—

$$(i.) \frac{2}{x-2} - \frac{3}{x} = \frac{1}{2x+5};$$

$$(ii.) \begin{aligned} x^2 + xy + y^2 &= 19, \\ x^2 - xy + y^2 &= 7. \end{aligned}$$

10. Find the roots of the equation :—

$$Ax^2 + Bx + C = 0.$$

ALGEBRA.

HIGHER GRADE AND HONOURS.

Monday, 17th June. 3 P.M. to 4.30 P.M.

Candidates are not expected to attempt more than about three-fourths of this paper. But any omissions, whether of reasoning, explanation, or calculation, will be treated as errors. Additional marks will be given for neatness and good style.

1. A merchant mixed a lbs. of tea, which he bought at m shillings per pound, with b lbs. at n shillings, and sold the whole so as to gain r per cent. What did he charge per pound?

2. Resolve into their simplest factors :—

$$\begin{aligned} (\alpha) & 12a^3 - 63b^3 + 28a^2b - 27ab^2 \\ (\beta) & x^4 + 4y^4 \end{aligned}$$

If $x^2 + mx + 15$ can be resolved into two simple factors, $x \pm a$ and $x \pm b$, a and b being whole numbers, calculate the possible values of m , and say how many pairs of factors there may be.

3. If A and B denote numbers having f for their G.C.M., what are the least numbers such that the product of A by one of them shall be equal to the product of B by the other?

Apply your reasoning to 689 and 611.

4. Solve the equations:—

$$(\alpha) \frac{1}{x+2} + \frac{1}{x+3} - \frac{3(x+6)}{(x+2)(x+3)} = 6 - \frac{6x+13}{x+3}$$

$$(\beta) \frac{x-y-1}{y+1} = \frac{5}{3}; \quad \frac{x-y-1}{y+3} = \frac{1}{2}$$

5. Show that if $(a^m)^n = a^{m \cdot n}$ for all values of m and n , $a^{\frac{p}{q}}$ must mean the p^{th} power of the q^{th} root of a ; p and q being positive whole numbers.

Calculate $32^{-\frac{2}{5}}$ and $2^{\frac{5}{2}}$, the latter to two decimal places.

6. What is a surd?

Show how to change $\frac{1}{\sqrt{a} + \sqrt{b}}$ into an equivalent fraction whose denominator shall be rational.

Prove that if a, b, c are three quantities in Arithmetic Progression, $\frac{1}{\sqrt{a} + \sqrt{b}}$, $\frac{1}{\sqrt{a} + \sqrt{c}}$ and $\frac{1}{\sqrt{b} + \sqrt{c}}$ are also in Arithmetic Progression.

7. Solve the equations:—

$$(\alpha) 8x^2 + 34x + 15 = 0$$

$$(\beta) \frac{1}{a} - \frac{1}{b} - \frac{1}{x} = \frac{1}{a-b-x}$$

8. Show that the sum of any number of terms, however many, of a Geometric Progression, whose common factor is less than unity, falls short of a certain finite quantity. Find the smallest number of terms of the series $2, \frac{2}{3}, \frac{2}{9}, \dots$ which must be taken that their sum may differ from $\frac{2}{3}$ by less than $\cdot 000001$.

9. What is the relation between the number of permutations of n things r together, and the number $(r-1)$ together. Find this from first principles.

Deduce the number of combinations of n things r together.

Two friends, A and B , form part of a company of 10. How many parties of 5 each may be made up in which A is present and not B ?

10. Calculate the coefficient of x^{39} in the expansion of $(2x-x^3)^{15}$.

GEOMETRY.

SECOND (OR LOWER) GRADE.

Monday, 17th June. 12 noon to 1.30 P.M.

Candidates are not expected to attempt more than about three-fourths of this paper. But any omissions, whether of reasoning, explanation, or calculation, will be treated as errors. All ordinary contractions may be used. Additional marks will be given for neatness and good style.

1. Define a straight line, a right angle, a square, and a parallelogram.

The angles which one straight line makes with another straight line on one side of it are either two right angles or are together equal to two right angles.

2. If a side of any triangle be produced, the exterior angle is equal to the two interior and opposite angles, and the three interior angles of every triangle are equal to two right angles.

$ABCD$ is a square. On CD an equilateral triangle CDE is described, so that E lies within the square. AE is joined. Find what part of a right angle the angle EAB is.

3. Parallelograms on the same base and between the same parallels are equal.

ABC is a triangle, and AB is bisected in D . From D , DE is drawn parallel to BC , meeting AC in E . Prove that $AE = EC$.

4. If a straight line be bisected and produced to any point, the rectangle contained by the whole line thus produced and the part produced, together with the square on half the line bisected, is equal to the square on the line made up of the half and the part produced.

Show that the preceding proposition is equivalent to the following: The rectangle contained by the sum and difference of two straight lines is equal to the difference of their squares.

5. Draw a straight line from an external point to touch a given circle.

Show that your construction enables two tangents to be drawn, and that these tangents are equal in length.

