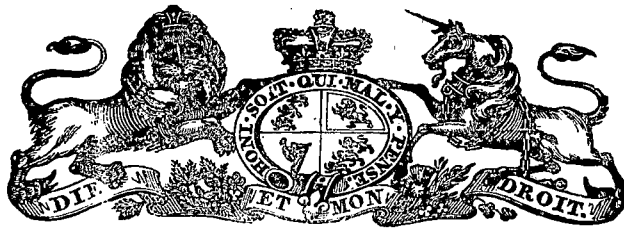


(No. 51.)



1875.

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T A S M A N I A.

H O U S E O F A S S E M B L Y.

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DEGREE OF ASSOCIATE OF ARTS :

EXAMINERS' REPORT, 1874.

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Laid upon the Table by the Attorney-General, and ordered by the House to be printed, August 11, 1875.



## TASMANIAN COUNCIL OF EDUCATION.

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### DEGREE OF ASSOCIATE OF ARTS—SEPTEMBER, 1874.

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IN conformity with the Rules and Regulations of the Tasmanian Council of Education, the Council has directed the publication of the names of the Candidates who have passed the Examination for the Degree of Associate of Arts to the satisfaction of the Examiners :—

#### FIRST CLASS.

WILLIAM HARVEY BUCKLAND, Hutchins School, Hobart Town. Awarded the Council's Gold Medal as Senior Associate of the year, the Council's First Prize of the value of £10 each for Latin, Greek, and Mathematics, and Second Prize of the value of £5 for French.

GEORGE HENRY REILLY, Hutchins School, Hobart Town. Awarded the Council's Prize of the value of £5 for Natural Philosophy.

MORTON JOHN CECIL ALLPORT, Horton College, Ross. Awarded the Council's Prize of the value of £5 for Geology.

HERBERT BURGESS BARRETT, High School, Hobart Town. Awarded the Council's Second Prize of the value of £5 each for Latin and Greek.

WILLIAM ANDREW BAYLEY BIRCHALL, Church Grammar School, Launceston. Awarded the Council's First Prize of the value of £10 for French.

#### SECOND CLASS.

THOMAS AUGUSTIN LEWIS, Church Grammar School, Launceston. Awarded the Council's Second Prize of the value of £5 for Mathematics.

ADAM TURNBULL TAYLOR, High School, Hobart Town.

STEPHEN KENNARD CHAPMAN, High School, Hobart Town. Awarded a Prize of the value of £5 for English.

WILLIAM TARLETON, Hutchins School, Hobart Town.

ROBERT WELLESLEY LETHBRIDGE, Horton College, Ross.

SAMUEL WILLIAM TAYLOR, High School, Hobart Town.

ARTHUR DENISON WATCHORN, City School (Mr. Pike's), Hobart Town.

#### THIRD CLASS.

HENRY FLINDERS FORD, High School, Hobart Town.

The Council has further directed the publication of the names of the under-mentioned Candidates over the age of 19 years, who have passed the Examination for the Degree of Associate of Arts to the satisfaction of the Examiners, and upon whom the Degree has been conferred accordingly :—

#### THIRD CLASS.

HARRIET ELIZABETH MAYSON. Private Study.

EMMA JANE IRONSIDE, Mrs. Barrett's School, New Town.

By Order of the Council,

GEO. RICHARDSON, *Secretary.*

Hobart Town, 24th September, 1874.

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## EXAMINERS' REPORT.

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MR. PRESIDENT AND MEMBERS OF THE TASMANIAN COUNCIL OF EDUCATION.

THE Examiners appointed by you to conduct the Examination for the Degree of Associate of Arts for the year 1874 have the honor to report as follows:—

The Preliminary Examination was held on Thursday, the 2nd September.

The number of Candidates who presented themselves was larger than that in any previous year. There were twenty-two in all, of whom four were females. Seventeen male and three female Candidates succeeded in passing.

On the several parts of the Preliminary Examination the Examiner has to report—

(1.) ARITHMETIC.—Two Candidates failed. Of the remainder, six did without mistake all the eight sums set; four did seven, and five did six correctly. The remaining five just succeeded in satisfying the requirements of the Examination. Too many, six in all, blundered over the simple process of expressing by figures a number given in words. Still, on the whole, the work was fair, showing some advance both in neatness and in correctness.

(2.) ENGLISH.—The analysis was uniformly well done: the parsing accurate, and the reading aloud, and the writing from dictation satisfactory. Only one Candidate failed in this branch of the Examination, having neglected to do any of the parsing, apparently from an oversight.

