1883.

NEW ZEALAND.

EDUCATION:

EXAMINATION OF TEACHERS.

[In Continuation of E.-1A, 1882.]

Presented to both Houses of the General Assembly by Command of His Excellency.

The INSPECTOR-GENERAL of SCHOOLS to the Hon. the MINISTER of EDUCATION.

SIR, Wellington, 18th April, 1883.

I have the honour to submit my report on the examination of teachers held on the 22nd January and the following days. The principal results as ascertained by you were published in the *Gazette* of the 29th March. On the whole I think they may be regarded as more satisfactory than those of any previous examination, the proportion of complete failures, and especially of very bad failures, being much smaller than in former years.

The total number of candidates entered was 549, but only 465 presented themselves, and, of these, 266 were more or less successful (last year 533 were entered, and 461 attended, but only 155 achieved any success). For Class D there were 93 entries, and 84 candidates sat: 15 passed, 18 were "partially successful," 10 completed the examination for Class E while failing for Class D, 2 completed the examination for Class E and were "partially successful" for Class D, and 3 are credited with "partial success" for Class E. The "partially successful" are those who, having done good work in most subjects but failing in one or two, are to be allowed the privilege of sitting again in the subjects in which they were unsuccessful. For Class E 299 entered and 255 were present: only 10 passed, but 147 were "partially successful." Of candidates "partially successful" in former years 157 sent in their names, and 126 attended: 61 of them succeeded in completing their examination. Last year less than 34 per cent. of the candidates did anything to improve their position; this year the proportion is over 57 per cent. In the following table the numbers of candidates from the several education districts are stated, with details of complete and partial success:—

	Auckland.	Taranaki.	Hawke's Bay.	Wanganui.	Wellington.	Marlborough.	Nelson.	Westland.	N. Canterbury.	S. Canterbury.	Otago.	Southland.	Totals.
Entered for Class D	21	...	...	3	12	1	1	3	33	1	15	3	93
Of whom—Present at examination	19	...	...	2	11	1	1	3	32	1	13	1	84
Passed for Class D	5	...	...	...	1	1	...	...	6	1	1	...	15
Partially successful for Class D	5	...	...	...	1	...	...	...	9	...	3	...	18
Partially successful for Class E	3	...	...	...	...	...	...	...	...	...	...	...	3
Partially successful for Class D and completed examination for Class E	...	...	...	...	...	...	...	...	...	...	2	...	2
Completed former examination for Class E	...	...	...	...	6	...	1	...	3	...	...	...	10
Entered for Class E	85	4	15	14	14	3	13	8	45	4	79	15	299
Of whom—Present at examination	71	4	13	13	13	2	10	6	39	3	67	14	255
Passed for Class E	1	...	...	...	1	...	...	...	2	...	6	...	10
Partially successful	30	2	7	6	9	2	4	2	26	2	49	8	147
Entered to complete former examination	43	1	1	9	10	2	10	4	35	5	31	6	157
Of whom—Present	40	1	1	3	7	2	8	4	26	4	25	5	126
Successful	19	1	...	2	4	2	3	2	11	3	11	3	61

As in former years, it was found necessary to have three examination centres for the Auckland District: in each of the other districts one centre was sufficient. With one exception, the work of supervision and of examination in reading and writing was done by the Boards' Inspectors, under an agreement made with the Boards in 1880. The expenses of the examination this year amount to £417 10s. 11d., and the fees received from candidates to £391.

The examiners for the year in the principal subjects were the same as for last year, except that the Principal of the Normal School at Auckland, instead of the Principal of the Christchurch Normal School, was associated with the Principal of the Wellington Normal School as examiner in the art of teaching and school management. It is to be presumed that the principals of normal schools have very special qualifications for dealing with this technical subject, and this consideration ought, I think, to outweigh any objection likely to be raised on account of their being required to examine some of their own pupils with other candidates. The examiners feel the force of this objection, but it is, I think, to a great extent neutralized by associating two examiners each year, and changing one name every year. The examiners have suggested the propriety of withholding from them the names of the candidates whose papers they read; but I do not think any such precaution is necessary, or that it would be of any use. I append an important extract from the report of Mr. Howard and Mr. McArthur, in which they state their opinion as to the principal causes of the very large number of failures in their subject.

The examiner in English for Class E complains of the frequent occurrence of ignorant or careless punctuation, a defect to which several failures in the subject are due.

In chemistry—an optional subject for Class D—there were three candidates. The examiner reports that they all passed with great credit.

As a rule the paper in domestic economy—which women may take instead of the paper in elementary science—was extremely well done. In elementary science, although a few papers were good, many of the candidates who obtained sufficient marks for a pass exhibited "such misconception as to the scope of the scientific principles involved as would be very misleading" to their pupils.

The examiner in drawing remarks on a general tendency to "line in" the figure before the form has been accurately sketched.

The examination in music, requiring some *vivâ voce* work, has to be intrusted to local examiners, and on that account is less uniform than the examination in most other subjects.

Mr. Petrie has suggested a slight change of the date of examination. He says that if it were held a week earlier there would be less interference with the work of the schools, and that rooms could be more easily obtained. As no change can be made without an Order in Council, I prefer to leave the consideration of this matter until I can obtain statements of opinion from authorities in all the districts, and ascertain if any time can be fixed that would give general satisfaction. The end of the year would be the best time, but as a rule the Inspectors are very much occupied during the first half of December in examining the largest schools, and it would not be wise to interfere with Christmas holidays. The next best time would be the beginning of January, but this would involve a break in the middle of the only time the Inspectors have free for their own recreation. The varying date of the short Easter holiday makes that an unsuitable time; and the cold wet weather that may be expected during the mid-winter recess in some parts of the country would seriously interfere with the comfort, and perhaps with the success, of candidates required to attend examination at that period of the year.

I append a set of examination papers for Class D and Class E. Several teachers have lately qualified for Classes B and C by passing the examinations of the University of New Zealand.

I have, &c.,

The Hon. the Minister of Education.

WM. JAS. HABENS.

Extract from Report on School Management.

The general result is a very disappointing one. With every desire to err, if we erred at all, rather on the side of leniency than of severity, we have been able to pass only 14 per cent. of the candidates, while at a very moderate estimate 20 per cent. of the papers are practically valueless. We venture to indicate what are in our opinion the causes of so large a percentage of failures.

1. *Many of the candidates lack the necessary intellectual qualifications for the work.* Their general education is at fault to a degree none but an examiner would credit. Their writing, spelling, composition are in some cases alike unsatisfactory. The writers show a lamentable ignorance of the meanings of common words. For example, in numerous instances "*arbitrary* punishment" is interpreted as "*corporal* punishment," "*oral examination*" as equivalent to "*object-lesson*," "*inductive teaching*" is confounded with "*collective*," and with "*simultaneous exercises.*" One candidate speaks of "the words we use in our *calibre.*"

Other evidence of defective intelligence is furnished by the inability of many candidates to perceive the plain drift of a question, unless, as we sometimes suspected, they wilfully shut their eyes to it, and addressed themselves to a subject they thought they could discuss more satisfactorily. Be this as it may, numerous answers were totally irrelevant. The following is one out of many examples:—

Q. "What means would you employ to give your pupils a proper sense of their mutual responsibilities as members of a society? What is the importance of doing this?"

A. "Compulsory attendance. Appointment and retention of teachers solely in hands of a Government department, thereby showing the taxpayers that the teachers are not simply and solely the paid servants of the parents."

Disorderly habits of thought, confusion of ideas, and incoherency of statement seemed rather the rule than the exception in the papers.

2. *Another cause of failure is, as might be anticipated, defective professional knowledge*, arising in many cases perhaps from inexperience of the work, in others from neglect of study or from injudiciously-directed reading. Presumably a good many of the candidates have been pupil-teachers. If so, it is a pity they should have passed through their apprenticeship without acquiring a truer knowledge of their proper life-business.

It was particularly disappointing to witness the steady way in which the candidates avoided all questions of principle. Nearly 40 per cent. of them shirked Section IV. ["Principles of Teaching"], and upwards of 75 per cent. declined Section VI. ["Discipline"], while the remaining answers were often of little value.

3. *We cannot but think that gross carelessness is also responsible for a number of failures.* In no other way can we account for the repeated violations of the rules of the examination, and for the neglect of the most important sections of the paper, which were left till last, in spite of the printed advice of the examiners, and were abandoned unfinished (the writers uniformly said) for want of *time!* This carelessness was further shown in the disgraceful untidiness and wretched writing of some of the papers, stamping their authors at once as unfitted in these respects for the teacher's office. It would be well for all candidates to bear in mind that they are examined as teachers, and are expected throughout their papers to display teacherlike qualities.

4. *The variation in the general style of the paper* itself no doubt also increased the number of failures, as those who had undergone a course of "special preparation" were the more readily detected. There is reason to think the highest aim of some candidates is not professional efficiency, but just by hook or by crook to pass the examination—no matter how barely.