6. The angle at the centre of a circle is double of the angle at the circumference subtended by the same arc.

From a point P outside a circle, two straight lines PQR , PST are drawn, cutting the circle. Show that the difference between the angles which RT and QS subtend at the centre of the circle is equal to twice the angle QPS .

7. If two chords of a circle intersect, the rectangle contained by the segments of the one shall be equal to the rectangle contained by the segments of the other.

AB is a diameter of a circle, and C is a point in AB produced. Through C , CD is drawn perpendicular to AB . If through any point P in CD a straight PBQ be drawn meeting the circle in Q , the rectangle PB, BQ is constant.

8. What is meant by a locus?

A and B are two fixed points, and the area of the triangle ABC is constant; find the locus of C .

GEOMETRY.

HIGHER GRADE AND HONOURS.

Monday, 17th June. 12 noon to 2 P.M.

Candidates are not expected to attempt more than about three-fourths of this paper. But any omissions whether, of reasoning, explanation, or calculation, will be treated as errors. All ordinary contractions may be used. Additional marks will be given for neatness and good style.

1. If a straight line AB is bisected in C and produced to any point D , prove that the rectangle contained by AD and DB together with the square on AC is equal to the square on CD .

ABC are three given points on a straight line. Find a point D in the line produced such that $\text{rect. AD, AB} + \text{sq. CD} = \text{sq. AC}$.

2. Prove that in every circle angles at the circumference which stand on the same arc are equal.

Prove that if the angles ABC and ADC are equal and B and D are on the same side of AC a circle will pass through the four points ABCD.

AB is bisected in O and P is any point in OB; OR is drawn perpendicular to AB and equal to OP; AR is joined. From R is drawn RS perpendicular to AR towards AB and equal to AR. Prove that *SP* is perpendicular to AB.

3. Describe a circle which shall touch one side of a triangle and the other two sides produced.

What is meant by the locus of a point? If BC is fixed and A moves on the circumference of a fixed circle passing through B and C, find the locus of the centre of the circle escribed to ABC and opposite to A.

4. When is A to B in the duplicate ratio of C to D?

Two similar parallelograms OABC and Oabc are similarly placed so that the angles AOC and aOc coincide. cb and AB, produced if necessary, meet in D. Prove $Oabc : OADc :: OADc : OABC$; and thence show that similar parallelograms are to one another in the duplicate ratio of their homologous sides.

5. Prove that in equal circles angles at the centres are proportional to the arcs on which they stand.

6. When is a straight line harmonically divided?

Show that a straight line which is bisected may be looked on as harmonically divided.

Prove that any diagonal of a quadrilateral is harmonically divided by the corners of the quadrilateral through which it passes, and the points where it meets the other two diagonals.

7. From a given point outside a plane draw a perpendicular to the plane.

O is a point outside a plane. OA is perpendicular to it. BC is a straight line in the plane and AD is perpendicular to it. Prove that OD is also perpendicular to BC.

8. If transversals through the angular points A, B, C of a triangle are concurrent, and intersect the opposite sides in D, E, F respectively, then

$$BD \cdot CE \cdot AF = DC \cdot EA \cdot FB.$$

ABC is a triangle and any straight line CF is drawn meeting AB in F. The angles BFC, AFC are bisected by FD, FE meeting the opposite sides in D, E. Show that AD, BE, CF are concurrent.

9. Explain how the area of the curved surface of a right circular cone is deduced from the mensuration of plane areas.

A tent is in the form of a cone. Its base is a circle 12 feet in radius. Its height is 8 feet. Calculate to the nearest penny the expense of the canvas at three shillings and sixpence a square yard.

TRIGONOMETRY AND LOGARITHMS.

HIGHER GRADE AND HONOURS.

Monday, 24th June. 10 A.M. to 11.30 A.M.

The use of a Table of Logarithms is permitted.

Candidates are not expected to attempt more than about three-fourths of this paper. But any omissions, whether of reasoning, explanation, or calculation will be treated as errors. Additional marks will be given for neatness and good style.

- Assuming that the circumference of a circle is 3.1416 times its diameter, calculate the number of degrees, minutes, and seconds in the angle whose arc is equal to the radius.
Find, to two decimal places, the radius of a circle in which an arc 1 foot long subtends an angle of 4° at the centre.
 - Prove from the definitions that $\tan^2 \alpha + 1 = \sec^2 \alpha$.
Prove that $\sec^2 \alpha + \operatorname{cosec}^2 \alpha + \tan^2 \alpha + \cot^2 \alpha = 2(\sec^2 \alpha \operatorname{cosec}^2 \alpha - 1)$.
 - Find by Geometry the sine of 60° .
Calculate $\sin 960^\circ$ and $\sin (-600^\circ)$.
 - Prove that the tangent of an angle is unchanged, both in magnitude and sign, if the angle is increased by 180° .
Find a general expression for all angles x which satisfy the equation $\tan 3x = \cot x$.
 - Prove geometrically that $\cos(\alpha - \beta) = \cos \alpha \cos \beta + \sin \alpha \sin \beta$ when α and β are each less than a right angle.
Find the maximum value of $\sin \theta + \cos \theta$, when θ lies between 0° and 90° .
 - Prove (i) $\sin 3\alpha + \cos \alpha = (\sin \alpha + \cos \alpha)(\sin 2\alpha + \cos 2\alpha)$.
(ii) $\tan 3\theta + \cot 2\theta = \frac{1}{2} \sec 3\theta \operatorname{cosec} \theta$.
 - Prove that in any triangle the sides are proportional to the sines of the opposite angles.
ABC is a triangle. AD and BE are drawn perpendicular to BC and AC. DE is joined. Prove that DE is equal to $AB \cos C$.
 - What is the base of a system of logarithms?
Prove that the logarithm of the m th power of a number is m times the logarithm of the number.
Solve to two decimal places $\left(\frac{26}{25}\right)^x = 3$.
 - Calculate to as great a degree of accuracy as your tables will allow the seventh root of 0.3296 .
 - BC is 102 yards; $\angle C$ is $62^\circ 29'$; $\angle B$ is $73^\circ 35'$. Calculate AC to the one hundredth of a yard.
-