(3.) HISTORY OF ENGLAND.—All passed: the majority did creditably, and one obtained full marks.

(4.) GENERAL GEOGRAPHY.—Questions fairly answered, four of the Candidates gaining every attainable mark.

Considering the number under examination, this may be accounted as the best Preliminary Examination yet held.

We have now to report on the Ordinary Examination, which commenced on Tuesday, the 8th September, and concluded on Tuesday, 15th.

Two papers, occupying about 6½ hours, were given each day, till the last, for which one only remained.

Of the twenty Candidates who passed the Preliminary Examination, four were over the age prescribed by the Regulations; and of their work, therefore, no account is taken in the reports on the several subjects of Examination which are subjoined.

I. ENGLISH, INCLUDING HISTORY AND GEOGRAPHY.—Presented by all. Failed, none. Passed, sixteen; with credit, seven. Full marks, 1100. Highest obtained, 808. Average of all who passed, 702. This average is 47 marks above that of last year; but the value of the subject has been raised 100 marks.

(a.) *The English Language*.—The paper set contained original composition, analysis, questions on the prescribed books, and on the grammar and structure of the language. The general average of the compositions was fair. In none were there any gross faults either of spelling or of grammar; but, regarded as specimens of English composition on a familiar subject, they varied exceedingly in merit. The best was that sent in by a young lady, one of the senior Candidates; but those of Chapman and Lewis were nearly as good.

Strangely enough, the two best analyses were furnished by the two Candidates who did the poorest specimens of composition. The passage from Bacon, given for analysis, was a somewhat crabbed and difficult one, and on the whole was fairly rendered; but the analyses lacked precision and fulness of detail. The questions on the books prescribed were admirably done, showing very careful preparation; but those on the grammar and structure of the language were not well answered. For instance, few of the Candidates had any idea that "such" is a compound word, answering precisely in formation as well as in meaning to the Latin "talis," or that the pronominal word "own" is really the perfect participle of the old verb meaning to have, and corresponding therefore in every particular to the German "eigen." Again, though Candidates had learnt in many instances the derivation of words, they do not appear to have grasped the principles of formation and change, which make such derivations as *scorch* from *excorticare*, to take the bark

off, not merely guesses from accidental similarity of sound, but scientific certainties. It is never too early to begin thus, from familiar words, to teach the elements of comparative grammar and comparative philology.

(b.) *History*.—The knowledge displayed was very creditable, the style of answering less satisfactory. Candidates generally might have obtained more marks for briefer but more methodical answers. The papers of S. and A. Taylor deserve special commendation, for the fulness and correctness of their answering.

(c.) *Geography*.—Papers fair; very few discreditable blunders. The weakest point, the ignorance of the relative position of well-known places on the surface of the earth. This is proved by the general failure to give even approximately their latitude and longitude.

II. *LATIN*.—Presented by all. Failed, 2. Passed, 14; with credit, 5. Full marks, 800. Highest obtained, 666. Average 505, an improvement both upon last year and upon 1871.

There is little fault to find with the Grammar Questions, or with the translations from, or questions upon, the prescribed Books; those upon the Odes of Horace in particular being admirably done: the composition, however, is very far from being what it ought. The verse, which will always be rather an ornament than an integral part of the examination, was attempted by nine only; and with moderate success by three only—Buckland, Barrett, and Lewis. But the prose, which all should attempt and do grammatically, at least, was far below the standard which should be attained. To one only—Buckland—could three-fourths of the marks be awarded; and only three others—Birchall, Barrett, and Reilly—obtained half-marks. Of the compositions of the remainder it may be said, generally, that even when not disfigured by grammatical blunders, they showed little comprehension of the genius or idiom of the language. The Examiner is bound, however, to notice considerable improvement in the translation of a piece of Latin, which the Candidates had not before seen.

III. *GREEK*.—Presented by 14. Failed, 3. Passed, 11; with credit, 4. Full marks, 800. Highest obtained, 653. Average 504, nearly the same as last year's, which was 511.

Book work, as in Latin, on the whole good. Nine only attempted an easy passage at sight, and of these only four succeeded in doing it at all well. Short, easy sentences, given for re-translation into Greek, were done well by Buckland, and fairly by Reilly, Barrett, and Birchall. The rest shewed little power to apply the grammar and the vocabulary, which the rest of their papers shewed that they had learnt.

IV. *FRENCH*.—Presented by all. Failed, 3. Passed, 13; with credit, 4. Full marks, 600. Highest obtained, 488. Average 349, as against 363 last year.