Perhaps it will be helpful to some unsuccessful candidates if we point out what seemed the most noteworthy defects in the answers to Sections I., II., and III. The time-tables presented this difficulty: They were evidently in many cases not original, but apparently "district" time-tables, presumably sanctioned by competent authority. The question then arose, Whom were we really criticising? However, our duty was plain, and we can only say that anything more unskilful and unsatisfactory than some of the models submitted to us could hardly have been compiled by the most uninstructed candidate. On the other hand there were some really good time-tables. To go into detail:—

The amendments suggested in the answers to Question 1 would often only have made confusion worse confounded, as the writers would have seen had they tabulated their proposals. The first part of the question was very much better answered than the second. No doubt it is easier to criticise than to amend.

The theoretical part of Question 2 was either evaded or answered very badly, while the time-table submitted was usually anything but satisfactory. The teacher was rarely unassisted, and would sometimes have needed three or four assistants to enable him to cope with the work presented for the six classes. When will teachers generally recognize the impossibility of teaching six classes single-handed, and learn the advisability of grouping small standards in three or four classes and of allowing sufficient time for a lesson to enable attention to be given to each standard in the group? The infant routine, the special point of the question, was generally dreary in the extreme, and even in some time-tables where kindergarten exercises were liberally provided the teacher was too busily employed elsewhere to give them any attention throughout the week. It would be curious to know what the compilers understood by kindergarten exercises.

The practice of teaching arithmetic and writing simultaneously throughout the school was adopted in many time-tables. Yet it is voted unsatisfactory, except in the very smallest schools, by teachers of acknowledged skill and experience.

It is evident that the bulk of the time must be given to the lower standards, and that the upper ones can get very little teaching. It would not be difficult to make other satisfactory arrangements for teaching writing to one section of the school at a time.

Some of the time-tables showed a want of common-sense on the part of the compilers, as when we were told that classes 2, 3, and 4 would all read *out of the same book*, or that an object-lesson would be given to all the classes at the same time.

The third question in the section was answered more satisfactorily, though objectionable arrangements, pardonable perhaps in a school where the teacher has no help, were adopted for one of different character, where the same necessity no longer existed. The plan of simultaneous writing is an instance in point, though, with a teacher to each class, there could be no necessity for it, and although it involved taking a number of noisy lessons together at another time.

In Section II., dealing with "Notes of Lessons," we were brought face to face with the unpleasant fact that the notes submitted were in many cases not the work of the candidates, but merely reproductions, sometimes word for word, of published notes, and occasionally of very bad ones. Now, while we admitted the lawfulness of borrowing ideas from books, we deemed it unfair and very unworthy of teachers to attempt thus to palm off on an examiner published notes as their own work. How would these teachers treat their pupils who sought thus to impose on them? We gave no marks for answers of this kind, and in the future candidates should give the examiners credit for knowledge of published notes.

Again, in several cases the notes were outside the "standard" limits, and, worse still, had done duty before in other capacities. For example, the candidates were asked for notes of a lesson in history for Standard IV., or in grammar for Standard V., or in arithmetic for Standard II. Six candidates from one district presented practically identical notes, of a history lesson, on a subject in advance of the standard, and so overladen with detail as to be only fit for a really good VI. Standard. It appeared to us that, had they known the standard requirements, they would not all have selected this extraneous subject; that, had they been able to gauge the attainments of children, they would not all have treated it in the same unsuitable way; and that, had they had any other historical notes at command, or any power of compiling them, some at least would have tried to satisfy the conditions of the question. Moreover, the notes would not have been identical had they been really original, and the fact that all the six candidates preferred that lesson seemed *primâ facie* evidence that they were still less qualified to deal with the alternative parts of the question. The same identical notes too had been presented previously for Standard V. We could therefore come to no other conclusion than that they were stock notes committed to memory and forced into service, and of no more value than those that had been copied out of a book. Accordingly we gave no marks for them, though we were regretfully compelled on this account to reject some candidates who might otherwise have passed.

The details of method, particularly asked for, were in many instances not furnished. The form of notes generally adopted too was bad, though a very common one. The method should, in our opinion, be interwoven with the matter, and not relegated to a separate column. Many of the particulars inserted in this column ought certainly to have been arranged under that headed "Matter," and *vice versâ*. In one lesson we were gravely assured that a horse was a ruminant animal, and that a cow made a peculiar noise *called its voice*. The far-fetched introductions to some lessons, and notably two in the G. P. R. James style to lessons on that time-honoured subject, "The Common Pump," were very amusing, albeit sheer waste of time.

There was a want of agreement too between the notes of lessons and the time-tables. These latter prescribed fifteen or twenty minutes for an object-lesson: the notes were for lessons of thirty minutes, forty minutes, or even an hour long.

The third section, dealing with registers, was treated more satisfactorily, although, out of 199 candidates who took the first question, only 30 were perfectly right in their calculations. The chief blunders were, as usual, in the working average. Some very crude ideas of the admission register were entertained. One candidate wished to record in it all the absences of the pupils, with the reasons assigned for them; another to register all the offences of which the pupils were guilty, with the punishment bestowed on each. Neither of the candidates explained how such registers were to be kept.

Of the other sections it will not be necessary for us to speak at length. Many of the answers would be amusing if the ignorance displayed by would-be teachers were not so lamentable. We were told several times that arithmetic and Euclid offered excellent opportunities for cultivating the imagination, and were recommended in teaching grammar to "begin at the beginning and continue throughout the whole course;" but what was the beginning and what constituted the course we were left to find out.

We rise from the perusal of these papers with the impressions—

(1.) That, even when every allowance is made for the imperfect character of the examination-test, many of the uncertificated teachers of the country are not at all qualified for the profession. We cannot conceive the possibility of some of these candidates doing good work.

(2.) That there is little or no improvement noticeable in the quality of the work done by candidates year by year.

(3.) That many of those whom we examined this year have bestowed no study on their profession, and will not until some limit is placed on the number of times they may present themselves without final rejection.

List of Passes, etc.

[Extract from *New Zealand Gazette*, 31st March, 1883.]

The following lists contain statements of the principal results of the examination held at the end of January, 1883. It must be understood that the granting of a certificate depends only in part upon the result of an examination, and that candidates who have not had the experience required by the regulations, or who do not receive the necessary marks from a School Inspector, have no claim to a certificate.

The first list contains the names of the successful candidates at the examination for Class D. The second supplies similar information with regard to Class E. The third and fourth lists give the names of candidates who will be allowed to qualify for Classes D and E respectively, by passing at the next

examination in those subjects only in which they have this year been unsuccessful. The fifth is the list of candidates who were partially successful in former years, and have now passed in the additional subjects necessary for a certificate.

Every candidate will receive a private intimation of his success or failure, and those whose names are in the third and fourth lists will be advised as to the subjects in which they will require to be examined again.

An asterisk against a name signifies that the candidate is too young to hold a full certificate.

I. Passed the Examination for Class D.

Auckland—
Armstrong, James.
*Braithwaite, Mary Annie.
*Colebrook, Kate.
*Purdie, Edmund C.
Sanderson, Frederick William.
Wellington—
Beck, Edward.
Marlborough—
Burnham, Arthur Palmerston.
North Canterbury—
*Kennedy, Rosamond Fanny.
McCormack, Annie Eliza.
*Petrie, George.
Smith, Thomas George.
*Spence, Annie Walker.
Thompson, Joseph.
South Canterbury—
Cooke, Charles John.
Otago—
*Warburton, Abel.

II. Passed the Examination for Class E.

Auckland—
*Frost, Constance Helen.
Wellington—
*Jacobsen, Henrietta.
North Canterbury—
*Fawcett, Lucy.
*Gardiner, Elizabeth.
Otago—
Blair, Georgina.
*Buick, Kate.
*Christie, Jessie Campbell.
*Gillies, Mary.
*Line, Leonard Arthur.
*Webster, Nellie.

III. Partial Success recorded towards Class D.

Auckland—
Burton, Ella.
Colhoun, Andrew.
French, Jessie Robb.
Horne, Arthur.
Murray, George William.
Wellington—
*Dempsey, Walter Norgrove.
North Canterbury—
*Barker, Annie.
Brock, William.
*Douds, Martha.
*Dynes, Martha.
*Hunnibell, Frederick William.
Opie, Charles Henry Adolphus Truscott.
Pole, Thomas Luke Potts.
*Stirling, William.
Tipler, Walter.
Otago—
Close, James Gunning.
*Cunninghame, Eva Beatrice.
*Joseph, Archibald Fraser.
Popplewell, Frederick Joseph.
*Smith, Charles Robert.