GEOMETRICAL CONICS.

HIGHER GRADE AND HONOURS.

Monday, 24th June. 12.30 P.M. to 2 P.M.

All ordinary contractions may be used. Additional Marks will be given for neatness and good style.

1. Define a conic section, and discriminate between the three species of conic sections.
The focus and directrix of a parabola being given, show how to find any number of points in the curve.
 2. Prove that in a parabola the subnormal is equal to the semi-latus-rectum.
 PTN is a triangle, right-angled at N . If a parabola be described through the point P , so that PT is the tangent at P , and PN is an ordinate, find its focus and directrix.
 3. Show how to draw two tangents to a parabola from an external point, and prove that they subtend equal angles at the focus.
 4. Define the auxiliary circle; and prove that, if an ordinate cut the ellipse in P and the auxiliary circle in Q , the respective tangents at these points meet on the axis major produced.
 5. If PN be any ordinate of an ellipse,
 $PN^2 : AN \cdot NA' = CB^2 : CA^2$.
Prove that, if through any point P on an ellipse a line PQR be drawn meeting the axes in Q and R , so that PQ is equal to BC , then PR will be equal to CA .
 6. Show that the tangent to a hyperbola makes equal angles with the focal distances of the point of contact.
Prove that an ellipse and a hyperbola which have the same foci intersect at right angles.
 7. Show that, if in any conic section a chord PQ meet the directrix in Z , and S denote the corresponding focus, SZ bisects the exterior angle of the triangle PSQ .
Hence show that, if two tangents be drawn to any conic from a point in the directrix, the chord of contact will pass through the focus.
 8. If in a central conic S, S' be the foci, and CP, CD conjugate semi-diameters, $SP \cdot S'P = CD^2$.
If the tangent at P meet a pair of conjugate diameters in T, t , show that the triangles $SPT, S'Pt$ are similar.
 9. Define an asymptote.
If through any two points Q and Q' of a hyperbola a line $RQQ'R'$ be drawn, meeting the asymptotes in R and R' , then RQ will equal $R'Q'$.
Deduce a method for finding any number of points on a hyperbola when the asymptotes and one point on the curve are given.
-

ANALYTICAL GEOMETRY.

HIGHER GRADE AND HONOURS.

Monday, 24th June. 3 P.M. to 4.30 P.M.

Additional marks will be given for neatness and good style.

- Find the co-ordinates of the middle point of the straight line which joins two points whose co-ordinates are x_1y_1 and x_2y_2 .
Prove that the straight lines joining the middle points of the opposite sides of a quadrilateral bisect one another.
- Find the equation to the straight line passing through the points $(-3, 2)$ and $(7, 5)$.
What intercepts does this cut from the axes?
- Find the tangent of the angle between two straight lines, whose equations in rectangular co-ordinates are $y=m_1x+c_1$, $y=m_2x+c_2$.
What is the equation to the straight line which passes through $(7, 5)$ and is perpendicular to $3x+4y+5=0$?
- Exhibit the equation $ax+by+c=0$ in the form

$$x \cos \alpha + y \sin \alpha - p = 0.$$

State the advantage of using this latter form.

Find in this way the length of the perpendicular from the point $(6, 8)$ on the straight line $3x+4y+5=0$.

- If (x_1y_1) (x_2y_2) are the rectangular co-ordinates of two points P and Q , show that $x_1y_2-x_2y_1$ is double the area of the triangle POQ .

A straight line cuts the co-ordinate axes in A and B , making intercepts a, b . From A and O parallels are drawn to BO and BA , meeting in Q . P is any point on the given straight line. Express in terms of the co-ordinates of P and Q the fact that the area OPQ is constant, and deduce one of the forms of the equation to the straight line.

- P, Q are points on the axis of x , and R, S are points on the axis of y . OQ is three times OP , and OS is twice OR . P is always one inch farther from O than R . Find the locus of the intersection of RP and QS .
- Find the equation to a circle whose centre and whose radius are known.