The latter part of the paper, consisting of questions on the prescribed books, was, as in Latin and in Greek, very fairly answered throughout; but the former part, consisting mainly of original work, was attempted with widely varying success. The Examiner has to report very favourably of the general style and accuracy of the translations at sight from French into English, which shewed considerable power over the language; but was not prepared for the great falling off which he found in the translation from English into French. The compositions of Buckland and Birchall were really good, and that of Lewis fair: the rest ranged from indifferent down to bad. Birchall alone did creditably the question set to test the Candidates' knowledge of common French idioms. Taking the paper as a whole, it may be said that, while most of the Candidates have such a knowledge of French as would enable them to read French works intelligently with but little help, very few among them are at all able to translate into or compose correctly in French.

V. *GERMAN*.—Presented by one Candidate only, who failed to pass.

VI. *PURE MATHEMATICS*.—Presented by 16. Failed, 2. Passed, 14; with credit, 4. Full marks, 800. Highest, 533. Average 316, a falling off both as compared with last year and 1871.

(a.) *Arithmetic*.—Work generally fair; Buckland's particularly good, as proved by the fact that out of 16 sums he did 15 without a single slip.

(b.) *Algebra*.—The general average of the work barely up to the mark, though only one or two shewed ignorance of first principles. The answering of Allport, Buckland, S. Taylor, Lewis, Birchall, and Reilly is deserving of commendation.

(c.) *Euclid*.—With one exception, all who passed in mathematics wrote out the propositions from Euclid clearly and correctly; but only three—Reilly, Lewis, and Allport—made anything of the easy deductions which were set.

(d.) *Higher Euclid and Trigonometry*.—Attempted by few. Buckland, Lewis, and Allport did fairly, in the order named.

VII. *NATURAL PHILOSOPHY*. Presented by 7. Failed, 2. Passed, 5; with credit, 3. Full marks, 250. Highest, 152. Average 131.

A better result than last year's. Reilly's work was very fair, and that of Buckland and Lewis good. This however applies mainly to the book work, as the problems depending upon it were by no means well done. Possibly, Candidates have not sufficient time to work out numerous examples, and thus thoroughly master the various applications of the principles taught them.

VIII. CHEMISTRY.—Presented by two Candidates, neither of whom succeeded in attaining the standard fixed for passing.

The Examiner reports a very great falling off from last year's results: that not one single question on the paper was well answered by either Candidate. He attributes this unsatisfactory result in a great measure to the absence of practical instruction: without which the study of text books alone cannot teach Chemistry.

IX. GEOLOGY.—One Candidate only, who passed with credit, obtaining more than half marks.

On adding together the marks obtained by the Candidates in the several subjects presented by them, it appeared that of the sixteen, thirteen had passed: and accordingly at noon on Thursday, the 17th, the following List was published:—

FIRST CLASS.—		Buckland, W. H. ....	3082
		Reilly, G. H. ....	2894
		Allport, M. J. C. ....	2634
		Barrett, H. B. ....	2617
		Birchall, W. A. B. ....	2567
SECOND CLASS.—		Lewis, T. A. ....	2328
		Taylor, A. T. ....	2324
		Chapman, S. K. ....	2245
		Tarleton, W. ....	2226
		Lethbridge, R. W. ....	1986
		Taylor, S. W. ....	1964
		Watchorn, A. D. ....	1950
THIRD CLASS.—		Ford, H. F. ....	1822

The following Table shews how this Examination bears comparison with former years:—

	No. of Candidates.	Rejected at Preliminary.	Admitted to A.A. Examination.	Passed.	First Classes.	Second Classes.	Third Classes.	Average of highest Marks obtained.	Average of all who passed.	Highest Marks yet gained.	Highest average yet reached.
1860-1871	114	13	91	84	40	19	25	2637	2095	3303	2430
1872	11	0	11	9	3	1	5	2821	2075		
1873	14	2	12	10	4	1	5	3295	2228		
1874	17	1	16	13	5	7	1	3082	2357		

The Examination, when the number of Candidates under 19 is taken into consideration, may be pronounced a satisfactory, if not a brilliant one.

The Prizes which by the Council's Regulations must be awarded are—

The Council's Gold Medal .....	W. H. Buckland.
First Prize, Latin .....	W. H. Buckland.
First Prize, Greek .....	W. H. Buckland.
First Prize, French .....	W. A. B. Birchall.
First Prize, Mathematics .....	W. H. Buckland.