IV. Partial Success recorded towards Class E.

Auckland—
Ballantine, Mary.
Bischoff, Adelaide.
*Bright, Aimèe Dora.
Cleveland, Annie Maria.
Cornforth, Charles Kilvington.
*Davis, Elizabeth.
Ferguson, Janet.
*Gibbs, Elizabeth.
*Gill, Esther Marcella.
Gillies, John Henry.
Gilshenan, Lawrence.
Goldsbury, Alfred.
Hames, Luther.
Isemonger, Thomas.
Longdill, Harriet Elizabeth.
Marsh, Sarah Matilda.
Mulgan, Maria Thomasina.
Murray, James Butler.
Murrish, Mary.
Nicholson, Florence.
Nicholson, William Henry.
Pooley, William Harper.
Rapson, Ethel May.
Reid, George Archdell O'Brien.
Rochford, Thomas.
Rosie, Wilhelmina Jane.
Silva, Algernon Gomez da.
Stone, Mary.
*Thompson, Harriet Walton.
Walker, Mary S.
*Wallis, Emily Annie.
Waygood, James Evans.
*Westwood, Clara Bertha.
Taranaki—
Evans, Edward.
*Roby, Ada Maria.
Hawke's Bay—
*Corbin, Annie Maria.
Evers, Marie.
*Frame, Annie.
*Monteith, Jane.
*Morgan, Margaret.
*Reed, Florence Marion.
Ward, Jenny Glanville.
Wanganui—
Coventry, Harry.
Dowling, Richard Egbert.
*Field, Emma Mary.
Hoey, Mary Nicol.
*Patterson, Sarah Ford.
*Williams, Kate.
Wellington—
Chatwin, Frances Annie.
*Cherrett, Jessie.
Evans, Eliza Hermione.
*Hamerton, Annis Eliza.
Kay, John.
McGowan, Elizabeth.
*McKenzie, Christina.
Robinson, Ann.
*Young, Mary Ellen.
Marlborough—
*Bary, Charles.
Ogilvie, Charles Andrew.

Nelson—
Humphreys, Joseph William.
Langford, Herbert.
*Sheppard, Alexa Isabella.
Stanley, Elizabeth Sarah.

Westland—
*Ralfe, Jessie Sugden.
*Roberts, Eliza.

North Canterbury—
Bartrum, Fanny Matilda.
*Bramley, Arthur.
Brownlee, Thomas.
*Bruce, Sarah Cumings.
Caddell, Anne.
*Campbell, Isabel Oinskie.
*Cole, Minnie Ursula.
*Dawkins, Maude Mary.
Dewar, Janet.
*Ewing, Eliza.
*Finney, Annie Frances.
Gillman, Alfred Inkson.
*Grant, Henry Alexander.
*Harband, Beatrice Mary.
Jaggar, Edith Jane.
*Johnson, Emily Jane.
*Kingston, Laura Elizabeth.
*McCormack, Caroline Mary.
McCormack, Janie Dickson.
*MacLymont, Victor Hotham Murray.
*Marshall, John.
Norton, Selina.
Seager, Henrietta.
*Seay, William Nixon.
*Stout, Thomas.
Walker, William Henry.
Wright, Elizabeth Leslie.

South Canterbury—
*Bethune, Finlay.
*Cuthbert, Andrew.

Otago—
Alves, Margaret Walker.
*Anderson, Maria Isabella.
*Barrett, Richard James.
*Bee, James.
Bishop, Henry.
*Bishop, Maude.
*Bolton, Elizabeth.
*Bushell, Bessie.
*Cameron, Margaret.
*Campbell, Verona Huntly Douglas.
*Colville, Charles Henry.
*Crawford, Mary Helen.
*Dawson, Sarah.
*Farquharson, Lizzie.
*Ferens, Sophie Augusta.
*Ferguson, Mary Ann.
*Finlay, Thomas Alexander.
*Gilles, Fanny.
*Grant, John Black.
*Grey, Alice Mary.
*Kirby, Christiana Elizabeth.
*Laing, Ellen.
Lean, Mary.
*Lindsay, Alexander.
*Macdonald, Agnes.
*Mackin, Frances Lily.
*McLaren, William.
*McLeod, Robina Alexandra.
*McMillan, Hugh.
McWilliam, Mary Anne.
Mason, David Sinclair.
*Matheson, Margaret Alexandrina.
*Mill, Janet Duncan.
*Mills, John.

Otago—*continued.*
*Mitchell, Jeanie.
*Palmer, Arthur Edward Albert.
Patrick, John Hunter.
*Pilling, Ewen.
*Reid, Mary.
*Robertson, James.
Robertson, Mary Agnes.
*Scott, Margaret Mann.
*Todd, Mary Robina Bruce.
Tregoning, Mary.
*Waddell, James Noble.
*White, Jane.
*Wilding, Mary Jane.
Wilson, Jane.

Southland—
Fairweather, Jane.
*Fullerton, Catherine Isabella.
Gazzard, Thomas Edward.
*Gray, John.
*Hamilton, Margaret Elizabeth.
*McNaughton, Flora.
O'Rourke, Margaret Theresa.
Tait, Agnes Cochrane.

V. Passed in the Subjects required to complete Former Examination.

Auckland—
Ballance, Alfred Charles.
Bond, Elon.
Coleman, Isabella Maglin.
De Carteret, Emma.
Dunning, Eliza Louisa.
Hamilton, Thomas D'Arcy.
Hosking, Alfred.
Hungerford, Elizabeth.
Kysh, Frederic William.
Leech, Katherine Rebecca.
McKerras, Elizabeth Haliday.
Marshall, Leslie Cunningham.
Metge, Daniel Dickinson.
Pascoe, Ada.
Smith, Edith Mabel.
*Stewart, Elizabeth.
Taylor, Mary Crawford Paul.
Vialoux, Kate.
Wright, Lydia.

Taranaki—
Potts, George William.

Wanganui—
Guylee, Joseph.
Tyerman, Berkley.

Wellington—
Barnard, Nellie.
*Bastin, Kathleen Georgina.
*Bright, Alice Maud.
Jenkins, David Henry.
Keeling, Laura Louisa.
Milne, Annie.
*Pinny, Louisa.
*Rutter, Elizabeth Mary.
*Warren, Ada Ruth.
Whitehouse, Annie Charlotte.

Marlborough—
Lucas, John Pearson.
Reynolds, Jacob Henry.

Nelson—
Blumer, George Alfred.
*Cooke, Minnie Susan.
Roby, John.
Veysey, John Thomas.

Westland—
Brown, Alice Ellen.
De Bakker, Coralie.

North Canterbury—
Alexander, Mary Stuart.
Bussell, Henry.
*Cabot, Dolce Ann.
Calvert, Elizabeth Honoria.
*Cookson, Arthur.
Currie, Janet Rae.
Dunnage, Florence.
Foster, Frances.
*Hiatt, Mary.
*Newell, John Alexander.
*Seager, Rose Elizabeth.
Silvester, George.
Staples, Caroline Sipthorbe.
Young, Margaret.
South Canterbury—
Beechey, James Mansfield.
*Grant, Mary Anne.
*Rowley, Elizabeth Mary.
Otago—
Beattie, Robert Martin.
Bryant, James Thomas.
*Cunninghame, Eva Beatrice.
Ferguson, William.
Golding, Francis.
Hawkes, Frances.
*Joseph, Archibald Fraser.
*Menzies, Emilia.
Montgomery, Mary.
Roberts, Mary Ann.
Schmedes, Cornelius Frederick.
Wicks, William Henry.
*Williamson, George Alexander.
Southland—
Bethune, Fanny.
Thomson, Annie.
Tunzelmann, John Emmanuel von.

Examination Papers.

Class E.—English Grammar and Composition.

Time allowed: Three hours.

1. What do you mean by *inflection?* Which are (1) the inflected, (2) the uninflected, parts o speech?
2. What is the general rule for the formation of the plural number in nouns? What are the exceptions to the rule?
3. How do you form the comparative and superlative degrees in adjectives and adverbs? Compare: Old, far, fore, forth, easy, shy, happily.
4. Define a pronoun. How many kinds of pronouns are there? Give an example of each.
5. Explain the terms "relative" and "antecedent," and the grammatical connection existing between them. Illustrate this connection by parsing the relative contained in a sentence of your own construction.
6. Give the past tenses and past participle forms of *hold, drink, slide, fly, flee, see, saw.* Define a transitive verb.
7. Parse each word in the following: They had now been fighting since nine in the morning, and twilight was coming on.
8. Explain the meaning of the prefixes *sub-, con-, sym-*, and of the affixes *-ly, -ship, -hood.* Illustrate by giving words (with meanings) in which each occurs.
9. Write a short essay on
   (1) The Advantages of Public Libraries; or
   (2) Holidays in Schools.
10. Write out and punctuate the passage dictated.
11. Spell the words dictated, and underline those that are trisyllabic.

Class E.—Exercise in Dictation and Spelling.

(Part of a Paper on English Grammar and Composition.)

10. "The keener intellects were climbing the stairs of the temple of Modern Science, though as yet they were few and feeble, and they were looked upon askance with orthodox suspicion. At their side the descendants of the schoolmen were working on the old safe methods, proving paradoxes by laws of logic amidst universal applause. The professor of medicine maintained in the queen's presence that it was not the province of the physician to cure disease, because diseases were infinite, and the infinite was beyond the reach of art; or again, because medicine could not retard age, and age ended in death, and therefore medicine could not preserve life." —*Froude.*
11. Spelling Exercise: Privilege, cudgel, reverie, forfeit, obstreperous, catarrh, raisin, browse, idiosyncrasy, allotment, sewerage, harass, foray, lusciousness, hubbub, fiery, irascibility.

Class E.—Arithmetic.

Time allowed: Three hours.

1. Divide seven hundred and twenty million sixty thousand and four hundred by ninety-nine in factors, and explain the method of finding the correct remainder.