A circle passes through the origin and makes intercepts on the axes of co-ordinates whose sum is constant. What is the locus of its centre?

- If the pole is on the circumference of a circle, and the initial line is the diameter, find the polar equation to the circle.

If a be the radius and α the vectorial angle of a point P on the circle, show that the equation to the tangent at P is

$$r \cos (\theta - 2\alpha) = 2a \cos^2 \alpha.$$

- If a, b, c denote the lengths of the sides of the triangle of reference, and α, β, γ the trilinear co-ordinates of a point, explain why the equation $a\alpha + b\beta + c\gamma = 0$ denotes a straight line altogether at an infinite distance.

Find the equation to the straight line through B parallel to the straight line $\beta = \gamma$.

DYNAMICS.

Tuesday, 25th June. 10 A.M. to 11.30 A.M.

Additional marks will be given for neatness and good style.

1. Define Speed and Velocity. Give an instance of a body whose speed is uniform though its velocity constantly varies.
A man walks along a road with velocity v . After a certain time the direction of the road is so altered as to make an angle of 60° with its original direction, but the man's speed remains unaltered. Find his change of velocity.
 2. A point is in motion with velocity v , and has a uniform acceleration g opposite to its direction of motion. Find its velocity after t seconds, and the distance travelled in that time.
A bullet is fired from a rifle, and the vertical component of its velocity is 1610 feet per second. If $g=32.2$ and the resistance of the atmosphere be neglected, find in what time the bullet will return to the horizontal plane.
 3. Give Newton's second Law of Motion, and show that it enables us to find the resulting motion when any number of forces act on a particle.
 4. Show that, if three forces acting on a particle be parallel to the direction and proportional to the magnitude of the sides of a triangle taken in order, they will be in equilibrium.
Two equal forces, P , are so placed that their resultant is equal to each of them. One of the two forces is now doubled. Find the magnitude and direction of the new resultant.
 5. Define Centre of Mass (centre of gravity). Show that the centre of mass of three equal masses placed at the angular points of a uniform triangular plate coincides with the centre of mass of the plate.
Hence, show that the three lines drawn from the angular points of a triangle to bisect the opposite sides, meet in a point.
 6. State the laws of Statical Friction. How does Kinetic Friction differ from Statical Friction?
Find the work done in dragging a mass of 10 lbs. up an inclined plane 10 feet long, rising 6 feet, if the coefficient of friction be $\frac{1}{10}$.
 7. Define Specific Gravity.
Show how to determine the specific gravity of a body by weighing it in air and in water.
 8. Give a brief description of the mercurial barometer, and explain its action.
Assuming the specific gravity of mercury to be 13.5, find the height of a barometer formed of a liquid whose specific gravity is 1.25 when the height of the mercurial barometer is 29 in.
 9. Two unequal masses, m and m' , are connected by a string passing over a fixed pulley. Find their acceleration and the tension of the string.
-

DIFFERENTIAL CALCULUS.

HIGHER GRADE AND HONOURS.

Tuesday, 25th June. 12.30 P.M. to 2 P.M.

Additional marks will be given for neatness and good style.

1. Define the differential coefficient of a function with respect to a variable.

Find from your definition the differential coefficient of ax^3 with respect to x .

The diameter of a spherical soap bubble is being enlarged at the rate of $\frac{1}{4}$ -inch per second. Calculate the rate in cubic inches per second at which its volume is enlarging at the moment when its diameter is 4 inches. (The volume of a sphere of radius r is $\frac{4}{3}\pi r^3$.)

2. If y is a function of an intermediate variable u , which is itself a function of x , enunciate and prove the connection between $\frac{dy}{dx}$ and $\frac{dy}{du}$ and $\frac{du}{dx}$.

Differentiate (α) $\sqrt{a^2 + x^2}$,

$$(\beta) \sqrt{\frac{x}{a^2 - x^2}},$$

$$(\gamma) \tan^{-1} \sqrt{\frac{x}{a^2 - x^2}}.$$

3. Differentiate n times successively $(x + a)^p$, when p is a positive integer and is (1) greater than n , (2) equal to n , (3) less than n .

Differentiate n times successively $\frac{x + 7}{x^2 - x - 6}$.

4. A circle (radius c) and a parabola (latus rectum l) touch at the vertex of the latter, and from a point N in the axis an ordinate is drawn, cutting the circle in P and the parabola in Q . Find the limiting value of the ratio $\frac{PN}{QN}$ when N approaches indefinitely near the vertex.

5. When is a function said to have a minimum value?

Show why the values of the variable are given by the vanishing of the differential coefficient of the function.

The amount of coals consumed in a steamboat is proportional to the cube of the speed, and their expense is ten shillings per hour when the speed is ten miles an hour; other expenses come to £3 a day. What is the most economical speed for a voyage of given distance?

6. Find the meaning of $\frac{dy}{dx}$ when x and y are the rectangular co-ordinates of a point on a curve. If the equation to the curve be $x^3 + y^3 = a^3$, prove that the tangent makes an intercept on the axis of x inversely proportional to the square of the abscissa of the point of contact.

BOOK-KEEPING.