The following Prizes, which by the Council's Regulations are left to the discretion of the Examiners, have been thus awarded:—

Second Prize for Latin .....	H. B. Barrett.
Second Prize for Greek .....	H. B. Barrett.
Second Prize for French .....	W. H. Buckland.

Second Prize for Mathematics .....	T. A. Lewis.
Prize for English .....	S. K. Chapman.
Prize for Natural Philosophy .....	G. H. Reilly.
Prize for Geology .....	M. J. C. Allport.

Of the four Candidates already mentioned as being over age two only succeeded in passing the Ordinary Examination. Both were females, and obtained good places in the Third Class.

Full tables of the results will be found appended to the report.

For the Examiners,

M. H. IRVING, M. A.

## TASMANIAN COUNCIL OF EDUCATION.

### EXAMINATION FOR THE DEGREE OF ASSOCIATE OF ARTS, SEPTEMBER, 1874.

#### GENERAL CLASS LIST.

##### FIRST CLASS.

NO.	NAME.	MARKS.	AGE.		SCHOOL.	TEACHER.
			yrs. mths.			
1	Buckland, W. H.	3082	16 6	{ Council's Gold Medal 1st Prize Latin ..... £10 1st Prize Greek ..... £10 1st Prize Mathematics..... £10 2nd Prize French..... £5 Prize Natural Philosophy.... £5	{ Hutchins	Rev. J. R. Buckland, B.A.
2	Reilly, G. H.	2894	17 5	Prize Geology ..... £5	Hutchins	Rev. J. R. Buckland, B.A.
3	Allport, M. J. C.	2634	16 5	2nd Prize Latin..... £5 2nd Prize Greek ..... £5	HortonCol- lege, Ross	W. W. Fox, B.A.
4	Barrett, H. B.	2617	16 9	1st Prize French..... £10	High	Rev. R. D. Poulett Harris, M.A.
5	Birchall, W. A. B.	2567	17 0		Church Grammar, Launceston	Rev. W. H. Savigny, M.A.

##### SECOND CLASS.

6	Lewis, T. A.	2328	17 7	2nd Prize Mathematics ..... £5	Ditto	Rev. W. H. Savigny, M.A.
7	Taylor, A. T.	2324	18 10	..	High	Rev. R. D. Poulett Harris, M.A.
8	Chapman, S. K.	2245	18 6	Prize English..... £5	High	Rev. R. D. Poulett Harris, M.A.
9	Tarleton, W.	2226	18 1	..	Hutchins	Rev. J. R. Buckland, B.A.
10	Lethbridge, R. W.	1986	17 3	..	HortonCol- lege, Ross	W. W. Fox, B.A.
11	Taylor, S. W.	1964	16 11	..	High	Rev. R. D. Poulett Harris, M.A.
12	Watchorn, A. D.	1950	16 8	..	City	H. M. Pike.

##### THIRD CLASS.

13	Ford, H. F.	1822	17 9	..	High	Rev. R. D. Poulett Harris, M.A.
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## SPECIAL CLASS LIST.

<i>English.</i>	<i>Latin.</i>	<i>Greek.</i>	<i>French.</i>	<i>German.</i>	<i>Pure Mathematics.</i>	<i>Natural Philosophy.</i>	<i>Chemistry.</i>	<i>Geology.</i>
FIRST CLASS.	FIRST CLASS.	FIRST CLASS.	FIRST CLASS.	FIRST CLASS.	FIRST CLASS.	FIRST CLASS.	FIRST CLASS.	FIRST CLASS.
Chapman Lewis Barrett Taylor, A. Taylor, S. Ford Reilly	Buckland Barrett Reilly Birchall Taylor, A. T. — —	Buckland Barrett Birchall Reilly — — —	Birchall Buckland Reilly Lewis — — —	None — — — — —	Buckland Lewis Allport Reilly — — —	Reilly Buckland Lewis — — — —	None — — — — —	Allport — — — — — —
SECOND CLASS.	SECOND CLASS.	SECOND CLASS.	SECOND CLASS.	SECOND CLASS.	SECOND CLASS.	SECOND CLASS.	SECOND CLASS.	SECOND CLASS.
Allport Birchall Tarleton Watchorn Buckland Lethbridge — — —	Chapman Allport Taylor, S. Lewis Ford Watchorn Tarleton Lethbridge —	Taylor, A. Tarleton Chapman Lethbridge Taylor, S. W. Allport Ford — —	Barrett Watchorn Tarleton Chapman Allport Taylor, A. Lethbridge — —	None — — — — — — —	Watchorn Tarleton Lethbridge Birchall Taylor, S. Barrett Taylor, A. Chapman Ford	Watchorn Allport — — — — — — —	None — — — — — — —	None — — — — — — —

For the Examiners,

M. H. IRVING, M.A.

Hobart Town, 17th September, 1874.