2. Multiply 15 miles 22 poles 2 feet by 365.
3. If the weight of a cubic foot of water is 1,000 oz., find the weight of a cubic inch of water in grains.
4. Find, by Practice, the value of 42a. 3r. 32p. at £6 12s. 6d. per acre.
5. A mechanic earns 12s. 6d. for every day he works: if he spends on an average 6s. 5d. on working-days, 17s. 8d. on holidays, and 1s. 3d. on Sundays, how much did he save in 1882, allowing for that year 8 holidays and 53 Sundays?
6. Simplify $\frac{2\frac{2}{3}-1\frac{4}{5}+\frac{7}{12}}{2\frac{3}{4}-\frac{2}{3}\text{ of }3\frac{3}{5}}$; and express $1\frac{1}{7}$ of half-a-crown as the fraction of 13s. 4d.
7. A reservoir is supplied by one pipe and emptied by another. The supply-pipe would fill it in 4 hours, and the waste-pipe empty it in 9 hours. If both are running together, how long will it take to fill the reservoir?
8. Define a decimal, and show how a decimal may be converted into an ordinary fraction, and an ordinary fraction into a decimal.
9. Find the value of $\frac{2{\cdot}64}{{\cdot}105}$ of ·0625 of a ton.
10. A consignment of 36 casks of sugar, each containing 3 cwt. 21 lb., was bought at £1·325 per cwt., and sold at 4·875d. per lb.: find the gain or loss.
11. If the air contained in a 400-gallon tank, at the pressure of $14\frac{1}{2}$ lb. per square inch, were compressed into a cubical vessel whose side is 8 inches, what would be the resulting pressure, it being known that the pressure of a gas is inversely proportional to the space it occupies, and that 1 gallon = 277·274 cubic inches?
12. If 72 yd. of cloth, $\frac{3}{4}$ yd. wide, be made of 32 lb. of wool, how much cloth, $1\frac{1}{4}$ yd. wide, can be made of 120 lb. of wool?
13. Find the simple interest on £628 12s. 6d. from the 22nd January to the 15th May at 5 per cent. per annum.
14. How much water must be mixed with 80 gallons of spirit which cost 24s. a gallon, so that by selling the mixture at 22s. a gallon there may be a profit of 10 per cent.?

Class E.—Geography.

Time allowed: Three hours.

1. Explain the meaning of the terms "latitude," "watershed," "river-basin," "estuary," "peninsula." Illustrate your answers by examples.
2. Explain why the days are longer in summer than in winter. In what parts of the world is the variation greatest?
3. Enumerate the principal lakes in New Zealand, and give the position of each.
4. Where in New Zealand are Greymouth, Mount Earnslaw, Mahia Peninsula, River Buller, Kaipara Harbour, Rangiora, Haast Pass, Castlepoint, Waipa River, Ross, Jackson's Bay, Mount Egmont?
5. Draw a map of Australia, and insert Cape Leeuwin, Brisbane, Swan River, Port Darwin, Wilson's Promontory, Maitland, Albany, Cape York, Port Jackson, Geelong.
6. Give a brief account of the river system of North America.
7. Give four of the principal towns of each of the following countries, and explain the position of each: Switzerland, Hindostan, Egypt, Canada, Spain, Persia.
8. What are the principal islands in or near the Baltic Sea, the Mediterranean Sea, the Gulf of Mexico?

Class E.—English History.

Time allowed: Three hours.

1. Explain how James VI. of Scotland came to be King of England.
2. What interval elapsed between the union of the Crowns and the union of the Parliaments; and which of these two events contributed most to cement the two countries? Specify the leading articles of the Treaty of Union.
3. What course of action led to the fall of the Stuart dynasty? How many attempts were made to restore it, and with what results?
4. Explain the nature and the object of the Act of Settlement.
5. When and with what design was the Triennial Act passed? How long did it remain in force, and by what Act was it repealed?
6. Give a brief account of the loss of our American colonies. Show how differently Britain deals with her colonies now.
7. Give a short narrative of the growth of our Indian Empire.
8. How was England led to establish the Australasian colonies?
9. What was the object of the Catholic Emancipation Act? What Act did it repeal? And what subsequent Act relieved another section of the community from similar disabilities?
10. Name the Prime Ministers of Victoria's reign, and any great measures or events with which their names may happen to be connected.
11. In what way did the following leave their mark on the history of their country: John Hampden, William Penn, Bacon, Newton, Wesley, Wilberforce, Watt, and Cobden?

Classes D and E.—School Management.

Time allowed: Three hours.

[Note.—Candidates may not answer more than one question in any one section of the paper. They must answer every section to obtain full marks; but they are urged to pay especial attention to Sections I., II., and III.]

Section I.—Time-tables.

1. Point out the radical defects and suggest working amendments in the following time-table for a school in which the teacher has no regular assistance:—

Time.	Standard I.	Standard II.	Standard III.	Standard IV.	Infant Division.
A.M.					
9.30–10.0	Arithmetic ...	Arithmetic ...	Arithmetic ...	Arithmetic ...	Reading.
10.0 –10.30	Reading	Arithmetic ...	Arithmetic ...	Arithmetic ...	Slate-writing.
10.30–11.0	Writing	Writing (copybooks)	Writing ...	Writing ...	Slate-writing.
11.0 –11.30	Slate-writing (figures)	Slate-writing (letters)	Reading and Grammar	Geography ...	Slate-writing.
11.30–11.50	Slate-writing (figures)	Slate-writing (letters)	Dictation ...	Dictation ...	Recess.
11.50–12.0	Slate-writing (letters)	Slate-writing (letters)	Mental arithmetic	Mental arithmetic	Slate-writing.
P.M.					
12.0 –12.30	Slate-writing (letters)	Reading	Preparing Geography	Preparing Geography	Slate-writing.
1.30– 2.0	Arithmetic ...	Arithmetic ...	Arithmetic ...	Arithmetic ...	Reading.
2.0 – 2.20	Arithmetic ...	Arithmetic ...	Arithmetic ...	Reading ...	Slate-writing.
2.20– 2.40	Reading	Slate-writing (capital letters)	Mapping ...	Mapping ...	Slate-writing.
2.40– 3.0	Slate-writing ...	Slate-writing (capital letters)	Preparing Grammar	Writing ...	Counting and figures.
3.0 – 3.15	Slate-writing ...	Writing (copybooks)	History... ...	History... ...	Slate-writing.
3.15– 3.30	Writing (copybooks)	Geography ...	Composition ...	Grammar ...	Slate-writing.

2. What essential differences are there in the conditions of work in an infant-school and in an elementary district school? Draw up a time-table for a country school under one teacher, having an infant-class, and in which the requirements of both kinds of work are met as far as possible under such circumstances.
3. Construct, for a separate school of six standards with a suitable teacher to each class, a time-table capable of easy adaptation to a school of like character, but with only half that staff. Indicate how the time-table might be most readily adapted to meet the altered circumstances.

Section II.—Notes of Lessons.

1. What principles should guide a teacher (*a*) in selecting, and (*b*) in determining the order of, the facts in an oral biographical lesson, or in a lesson on the geography of a district with which the pupils are never likely to be brought into close relation? Draw up notes of one such lesson, of half an hour's duration, in illustration of your theory.
2. Construct teaching-notes, giving details of method, of a half-hour lesson on
   (*a*) Grammar to Standard V.; or,
   (*b*) History to Standard IV.; or,
   (*c*) Arithmetic to Standard II.
3. Select a suitable subject for an object-lesson. State the standard to which you would give it, and the time you would allow for it; and construct original teaching-notes on the subject, giving prominence to the illustrations you would employ.

Section III.—Registers.

1. A school is closed for the first seven weeks of a quarter. The following is an abstract of a class register of attendance for the remaining weeks. Compile the weekly and quarterly returns:—

No.	Name.	Eighth Week.					Ninth Week.					Tenth Week.					Eleventh Week.					Twelfth Week.					Thirteenth Week.					Times Present.					Totals for Quarter.
		M.	T.	W.	Th.	F.	M.	T.	W.	Th.	F.	M.	T.	W.	Th.	F.	M.	T.	W.	Th.	F.	M.	T.	W.	Th.	F.	M.	T.	W.	Th.	F.	Week 8.	Week 9.	Week 10.	Week 11.	Week 12.	Week 13.	
1	A. B.		a/a																																	
2	C. D.							a/a															a/													
3	E. F.						a/a										/a						a/a	a/a	a/a	Left										
4	G. H.							/a				a/a	a/a	a/a	a/a								a/a													
5	I. J.	a/															a/a						a/a													
6	K. L.					/a		/a			a/												a/													
7	M. N.							/a									/a										a/a	a/a	a/a	a/a						
8	O. P.	a/									a/a	a/a	Left																							
9	Q. R.							a/a															/a				a/									
10	S. T.								a/									/a					a/a													
11	U. V.		/a					/a				a/a											a/													
12	W. X.			Admitted															a/a					/a	a/											
13	Y. Z.													Admitted									a/													
14	A. C.													Admitted									a/													
15	B. D.																									Admitted										
Number of attendances	M.																																			
	A.																																			
Total attendances ...																																				
Times school open...																																				
Average attendance																																				
Weekly roll number																																				

N.B.—For Working Average.—Attendances, • Times school open, • Working average for quarter, • Average roll, •

2. In what way may an ordinary register of attendance be most conveniently made a record also of the late-coming and of the early-going of pupils? What further use ought to be made of the information thus furnished?
3. What information should be given in an admission register, so that the said register may contain an abstract of each pupil's school career?