Thursday, 20th June. 10 A.M. to 12.30 P.M.

Record the following transactions in the form of Journal provided: post from thence into the Ledger, inserting folio references; close the Ledger, and draw up a Balance Account.

(Marks will be given principally for correctness in Ledger Entries, and for accuracy in the Balance Account.)

On the 1st January, 1889, John Gray finds the state of his affairs to be as follows:—

ASSETS.

	£	s.	d.
Cash at Bank - - - -	796	8	10
" Office - - - -	33	2	9
Due by J. Adams - - - -	47	5	4
Acceptance of J. Halse, due 4th January -	151	4	11
Stock of Wool - - - -	1250	0	0

LIABILITIES.

	£	s.	d.
T. Ellis (Loan at 5%) - - - -	630	0	0
Acceptance to W. Heath, due 10th January	207	3	9
F. Greenwood, balance of account - -	158	2	6
H. Knight, one quarter's rent - - - -	50	0	0

The following transactions belong to the month of January:—

	£	s.	d.
1889.			
Jan. 1. Paid cheque to T. Ellis for year's interest - - - -	30	0	0
" " Paid cheque to H. Knight for rent - - - -	50	0	0
" 2. Sold wool to B. James - - - -	128	10	7
" " Received cheque from him, and banked same - - - -	125	6	0
" " And allowed discount - - - -	3	4	7
" 3. Paid into Bank J. Halse's acceptance - - - -	151	4	11
" 4. Bought wool of W. Heath - - - -	321	7	6
" " Received cash from J. Adams - - - -	47	5	4
" 5. J. Halse's acceptance is returned dishonoured by Bank - - - -	151	4	11
" 10. Bank pays my acceptance - - - -	207	3	9
" 11. Paid cheque to F. Greenwood - - - -	142	6	0
" " And am allowed discount - - - -	15	16	6
" 12. Accept W. Heath's draft, due 7th February - - - -	309	7	6
" " And am allowed by him for short weight - - - -	12	0	0
" 14. Drew cheque for private expenses - - - -	100	0	0
" 15. Sold wool to J. Adams - - - -	436	9	5
" 21. Received cheque from J. Adams on account, and banked the same - - - -	200	0	0

Jan. 23. Accepted composition of 15s. in	£	s.	d.
the £ from J. Halse, now in-			
solvent (banked)	-	113	8 8
Wrote off Loss	-	37	16 3
„ 31. Paid office expenses for month	-	25	1 9

On the 31st January the debts owing are £40 12s. 7d. for Salaries ; one month's Rent to H. Knight ; and one month's Interest to T. Ellis ; and the estimated Stock of Wool on hand is £1280.

COMMERCIAL ARITHMETIC.

Thursday, 20th June. 2 PM. to 4 PM.

All the work must be shown. Additional marks will be given for neatness and good style.

1. What is Government stock ?

A person invests £2,100 in the $2\frac{1}{2}$ per cents. at $94\frac{7}{8}$, what amount of interest will he receive (charge for brokerage being $\frac{1}{8}$ per cent.) ?

Find at what price he must buy $4\frac{1}{2}$ per cent. stock in order to obtain the same rate of interest.

2. What is meant by the present worth of a sum due at a future period ?

Show that a bill-broker, who deducts as discount 5 per cent. of the amount of a bill due 12 months hence, gets $5\frac{5}{9}$ per cent. for his money.

3. What is meant by the *par of exchange*, and on what does it depend ? When is the *course of exchange* said to be above par, and what causes lead to this result ? Show why the course of exchange can never greatly differ from the par of exchange.

4. If the course of exchange at Paris, upon London, be 25.83 francs for £1, and that at Naples, upon Paris, be 85 lire for 82 francs, how many Italian lire should be paid at Naples for £15 ?

5. A bankrupt's debts amount to £9,500. After paying legal expenses amounting to £138, his assets suffice to pay his creditors a dividend of 4s. $6\frac{1}{2}$ d. in the pound. Find the amount of the assets.

6. I deposited £420 on May 5th in a bank paying interest at 3 per cent. per annum. On June 4th the interest fell to $2\frac{1}{2}$ per cent., and on Sept. 10th it rose to $2\frac{3}{4}$ per cent. Find (to the nearest penny) the interest due on Nov. 12th, in the same year.

7. The Roubaix terms for dress material are a bill at 60 days from date of invoice. I owe for these parcels of goods as follows :— £50 invoice, dated June 1 ; £60 invoice, dated June 10 ; £150 invoice, dated June 12. Find on what day a single payment of £260 will equitably discharge my debt.

8. I wish to sell out £45,000 four per cent. preference shares at 105, and to purchase £45,000 five per cent. debentures at 131. It is calculated that the result of each sale of £5,000 will be to lower the price of the stock which I am selling by $\frac{1}{16}$ per cent. (i.e., the first £5,000 will be sold at 105, the next at $104\frac{15}{16}$, &c.), and that each purchase of £5,000 will raise the price of that which I am buying by $\frac{1}{8}$ per cent. If my broker's charges for brokerage for the whole transaction amount to £50, what will be the total amount of his bill?