SECTION IV.—PRINCIPLES OF TEACHING.

1. What subjects of the elementary school course afford the best opportunities for cultivating the imaginative faculties of the pupils? Give a general outline of the way in which you would make one of these subjects subserve this purpose.
2. What are the special advantages and disadvantages (*a*) of oral, (*b*) of written examinations, which render the employment of both advisable in teaching?
3. "Teaching is both an art and a science." Discuss this statement, and from it deduce the necessary qualifications of a good teacher.

SECTION V.—METHODS OF TEACHING.

1. Define clearly what is meant by a "method," and state the characteristics of a good method.
2. How would you provide for the effective correction of composition exercises in a country school where the teacher is unassisted?
3. Explain fully your method of giving an ordinary writing lesson, or of teaching geographical definitions.

SECTION VI.—DISCIPLINE.

1. Some educationists assert that school punishment should never be arbitrary, but should always be the natural logical consequence of the misdoing. To what extent is this principle applicable in school-work, and what are the hindrances to its general application?
2. What means would you employ to give your pupils a proper sense of their mutual responsibilities as members of a society? What is the importance of doing this?
3. "The perfection of government is to effect the maximum of result with the minimum of machinery." Illustrate the application of this doctrine in school discipline.

SECTION VII.—GENERAL.

1. What special benefits are to be derived from grammar as a subject of elementary school education? How must it be taught to secure these advantages?
2. A distinguished educationist says: "I know that nine-tenths of those whom the University sends out must be hewers of wood and drawers of water; but, if I train the ten-tenths to be so, depend upon it the wood will be badly cut and the water will be spilt." Discuss the application of this to elementary school-work.
3. Write an essay on "The Special Value of Inductive Teaching."

CLASSES D AND E.—ELEMENTARY SCIENCE.

Time allowed: Three hours.

[NOTE.—Candidates are not to attempt more than ten questions. Female candidates, if proficient in Needlework, may substitute for this paper the paper on Domestic Economy and the Laws of Health; but passing in Science will not exempt them from passing in Needlework also.]

1. State the laws of gravitation. If a planet had half the mass of the earth and twice the diameter, what would be the weight of a mass of one pound upon its surface?
2. Describe how you would make experiments to illustrate the laws of motion. Explain the kinetics of a conical pendulum.
3. Suppose a set of cord and pulleys to be without weight and friction: make a sketch to illustrate the arrangement so that one pound shall balance six.
4. A body weighs six pounds in air; it floats in water, and requires two pounds to make it sink: what is its specific gravity?
5. Give examples of chemical affinity, of attraction of cohesion, of molecular attraction, and of magnetic and electrical attraction.
6. How is the velocity of sound in water or in a solid body ascertained?
7. How are the notes of an organ and of a concertina produced? Describe simple experiments to show that a succession of taps will produce a musical note.
8. What phenomena of light depend upon the fact of its rectilinear propagation?
9. Describe the camera used in taking photographs, and draw a diagram illustrating the formation of the image on the ground-glass plate.
10. If two pounds of steam, three pounds of ice, and ten pounds of water at 20° C. were mixed, what would be the temperature of the resulting water?
11. Give an account of some form of hygrometer, and illustrate your answer by a sketch.
12. Describe the formation of dew. Under what circumstances is it most copiously deposited?
13. Give a general account of magnetic induction.
14. Describe how a magnetic needle may be made to vibrate at will, although it be a hundred miles away.
15. Describe exactly what occurs during the burning of a candle.
16. What are the properties of carbonic acid? Describe two methods of preparing it.
17. Describe the germination of a seed.
18. Give a clear description of the mechanism of respiration.

Classes D and E.—Domestic Economy and Laws of Health.

Time allowed: Three hours.

[Note.—This paper is for female candidates who are proficient in Needlework, and, in consideration of this, are allowed, if they prefer it, to be examined in Domestic Economy and the Laws of Health, instead of in the general subject of Elementary Science. See the note on the Elementary Science paper.]

1. What are the various kinds of food needful for the proper nourishment of the body?
2. Describe a carbon filter. Why is carbon better than sponge or sand for filtering water?
3. How is the heat of the body kept up and regulated? What are some of the diseases produced by insufficient clothing?
4. Describe the structure of the skin, and state its functions. Why is it necessary it should be clean?
5. Why should rooms be well lighted and airy?
6. Give a general account of the uses of exercise, and of the most suitable kinds for persons of sedentary occupations.
7. How should meat be cooked so as to get all the juices out for beef-tea, &c., and how should it be cooked so as to keep the juices in?
8. Why is hot food generally better than cold food?
9. Give a general account of the management of a sick chamber in the case of a contagious disease.
10. Name the juices concerned in the process of digestion, and state the functions of each.

Class D.—English Grammar and Composition.

Time allowed: Three hours.

[All the sections of this paper must be attempted.]

I.

1. Point out and explain anything peculiar in the grammatical functions of the italicized words:—(*a*) Mother, what does *marry* mean? (*b*) Yet, *to say* truth, too late I thus contest; (*c*) They set him free without his ransom *paid;* (*d*) Who dares receive it *other?* (*e*) He went *the Saturday* after; (*f*) The *one* backed up the other; (*g*) *A* few cases deserve special mention; (*h*) Nor better was their lot *who* fled; (*i*) If each man do his *best;* (*j*) This rural life of *mine;* (*k*) It is right, *provided* he have done it; (*l*) And *creep* time ne'er so slow, yet it shall come; (*m*) His wife looked *from* behind him; (*n*) Ay, there *goes* a pair that only *spoil* each other.
2. Distinguish exactly the use of the following words in *-ing*:—(*a*) The city lies *sleeping;* (*b*) Be still, sad heart, and cease *repining;* (*c*) Then, *sighing,* she left her lowly shed; (*d*) I hear them *coming;* (*e*) Here are my letters *announcing* my intention; (*f*) Whilst *blessing* your beloved name, I'd waive at once a poet's fame; (*g*) These *writing* materials; (*h*) She was the mother of all *living;* (*i*) Think'st thou this heart could feel a moment's joy, thou *being* absent? (*j*) My father had, generally *speaking,* his temper under complete self-command; (*k*) There's no *getting* rid of him; (*l*) I have not the pleasure of *knowing* him.
3. State exactly the difference between a relative and a demonstrative, and give rules for the avoidance of ambiguity in the use of pronouns. If you notice any ambiguity or inelegance in the use of the pronouns in the following sentences, correct it, and give reasons for your correction:—(*a*) There is nothing which is possible which we cannot effect; (*b*) These orders being illegal, they are generally communicated verbally; (*c*) These I removed from the last edition, and embodied them in a small volume; (*d*) No one as yet had exhibited the structure of the human kidneys, Vesalius having only examined them in dogs; (*e*) A statute inflicting death may be and ought to be repealed if it be in any degree expedient, without its being highly so; (*f*) Mr. Disraeli delivered a rambling and disjointed string of jocosities, by no means equal to his last Irish speech, which rather wearied the House; (*g*) He has to guard against possible fraud by ponderous machinery, the protection against which is most expensive; (*h*) There are organizations so delicate that ruder minds cannot understand or appreciate them, and to whom, therefore, there is little use in applying for sympathy or comfort.

II.

1. Point out any word that is inaccurately used in each of the following, substitute the correct word, and distinguish the two words:—(*a*) His mission was to eliminate religion of all such and kindred rubbish; (*b*) Her future life, it has been reported, was virtuous and fortunate; (*c*) With Israel, the chosen nation, religion replaced morality; (*d*) Our interest in Persia is synonymous with that of the Persians; (*e*) It was only given verbally, and without witnesses; (*f*) Shakespeare, the mutual ancestor of Englishmen and Americans; (*g*) A man of whom it might be predicated that his political power would end with his political life; (*h*) It contributed a good deal to confirm me in the contemptible idea I had always entertained of Cellarius.
2. Break up the following sentence into short sentences, and rewrite it in such a way as to avoid its obscurities, ambiguities, inelegances, and inaccurate or obsolete usages: "And but for which accident (and to remember the dismal inequality of this contention, in which always some earl or person of great honour or fortune fell, when, after the most signal victory over the other side, there was seldom lost a man of any known family, or of other reputation than of passion for the cause in which he fell) I should not have wasted so much paper in mentioning an action of so little moment as was this of Bromicham: which I shall yet enlarge with the remembrance of a clergyman who was here killed at the entering of the town after he had not only refused quarter, but provoked the soldier by the most odious revilings and reproaches of the person and honour of the king that can be imagined, and renouncing all allegiance to him; in whose pockets were found several papers of memorials of his own scurrilous behaviour in such loose expressions as modest ears cannot endure."

III.

Give a full description of any humorous character you have come across either in life or in imaginative literature.

IV.

1. Spell the words dictated by the Supervisor.
2. Write and punctuate the passage dictated by the Supervisor.

CLASS D.—EXERCISE IN DICTATION AND SPELLING.

(Part of a Paper on English Grammar and Composition.)

IV.

1. Words to spell: eleemosynary, quiescent, square-rigged, peaceable, hypochondria, assize, parricidal, stoically, lieutenant, quarantine, innuendo, minion, ebullition, paroxysm, dragonnade, jeopardy.
2. "It is a pathetic sight and a striking example of the complexity introduced into the emotions by a high state of civilization—the sight of a fashionably drest female in grief. From the sorrow of a Hottentot to that of a woman in large buckram sleeves, with several bracelets on each arm, an architectural bonnet, and delicate ribbon-strings—what a long series of gradations! In the enlightened child of civilization the abandonment characteristic of grief is checked and varied in the subtlest manner, so as to present an interesting problem to the analytic mind. If, with a crushed heart and eyes half-blinded by the mist of tears, she were to walk with a too devious step through a door-place, she might crush her buckram sleeves too, and the deep consciousness of this possibility produces a composition of forces by which she takes a line that just clears the doorpost. Perceiving that the tears are hurrying fast, she unpins her strings and throws them languidly backward—a touching gesture, indicative, even in the deepest gloom, of the hope in future dry moments, when cap-strings will once more have a charm."—GEORGE ELIOT.

CLASS D.—ARITHMETIC.

Time allowed: Three hours.

1. How many times can seventeen thousand and sixty-eight be subtracted from forty-seven million six thousand and ninety; and what will be the remainder?
2. Multiply 16a. 2r. 14p. 10sq.yd. by $37\frac{1}{4}$.
3. If $16\frac{1}{2}$ ft. be taken as the unit of measurement, what number will express the polar diameter of the earth, which is 7,899 miles?
4. Find, by Practice, the value of 3 tons 12 cwt. 1 qr. 14 lb. at £2 16s. 3d. per cwt.
5. A rectangular section of land is half as long again as it is broad, and it contains 240 acres: find the expense of fencing it at 17s. 6d. per chain.
6. State and explain the rule for multiplying together two vulgar fractions.

   Simplify $\frac{4\frac{2}{5}-3\frac{5}{6}}{1\frac{7}{8}+2\frac{7}{9}} \times \frac{2\frac{3}{4}+3\frac{2}{3}}{2\frac{1}{12}-1\frac{5}{30}}$ of $16\frac{3}{4}$.
7. Multiply $36{\cdot}856$ by $2{\cdot}\dot{2}\dot{7}$, and divide the result by $\cdot\dot{4}\dot{1}\dot{2}$.
8. Find the value of $\frac{2}{9}$ of $\frac{5}{14}$ of 10s. 6d. − $3{\cdot}375$ of 4s. 2d. + $1{\cdot}2\dot{1}\dot{8}$ of 13s. 9d., and express it as the decimal of £2 2s. 3d.
9. Define *proportion*. What is meant by a *third proportional* to two numbers, and by a *mean proportional* between two numbers? Give examples.
10. If 11s. 3d. be paid for the carriage of $\frac{5}{16}$ cwt. for 420 miles, how far should $\frac{5}{6}$ cwt. be carried for £4 10s.?
11. The velocity acquired by a falling body is proportional to the square root of the height from which it has fallen, and it is 40 ft. per second when the body has fallen through 25 ft.: what will be the velocity when the body has fallen through 72 ft.?
12. If 1 metre = 39·36 inches, 1 kilogramme = $2\frac{1}{5}$ lb., and 9° Fahrenheit = 5° Centigrade, and if the work of raising a pound one foot be called a foot-pound, and that of raising a kilogramme one metre be called a kilogram-metre, express 902 foot-pounds per degree Fahrenheit in kilogram-metres per degree Centigrade.
13. Explain the difference between simple and compound interest.

    Find the amount at compound interest of £625 in $2\frac{1}{2}$ years, at 8 per cent. per annum, the interest being payable half-yearly.
14. If oranges be bought at the rate of sixteen for a shilling, how many must be sold for a shilling to gain 60 per cent.?
15. A person invests £11,900, partly in colonial $4\frac{1}{2}$ per cent. stock at $97\frac{1}{2}$, and partly in Consols (3-per-cents) at par: if he holds twice as much British as colonial stock, find the income that he obtains from the whole investment.

CLASS D.—GEOGRAPHY.

Time allowed: Three hours.

1. What are the principal causes which affect the climate of a place?
2. Where do the trade-winds blow, and how are they caused? How do you account for land and sea breezes?
3. Draw a map of both islands of New Zealand, showing their relative position and (approximately) their relative sizes. Mark the names of the capes and of the inlets.

4. Describe the position of the following towns in the United Kingdom, and mention anything for which any of them are remarkable: Wigan, Londonderry, St. Andrews, Aberdeen, Swansea, Salisbury, Sunderland, Cork, Dundee, Bath, Limerick, Chester.
5. Describe the river system of Asia.
6. Describe the courses of two of the following rivers, giving the tributaries which they receive and the more important towns on their banks: (1) Danube, (2) Rhine, (3) Mississippi, (4) Ganges.
7. Describe as accurately as you can the positions of the following places in Australia: Maitland, Rockhampton, Perth, Port Augusta, Sale, Hunter River, Cape Otway, Port Darwin, Encounter Bay, Botany Bay.
8. Enumerate the British possessions in Asia or near its coast.
9. Give a brief description of the physical features of British North America.

Class D.—English History.

Time allowed: Three hours.

[Candidates may omit five questions.]

1. Give an account of the rise of Egbert.
2. Sketch the history of the Danish rule in England, and account for its termination.
3. Did William the Conqueror introduce English feudalism? Give an account of it.
4. Investigate the effect of great religious revivals on the political history of England.
5. What were the causes and results of the loss of Normandy by King John?
6. Why may our present parliamentary system be said to commence definitely in the reign of Edward the First?
7. What were the purpose and results of the Statute of Labourers in the reign of Richard the Second?
8. Discuss the character and policy of Henry the Eighth.
9. Sketch the effects of the great discoveries of the fifteenth and sixteenth centuries on England.
10. Give an account of the struggle between Charles the First and his Parliament till the beginning of the Civil War.
11. How did Cromwell deal with Ireland and Scotland?
12. Describe briefly the great naval victories of England during the latter part of the eighteenth century.
13. Select any five of the following, and define the part each played in English history: Tostig, Lanfranc, Baliol, Gaveston, Warbeck, Sir Thomas Wyatt, Monk, Marlborough.

Class D.—Latin (Optional).

Time allowed: Three hours.

1. Decline, in the singular number only—*Iste, unus, alius, idem.* Give the genitives, singular and plural, of *domus, merces, aries, iter, os, senex;* and the ablatives singular of *mare, navis.*
2. Give a rule for the use of *e* or *i* as the termination of the ablative singular of adjectives and participles.

   Translate into Latin—

   When Augustus was reigning (*impero*, ablative absolute).
   By prudent counsel.
   With better success.

   Give the nominatives singular masculine of the comparatives and superlatives of *malus, pius, honorificus.*
3. What are the supines, and how are they used?

   Translate into Latin—

   He said that the city would be destroyed;

   and explain fully the syntax of the Latin expression for the future infinitive passive.
4. Express in Latin—

   Who am I?
   Who do men say that I am?
   You know who I am.
   What was I to say?
   I did not know what to say.
   I had nothing to say.
5. When can the ablative without *quam* be used after a comparative?

   Express in Latin—

   There is nothing more pleasant than friendship.
   Cæsar benefited (*prosum*) his country more than Pompey.
   All men believe that treachery (*proditio*) is baser than any crime.
6. Translate—

   In Cumano nuper quum mecum Atticus noster esset, nuntiatum est nobis a M. Varrone, venisse eum Roma pridie vesperi, et, nisi de via fessus esset, continuo ad nos venturum fuisse. Quod quum audissemus, nullam moram interponendam putavimus, quin videremus hominem nobiscum et studiis eisdem et vetustate amicitiae conjunctum. Itaque confestim ad eum ire perreximus: paullumque quum ejus villa abessemus, ipsum ad nos venientem vidimus: atque illum complexi, ut mos amicorum est, satis eum longo intervallo ad suam villam reduximus.

Class D.—Algebra (Optional).

Time allowed: Three hours.

1. From the number which, when multiplied by itself, gives the sum of the numbers three times a and twice b, is subtracted the quotient obtained by dividing the number a by the number b, and the remainder is multiplied by itself: write down the algebraical expression for the result, and find its value when $a = 5\frac{1}{3}$ and $b = 4{\cdot}5$.

   Explain the meaning of $\frac{3a^2}{b} - \sqrt{\frac{b}{a}}$.