Leaving Certificates, 1889.

LEAVING CERTIFICATES, 1889.

RESULTS of EXAMINATION for LEAVING CERTIFICATES (Higher Class Schools, Scotland) held by the SCOTCH EDUCATION DEPARTMENT from the 17th to the 25th of June (inclusive).

Number of Schools at which Examination was held.	Total Number of Candidates.	Number of Papers taken.
41	2,066	9,200

LIST of HIGHER CLASS SCHOOLS at which the EXAMINATION was held.

Aberdeen Grammar School.	Galashiels Academy.
Aberdeen, Robert Gordon's College.	Glasgow Academy.
Anstruther Waid Academy.	Glasgow High School.
Arbroath High School.	Glasgow, Hutcheson's Girls' School.
Ayr Academy.	Glasgow, Hutcheson's Grammar School (Boys').
Beith, Spier's School.	Glasgow Kelvinside Academy.
Crieff, Morrison's Academy.	Greenock Academy.
Dollar Institution.	Haddington Knox Institute.
Dumfries Academy.	Hamilton Academy.
Dundee High School.	Inverness Royal Academy.
Dunfermline High School.	Irvine Royal Academy.
Edinburgh Academy.	Kirkcaldy Higher Class School.
Edinburgh, Daniel Stewart's College.	Kirkeudbright Academy.
Edinburgh, George Heriot's Hospital School.	Montrose Academy.
Edinburgh, George Watson's Boys' College.	Nairn, Rose's Academical Institution.
Edinburgh, George Watson's Ladies' College.	Paisley Grammar School and Academy.
Edinburgh, Ladies' College.	Peebles, Bonnington Park High School.
Edinburgh, Merchiston Castle School.	Perth Academy.
Edinburgh, Royal High School.	Perth, Sharp's Educational Institution.
Elgin Academy.	Stirling High School.
	Tain Royal Academy.

TABLE showing Subjects in which Candidates were presented, and Results of the Examination.

—	Total Number presented.	Passed in different Grades.			
		Second.	First (or Higher).	Honours.	Total Passes.
English - - - -	1,610	834	326	112	1,272
Latin - - - -	664	332	143	19	494
Greek - - - -	452	232	72	16	320
French - - - -	1,138	603	194	77	874
German - - - -	731	499	148	52	699
Mathematics* (including Arithmetic).	958	557	117	21	695
Geometrical Conics - -	67	—	26	12	38
Analytical Geometry - -	40	—	15	5	20
Dynamics - - - -	173	—	79	22	101
Differential Calculus - -	6	—	2	2	4
Arithmetic only - - -	551	322	54	—	376
Book-keeping and Commercial† Arithmetic.	144	—	—	—	75

* 154 candidates having failed to pass in mathematics, but having passed in arithmetic, certificates have been issued to them in that subject only, as follows:—

71 in the Higher Grade.

83 „ Lower „

† Candidates are not passed in grades.

—	1888.	1889.
Number of candidates -	972	2,066
„ schools -	29	41
„ papers taken -	4,300	9,200

Scotch Education Department,
10th July 1889.

H. CRAIK,
Secretary.

REPORT BY PROFESSOR J. EGGELING

On the INSPECTION of the FRENCH and GERMAN CLASSES in

1. Edinburgh : George Heriot's Hospital School.
2. " Merchiston Castle School.
3. " Royal High School.
4. " Daniel Stewart's College.
5. " George Watson's Boys' College.
6. " " " Ladies' College.
7. " " " Ladies' College.

MY LORDS,

Edinburgh, 12th June 1889.

IN accordance with instructions received from the Department I visited the above-mentioned higher class schools, during the latter part of May, for the purpose of inspecting their French and German classes. The average time spent in each school was that of a day's lessons; care being taken to disturb as little as possible the regular order of the timetable. In most schools I saw all the classes, whilst in the two largest schools it seemed sufficient for my purpose to go over such of the classes as I thought would enable me to form a pretty accurate idea of the general working of the modern language department.

The principal object of the inspection was to obtain a comparative view of the methods of instruction followed in the several schools, particularly in regard to points not brought out, or only partly brought out, by written tests, such as pronunciation, conversation, and extempore composition; and, wherever it might seem desirable, to offer suggestions, with a view to increasing the efficiency of the teaching of modern languages.

The general impression produced by the inspection was a very favourable one. There can be no doubt, in my opinion, that the work of teaching is everywhere in these schools performed in a thoroughly honest and conscientious way. On the part of the headmasters also nothing evidently that judicious arrangement and watchful care can do is wanting to keep the schools up to a high point of efficiency. Among so numerous a body of teachers one must of course be prepared to find a considerable diversity of natural pedagogic ability and practical success; and, moreover, some of the methods employed by individual teachers may not perhaps commend themselves to one's own taste and educational notions. Nevertheless, I have no hesitation in stating that among the teachers, British or foreign, specially appointed to teach French or German in these schools, I did not meet with a single case of inefficiency. In the junior department of some schools, where the entire charge of a class is taken by a single master in all subjects, cases of young teachers, sometimes quite fresh from college, and, it may be, still attending some university classes, are, it is true, to be met with, whose knowledge of French (the only foreign modern language usually taught in classes of this kind) is rather slender, and the effects of whose pronunciation on their pupils it may require no little pains to remove in a subsequent stage. But here, too, the generality of teachers seem quite equal to their task, and excellent teaching, admirably adapted to the capacities of young minds, is not unfrequently found among these junior masters.