2. From $[1-(2a+bx-bc+d)x]a^2$ take $(abc-a^2c)ax+2a(a+d)$.
3. If $s=\frac{1}{2}(a+b+c)$, prove that
   $\frac{1}{2}(b+c-a)\times\frac{1}{2}(c+a-b)\times\frac{1}{2}(a+b-c)=s^3-(a+b+c)s^2+(ab+ac+bc)s-abc$.
4. Divide $x^6+(a^2-2b^2)x^4-(a^4-b^4)x^2-a^6-2a^4b^2-a^2b^4$ by $x^2-a^2-b^2$.
5. Simplify—
   $3a+2b-\{-2c-4[a+b-2(a-b+c)]-2a\}$;
   $\frac{7a-5b}{2}-\frac{1}{3}\left\{2a-3b-\left[\frac{a+b-c}{2}-\frac{1}{3}(a+2c)\right]+c\right\}$.
6. Simplify—
   $\frac{a(xy-z)}{xy+z}-\frac{a(xy+z)}{xy-z}$;
   $\left(\frac{6ab}{5c}+\frac{b^2}{4ac}\right)\times\frac{10a^2c}{48a^2b+10b^2}$;
   $\frac{a}{4a+4}-\frac{2a}{a+2}+\frac{9a}{4(a+3)}-\frac{a-1}{(a+2)(a+3)}$.
7. Solve the equations—
   $\frac{a-b}{x-c}=\frac{a+b}{x+2c}$;
   $\frac{2x+1}{29}-\frac{402-3x}{12}=9-\frac{471-6x}{2}$.
8. On a certain journey I find that, if I travel 5 hours at the rate of x miles an hour, I fall short of my destination by y miles; but if I travel 3 hours at y miles an hour, I go x miles beyond the place: find the relation between x and y.

Class D.—Euclid (Optional).

Time allowed: Three hours.

1. Define *parallel straight lines*, and a *parallelogram*. What is a parallelogram called when its angles are right angles? Quote the axiom on which Euclid has based his treatment of parallel straight lines.
2. To bisect a given rectilineal angle, that is, to divide it into two equal angles.

   Explain why, in the construction of the figure, the equilateral triangle is to be described with its vertex turned away from the given angle.
3. If two triangles have two sides of the one equal to two sides of the other, each to each, but the angle contained by the two sides of one of them greater than the angle contained by the two sides equal to them of the other, the base of that which has the greater angle shall be greater than the base of the other.

   Prove that, if a line be drawn bisecting another line at right angles, any point situated in the former line is equidistant from the extremities of the latter, and any point not situated in the former line is at unequal distances from the extremities of the latter.
4. All the interior angles of any rectilineal figure, together with four right angles, are equal to twice as many right angles as the figure has sides.

   By how much does one of the interior angles of a regular octagon exceed an interior angle of a regular hexagon?
5. To describe a parallelogram that shall be equal to a given triangle, and have one of its angles equal to a given rectilineal angle.
6. If a straight line be divided into any two parts, the square of the whole line is equal to the squares of the two parts together with twice the rectangle contained by the parts.

   In a right-angled triangle, if a perpendicular be dropped from the right angle on the hypothenuse, prove that the square on this perpendicular is equal to the rectangle contained by the segments of the hypothenuse.
7. In every triangle, the square of the side subtending either of the acute angles is less than the squares of the sides containing that angle by twice the rectangle contained by either of these sides and the straight line intercepted between the acute angle and the perpendicular let fall upon it from the opposite angle.

Class D.—Chemistry (Optional).

Time allowed: Three hours.

1. Write down three equations to show how oxygen is made.
2. Explain how water may be formed from its elements. How much of each of its constituent elements is there contained in 100 grammes of water?
3. Write down the names and symbols of the oxides of nitrogen. In what respects does atmospheric air differ from these?
4. State what you know of chlorine under the following heads: (1) Its source, (2) its manufacture, (3) its properties, (4) its uses or applications.

5. Describe the process for the manufacture of one of the following substances: Chloride of lime, phosphorus, sulphuric acid.
6. Write down the names and symbols of all the acids that contain (*a*) chlorine, (*b*) phosphorus, (*c*) nitrogen.
7. Explain how nitric acid is made (giving equations).
8. In what respects do chlorine, bromine, and iodine resemble each other?
9. What are the products of the complete combustion of the following substances: Hydrogen, carbon, phosphorus, marsh gas (CH_4)?
10. What becomes of the substance of a diamond when it is being burnt?
11. In what way could you show that in breathing we exhale carbonic acid and the vapour of water?
12. In what different ways could you remove the oxygen from atmospheric air? What are the properties of the gas that would then be left?

CLASS D.—ELECTRICITY (Optional).

Time allowed: Three hours.

1. Describe how to imitate the phenomena of magnetism by means of a copper spiral carrying an electric current.
2. Describe Faraday's apparatus for investigating specific inductive capacity.
3. Describe and explain an ordinary frictional electric machine.
4. Describe how to charge two Leyden jars by "cascade" so that one is negative and the other positive.
5. Describe Sir William Thomson's quadrant or portable electrometer.
6. What are the reactions of a Grove's cell and a Daniell's cell? What experiments are these cells respectively suitable for?
7. Describe the telephone and the microphone.
8. Give an account of one form of arc and one form of incandescent electric light.
9. Give an account of one form of telegraph in which the letters of the alphabet are either printed or indicated on a dial.
10. Describe the thermo-electric pile and galvanometer.

CLASS D.—SOUND AND LIGHT (Optional).

Time allowed: Three hours.

1. Give an account of the organ of hearing.
2. What are the laws of the vibrations of strings? If a vibrating string be stretched with four times its original weight, what length must it be to make the same number of vibrations as it did before the tension was increased?
3. Describe two methods for determining the velocity of sound in air.
4. Describe all the essentially different modes of producing interference of sound.
5. Draw a diagram illustrating an annular eclipse of the sun.
6. Draw a diagram illustrating how it is that a stick dipped obliquely in water appears bent.
7. A beam of white light is made up of green and red colours only, and is polarized. Describe how you would analyse the beam to show fully its composition.
8. Describe a camera lucida and a camera obscura.
9. Draw a diagram illustrating the formation of the image in a compound microscope.
10. Describe either Clerk Maxwell's or Helmholtz's apparatus for investigating the synthesis of colour.
11. Show how an image is produced in a silvered ball.

CLASS D.—HEAT (Optional).

Time allowed: Three hours.

1. What is the coëfficient of expansion of a perfect gas? How has it been determined?
2. What is the usual method of determining the specific heat of a substance? Describe Bunsen's calorimeter.
3. Define the coëfficient of conductivity. How has the absolute coëfficient of conductivity of metals been determined?
4. State generally the effect of heat upon water. Commence the description with the water in the condition of ice at a temperature of −20°C.
5. How would you make experiments to show that water is a very bad conductor of heat?
6. Give an account of all the essentially different methods used for the reduction of temperature.
7. Give a full account of the formation of clouds.
8. Describe the apparatus by which the heat of combustion of coal and other substances has been determined.
9. If ten pounds of iron at 1,000° C., twenty pounds of water at 10° C., two pounds of ice at 0° C., and one pound of steam at 100° C., were placed together, what would be the final temperature?
10. Describe Melloni's apparatus used in the investigation of radiant heat.

CLASS D.—BOTANY (Optional).

Time allowed: Three hours.

1. State the differences between a rhizome, a corm, a bulb, and a tuber.
2. Describe the different forms of venation found in leaves, giving diagrams.
3. Describe the different parts of the embryo of a flowering plant.
4. Of what elements are cellulose and protoplasm formed, and how does each of these substances occur in plants?

5. What is meant by the term "tissue"? Describe all the different kinds of vegetable tissue that you know, giving diagrams.
6. Describe the flowers and ovaries of the wall-flower, the pea, the rose, and the primrose.
7. Describe the process of fertilization in a flowering plant.
8. Why do most living plants give off oxygen when exposed to sunlight; and what are the exceptions to this rule?
9. Explain fully the distinctions between respiration and transpiration in plants.

CLASS D.—GEOLOGY (Optional).

Time allowed: Three hours.

1. How are quartz, felspar, and calcite distinguished from each other, and in what kind of rocks does each occur?
2. What are the differences between surface-soil, alluvium, and rock?
3. Distinguish between sedimentary and eruptive rocks, as to composition, texture, and position.
4. What is meant by the dip and strike of a rock?
5. Explain the terms "foliation" and "lamination," and state in what rocks these structures are found.
6. Describe the structure and origin of a volcanic mountain.
7. Describe the different effects of sub-aërial and marine denudation.
8. What are the proofs that the sedimentary rocks were formed under water, and how have they become hardened?
9. What is the origin of coal? Give reasons for your opinion.

CLASS D.—FRENCH (Optional).

Time allowed: Three hours.