Room for improvement there certainly is, in the upper no less than in the lower department of schools; and a material progress in the study of modern languages may not unreasonably be expected within a very few

years. In girls' schools the university local examinations have undoubtedly done much to raise the general standard of the study of French and German; and a similar advance, in boys' schools, should ere long result from the operation of the leaving certificate scheme. Much also, in this respect, will no doubt depend on the attitude assumed by the universities towards modern languages. Hitherto their attitude has been all but forbidding, and in consequence every hour that, in classical schools, has to be spent on either French or German (which, however, is mostly excluded altogether from the course of study) seems to be yielded reluctantly and grudgingly, as calculated to lessen the pupils' chances of gaining distinction in the "university subjects," a consideration of paramount importance in the regulation of the school programme.

There can be little doubt that were some kind of recognition extended to modern languages on the part of the universities such a step would be heartily welcomed by many headmasters of higher class schools. A change in this direction would also go far to supply a serious gap in the Scotch educational system, viz., the want of a university training in modern languages. At present no such training of any kind is afforded in the universities, and intending schoolmasters are left to pick up their knowledge of these languages as best they can, and often have to do so under great difficulties. Surely this is not a creditable state of matters. I venture to think that the proper training of the higher class teacher is a matter of no less concern to the Scotch Education Department than that of the primary teacher, and no effort, I trust, will be spared to ensure adequate provision for modern languages in the new university arrangements contemplated by Government and the legislature. In instituting the leaving certificate the Department has taken a step which must have commended itself to everyone who has educational progress at heart. Without the interposition of the Government no such scheme could probably have been carried out, although many people had long seen that such a measure was urgently required. Is it too sanguine to hope that before long it will be followed by some further step calculated to ensure a sufficient supply of properly trained teachers for higher class schools? To those acquainted with the German system of training teachers for the "Gymnasium" and "Realschule" it must often have occurred that some such scheme as the German Government examination "*pro facultate docendi*," on the completion of the university course of study, would meet all the requirements of the Scottish system. In Germany an examination may be passed in any subject, or rather group of subjects, for which teachers are required in such schools, and the education departments grant teachers' certificates ("*facultas docendi*") of three different grades, according to whether the candidate is considered fit to teach the upper, middle, or lower departments of higher class schools. The examination is carried on both orally and in writing, and it also usually includes a test lesson (*Probe-Lektion*) held by the candidate in some school in presence of the examiner. The examination takes place in any university, and is conducted by university professors or lecturers, but under the control of the Education Department which appoints or confirms the examiners in each university from year to year. This control seems to me essential, in order to ensure uniformity of standard and to prevent universities from bidding against each other, with the inevitable result of a general lowering of the standard of efficiency. It requires no remark that a higher class teachers' certificate of this kind, issued by the Scotch Education Department, would afford to headmasters and bodies that have to appoint teachers an excellent standard for judging of the qualifications of candidates.

In most of the schools inspected similar arrangements have been adopted as regards the teaching staff. Where it is impossible for one and the same master to take charge of the entire teaching of his subject, the lower classes are usually taught by Scotch or English masters or governesses, while the highest classes (or, in some cases, the higher divisions of the upper classes) get the full benefit of a foreign master. Upon the whole this arrangement seems to work very well. As a rule, the Scotch and English teacher will naturally know better how to manage Scotch children than a foreign master who is often seriously hampered in this respect by his imperfect command of just those simple turns of speech that are most suitable to the intellect of this class of pupils. On the other hand, there may, of course, be some difficulty as regards pronunciation; though a notion seems to prevail here and there that this is a point of no great importance at the early stages of school training; that it matters little whether your "du," "denx," and "donx" are sounded pretty much alike; and that the correct pronunciation will come later on. But, surely, this is by no means so unimportant a point, and the rule "Principiis obsta" holds good here quite as much as in other matters. It is in the junior classes, if anywhere, that the proper foundation should be laid, and that the organs of speech must be trained to reproduce the foreign sounds as correctly as possible. Indeed, an hour or two devoted exclusively, at the very outset, to these troublesome sounds, could hardly be better employed. In one of the schools I was most agreeably surprised to find a young Scotch teacher in charge of the junior department whose pronunciation was not only all that could be desired, but who had so well trained his little pupils in this respect, that I did not notice a single boy who did not pronounce his French sounds quite distinctly and correctly. In one of the girls' schools I was also similarly impressed by the admirable sympathetic teaching of one of the lady teachers. In some instances, on the other hand, I had a distinct impression that it might be of considerable advantage if the principal French master were somewhat more in touch with the junior teachers so as to be able, occasionally, to give them the benefit of his advice. Such guidance could, however, only be profitable where the foreign master is himself as painstaking in such matters as should be. For not unfrequently a certain habit of "laissez aller" may also be noticed in this respect to prevail in the upper classes; the teacher having apparently become tired of constantly correcting mistakes of pronunciation and "liaison," and given it up as a hopeless task. It need scarcely be said that such tendencies should be strenuously resisted; and, indeed, a conscientious teacher, who at all values his reputation, will never allow himself to fall into such slovenly habits.

German pronunciation offers comparatively less difficulty to Scotch boys and girls. For, though in German there are much the same modified vowels as in French, they occur less frequently, and for the most part constitute a prominent feature of the grammatical and formative system of the language, which makes a considerable difference from the students' point of view. Nor is there any difficulty in German as regards "liaison" or mute syllables; and the pronunciation of the "eh," which is a source of so much trouble to Englishmen, comes, on the whole, naturally enough to Scotch children. Still, however, there is constant occasion also in teaching German to guard against indistinct utterance, especially in final inflectional syllables (as, *e.g.*, in the declension of nouns with adjectives) where a certain laxity, suggestive of unsoundness of grammatical drill, may often be noticed.

As regards French and German conversation, this is practised to some



extent in most schools. It seems to me desirable that teachers should be encouraged to do so as much as they reasonably can without detriment to the more important part of their duties. A thorough grammatical and syntactic training, and the acquirement of a fair facility in reading French and German sufficient for self-instruction, and for the appreciation of literary merit in foreign works, must, doubtless, always remain the chief aim of school teaching, if the study of these languages is to be, what it ought to be, a means of culture and discipline of the mind, and if it is not to degenerate into a mere superficial "accomplishment." And, certainly, this is a sufficiently high aim; and with the limited amount of time which schools find it possible to give to modern languages,—limited certainly, even in the most favourable circumstances, when compared with the time bestowed on Latin and Greek in classical schools,—it can scarcely be wondered at if the final results of the school training often fall considerably short of that aim. Teachers might therefore seem justified in concentrating their attention on grammar and translation without aiming at anything like conversational facility as sheer waste of time. Nevertheless, it cannot be denied that with many of those who look upon modern languages as not less effective instruments of education than Greek and Latin,—and their number is increasing every day,—the practical uses to which those languages may be put form a most important consideration in their favour; and such advocates of the study of modern languages, we may be sure, will find it difficult to believe that it is impossible for our schools to impart to their pupils some modest facility of expressing themselves in French and German, and following a conversation in these languages. Teachers will therefore do well not entirely to neglect this branch of instruction, and whenever an opportunity presents itself, in the highest classes, to address their pupils in the respective language. To do so, in explaining grammatical rules, would probably not be advisable, on account of the technical terms constantly occurring therein, and the danger of the explications being misunderstood. On the other hand, conversational turns of speech may, of course, frequently be made use of for illustrating the grammatical rules under consideration. Indeed, in skilful hands, conversational exercise may be made a most valuable means of applying grammatical rules and testing syntactic knowledge; whilst it also undoubtedly serves to enliven the class, and to make the lesson interesting to the pupils. Many teachers make the reading of French and German books their favourite opportunity for conversation; and often no doubt the passages read form very good subjects for conversational practice. Besides, by being made to put the same ideas in different words, and different turns of speech, pupils have their range of expression widened, and thus frequently get an excellent lesson of composition. Reading, indeed, forms in every respect a most valuable, and even an indispensable adjunct to grammatical drill, and to separate it completely from the latter, as is sometimes done, by the two branches of instruction being placed in different hands, would seem a somewhat anomalous arrangement which deprives the principal teacher of the most natural and the most fruitful means of constantly testing and refreshing the results of the grammar work of his classes. In the highest classes it seems to me especially desirable that the different branches of instruction should be made closely to work into one another, so as constantly to illustrate and supplement each other.

On the subject of reading, in connexion with the leaving certificates, a suggestion from one who has had some little experience in written examinations may not be deemed out of place here. As no definite amount of work is prescribed for reading, even for the lower grade

certificate, schools that intend to send up pupils for the leaving examination, will do well, in my opinion, not to reduce the amount of time formerly devoted to the getting up of books prescribed for other examinations, but rather, if possible, to allow more time for reading. In last year's examination for the junior grade certificate, the translations from French and German—startling as it may appear—were by far the weakest portion of the papers. Most candidates had evidently had too little practice in reading, and their range of vocabulary was painfully deficient, especially in German. A certain amount of extempore reading conducted by the most competent teachers, who are able to bring all the resources of vocabulary and conversational practice to bear on the reading lesson, would probably go far to remedy this defect, and save many a young scholar from disappointment.

In conclusion I have to express my admiration of the exemplary way in which the classes, one and all, behaved during the inspection; as also my sincerest thanks to the headmasters and teachers for the uniform kindness and courtesy shown me during my visits at their schools.

I have the honour to be, &c.

J. EGGELING.

*To the Right Honourable
the Lords of the Committee of Council
on Education in Scotland.*

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