1. Before each of the following names of rivers put the appropriate definite article: *Rhin, Tamise, Moselle, Danube, Tibre, Seine, Meuse, Vistule, Rhône, Garonne.*
2. Put the following words in the feminine: *Jardinier, jumeau, abbé, inspecteur, chanoine, nègre, enchanteur, époux, danseur, artiste.*
3. Compare some adjective—say, *tendre*—giving the comparatives of superiority, equality, inferiority; also the superlative relative and a superlative absolute.
4. In indicating the number of a book, a chapter, or a page, what numbers do the French use?
5. How are questions asked when the subject of the verb is a noun? *Example?* Has John learnt his lessons?
6. Take the verb *apercevoir*, give its principal parts, and from these form the whole verb, giving the first person singular only, unless where others are necessary to show how the verb is formed. State in what respects verbs of the third conjugation differ from other verbs in the formation of certain tenses.
7. When is an *s* put at the end of the second person singular of the imperative?
8. Take the verb *se tromper*, and conjugate in full the present indicative affirmatively, the future interrogatively, and the imperative negatively.
9. Conjugate in full *il y a.*
10. Explain when the preterite definite should be used, and when the preterite indefinite.
11. What difference is there between *avant* and *devant, après* and *d'après, vers* and *envers;* also between *à la ville, dans la ville,* and *en ville?*
12. What difference is there between *chaque* and *chacun?*
13. What are the rules relating to the agreement of adjectives with the word *gens?*
14. After what words is *on* generally preceded by *l'*, and when is this *l'* to be omitted though these words precede? Are words agreeing with *on* always put in the masculine and singular?
15. What verb must be used in French in speaking of the weather—as, "It is warm;" "It is fine weather," &c.?
16. Translate, "The books we have read," comment on the translation, and account for the difference between the English and the French mode of expressing one's-self in such sentences as these.
17. Take the sentence, *La jument s'est cabrée et elle s'est cassé la jambe;* and explain why the first past participle (*cabrée*) varies, and the second (*cassé*) does not.
18. Which part of the verb is used after prepositions? There is one exception to the general rule: which is it?
19. Translate into English—

Oberlin ne se borna pas à dire à ses paroissiens ce qu'ils avaient à faire pour améliorer leur position. Connaissant la répugnance des campagnards à se laisser instruire par des gens de la ville, sur des choses qu'ils croient savoir mieux qu'eux, il résolut de prêcher d'exemple. Des champs dépendant de la cure se trouvaient placés sur des sentiers très-fréquentés. Il y fit des plantations de toute sorte d'arbres fruitiers—poiriers, pommiers, pruniers, cerisiers—dont il s'était procuré des tiges; il y sema aussi du froment, et il attendit avec impatience le résultat de cette prédication muette. Il ne tarda pas à se montrer; les passants s'arrêtaient devant les plantations du pasteur, les considéraient avec curiosité, en admiraient la belle apparence, et pensaient en eux-mêmes que leurs champs faisaient bien triste figure à côté de ceux-là. Ils vinrent tous, l'un après l'autre, demander à Oberlin comment il s'y prenait pour tirer un si beau produit de terres si stériles. C'est là que le bon pasteur les attendait. Il ne manqua pas de leur rappeler que, même par rapport aux choses extérieures, tout don parfait vient d'en haut, mais il leur fit comprendre aussi l'importance d'une activité dirigée par l'intelligence. On commença dès-lors à prêter l'oreille à ses conseils, et il s'efforça tout d'abord d'améliorer la culture des pommes de terre.

Also—

La Vérité toute nue
Sortit un jour de son puits.
Ses attraits par le temps étaient un peu détruits;
Jeunes et vieux fuyaient sa vue:
La pauvre Vérité restait là morfondue
Sans trouver un asile où pouvoir habiter.
A ses yeux vient se présenter
La Fable, richement vêtue,
Portant plumes et diamants,
La plupart faux, mais très-brillants.
"Eh! vous voila! bonjour," dit-elle.
"Que faites-vous ici seule sur un chemin?"

La Vérité répond: "Vous le voyez, je gèle.
Aux passants je demande en vain
De me donner une retraite;
Je leur fais peur à tous. Hélas! je le vois bien,
Vieille femme n'obtient plus rien."
"Vous êtes pourtant ma cadette,"
Dit la Fable; "et, sans vanité,
Partout je suis fort bien reçue.
Mais aussi, dame Vérité,
Pourquoi vous montrer toute nue?

Cela n'est pas adroit. Tenez; arrangeons-nous.
Qu'un même intérêt nous rassemble:
Venez sous mon manteau; nous marcherons ensemble:
Chez le sage, à cause de vous,
Je ne serai point rebutée;
A cause de moi chez les fous
Vous ne serez point maltraitée.
Servant par ce moyen chacun selon son goût,
Grâce à votre raison et grâce à ma folie,
Vous verrez, ma sœur, que partout
Nous passerons de compagnie."

Class D.—German (Optional).

Time allowed: Three hours.

1. What are the terminations of feminine nouns?
2. Decline the following nouns, with the definite article: *Der Hund, die Mutter, das Lied, die Frau, das Herz, der Monat, das Haus, der Doctor.*
3. Give the comparative and superlative of *fromm, hoch, nah*, and state when the comparison must be expressed by *mehr* and *am meisten*, &c.
4. Give the German for—first, second, third; firstly, secondly, thirdly; of one kind, of two kinds, of three kinds; simple, twofold, threefold; a half, a third, one and a half.
5. What change do the possessive pronouns undergo when attached to *wegen, halben, willen?*
6. Give the infinitive, imperfect, and past participle of the verbs *werfen, loben, stehen, studiren, senden.*
7. Give the second person singular of the imperative of *erlöschen, bitten, essen, lesen, genesen.*
8. Give the present indicative, the present subjunctive, the imperfect indicative, and the imperfect subjunctive of *wollen, können, mögen, dürfen.*
9. Which prepositions govern the accusative only?
10. Which are the adjectival suffixes?
11. Translate into German, and decline—The high table; the bitter drink; Charles the Twelfth; a stranger; the stranger.
12. State the difference between *wann, wenn*, and *als*. Give an example for each of these words.
13. Translate—That is quite agreeable to me. I am sure of that. Do not be afraid of the dog. He is proud of his wealth. She is jealous of her sister.
14. Translate—I am dying of thirst. I beg your pardon, Sir. You can go by land, but I will go by water. She did it from vexation. Where will you dine to-day?
15. Translate into English:—

(A.) Den meisten, oder, dass wir es recht sagen, den einzigen wirklichen Kummer verursachte unserer Familie der Gedanke, dass sie den Verkauf ihres lieben kleinen Hauses nicht würden abwenden können. Sie waren Alle, bis auf die Mutter darin aufgewachsen, und jede Stelle, jedes Plätzchen im Hause war ihnen lieb und werth, denn es fand sich keines, an das sich nicht angenehme Erinnerungen geknüpft hätten. Mit den grössten Opfern hätten sie das kleine Besitzthum behaupten mögen. Vater Müller war bei dem Geheimerath Werthlos gewesen, um ihn zu bitten, doch nur ein Jahr oder zwei Geduld und Nachsicht mit ihm zu haben—aber der böse Mann, der nur darauf ausging, Rache an dem redlichen Kopisten zu nehmen, war unerbittlich geblieben. Der schwere Kampf, den Vater Müller mit sich selbst gekämpft hatte, ehe er sich dazu entschliessen konnte, das Mitleid seines Verderbers in Anspruch zu nehmen, war nun also ganz vergeblich gekämpft, und die Mutter musste fleissig trösten, um die dadurch herbeigeführte Verstimmung des Vaters zu der gewöhnlichen stillen Ruhe und Freudigkeit zurückzuführen. Vater Müller, um nichts zu versäumen, den drohenden Verlust abzuwenden, war ein Mal, fünf Mal, zehn Mal zu allen seinen Bekannten gelaufen, um von irgend Einem das nöthige Kapital geborgt zu erhalten, aber auch die sauern Gänge hatten zu keinem günstigen Erfolge geführt. So rückte denn der Tag, der die Familie aus ihrem Häuschen treiben sollte, immer näher heran, und mit stiller, heimlicher Wehmuth ruheten die Augen Aller auf den traulichen vier Wänden, in denen sie so manches herbe und freudige Geschick wie es eben der liebe Gott sandte, erfahren hatten.

(B.) So zieht das edle Paar, stets fröhlich, wach und munter,
Bei Sonnenschein und Sternenlicht
Drei Tage schon den Libanon hinunter;
Und wenn die Mittagsglut sie auf die Scheitel sticht,
Dient hohes Gras im Schatten alter Cedern
Zum Ruheplatz; indess in bunten Federn
Das leichte Volk der Luft die Silberkehlen stimmt
Und traulich Theil an ihrer Mahlzeit nimmt.

Am vierten Morgen lässt ein kleiner Haufen Reiter
Sich ziemlich nah' auf einer Höhe sehn.
Es sind Araber, spricht zu Hüon sein Begleiter,
Und aus dem Wege dem rohen Volke zu gehn,
Wo möglich, wäre wohl das Beste;
Ich kenne sie als unverschämte Gäste.
Ei, ei, wo denkst du hin? erwidert Siegwins Sohn,
Wo hörtest du, dass Franken je geflohn?

Die Söhne der Wüste, magnetisch angezogen
Von Hüons Helm, der ihnen im Sonnenglanz
Entgegen blitzt, als wär' er ganz
Karfunkel und Rubin, sie kommen mit Pfeil und Bogen,
Den Säbel gezückt, in Sturm heran geflogen.
Ein Mann zu Fuss, ein Mann zu Pferd,
Scheint ihnen kaum des Angriffs werth;
Allein sie fanden sich betrogen.

By Authority: George Didsbury, Government Printer, Wellington.—1883.