# TASMANIAN COUNCIL OF EDUCATION.

*EXAMINATION for the Degree of ASSOCIATE OF ARTS.—September, 1874.*

## TABLE OF MARKS.

No.	NAME.	DATE OF BIRTH.	SCHOOL.	TEACHER.	English.	Latin.	Greek.	French.	German.	Mathematics.	Natural Philosophy.	Chemistry.	Geology.	TOTAL.	CLASS.
[Maximum Number of Marks . . . . .]					1100.	800.	800.	600.	600.	200.	250.	250.	250.		
1	Buckland, William Harvey	21 Mar. 1858	Hutchins	Rev. J. R. Buckland, B.A.	621	c 666	c 653	c 466	—	c 533	c 143	—	—	3082	First.
2	Reilly, George Henry	22 April, 1857	Ditto	Ditto	c 750	c 577	c 546	c 422	—	c 447	c 152	n. p.	—	2894	First.
3	Allport, Morton John Cecil	27 April, 1858	Horton College, Ross	W. W. Fox, B.A.	713	504	438	292	—	c 455	101	—	c 131	2634	First.
4	Barrett, Herbert Burgess	26 Dec. 1857	High	Rev. R. D. Poulett Harris, M.A.	c 803	c 621	c 585	365	n. p.	243	—	—	—	2617	First.
5	Birchall, William Andrew Bayley	1 Sept. 1857	Church Grammar, Launceston	Rev. W. H. Savigny, M.A.	695	c 555	c 563	c 488	—	266	—	—	—	2567	First.
6	Lewis, Thomas Augustin	29 Jan. 1857	Ditto	Ditto	c 805	464	—	c 420	—	c 501	c 138	n. p.	—	2328	Second.
7	Taylor, Adam Turnbull	26 Nov. 1855	High	Rev. R. D. Poulett Harris, M.A.	c 781	c 537	512	274	—	220	—	—	—	2324	Second.
8	Chapman, Stephen Kennard	27 Mar. 1856	Ditto	Ditto	c 808	511	449	309	—	168	—	—	—	2245	Second.
9	Tarleton, William	13 Aug. 1856	Hutchins	Rev. J. R. Buckland, B.A.	681	439	483	319	—	304	n. p.	—	—	2226	Second.
10	Lethbridge, Robt. Wellesley	18 June, 1857	Horton College	W. W. Fox, Esq., B.A.	583	431	445	253	—	274	n. p.	—	—	1986	Second.
11	Taylor, Samuel William	21 Oct. 1857	High	Rev. R. D. Poulett Harris, M.A.	c 781	487	443	n. p.	—	253	—	—	—	1964	Second.
12	Watchorn, Arthur Denison	25 Jan. 1858	City	H. M. Pike, Esq.	681	445	—	364	—	340	120	—	—	1950	Second.
13	Ford, Henry Flinders	22 Dec. 1856	High	Rev. R. D. Poulett Harris, M.A.	c 764	462	431	n. p.	—	165	—	—	—	1822	Third.
Candidates over Nineteen Years of Age.					[Maximum Number of Marks..]	1100.	600.	600.	600.	600.	400.	200.	600.		
14	Mayson, Harriet Elizabeth	—	Private Study	—	687	—	248	339	—	—	300	155	—	1729	Third.
15	Ironside, Emma Jane	—	Private, New Town	Mrs. Barrett	646	—	—	369	369	143	n. p.	95	—	1622	Third.

NOTE.—c passed with credit. n. p. not passed.

For the Examiners,

M. H. IRVING, M.A.

Hobart Town, 17th September, 1874.

# TASMANIAN COUNCIL OF EDUCATION.

EXAMINATION FOR THE DEGREE OF ASSOCIATE OF ARTS.—SEPTEMBER, 1874.

## Preliminary Examination.

*All marks obtained by those who pass will be carried forward into the ordinary Examination.*

### ARITHMETIC.

Two hours.

M. H. IRVING, M.A., Examiner.

*No credit will be given for any question unless the whole of the work be sent up and the answer be absolutely correct.*

*No Candidate will pass who does not do correctly one sum in each question.*

1. Multiply—

- (a) 693487 by 8376.
- (b) 372946 by 92085.

2. Divide—

- (a) Three billions two hundred and nine thousand millions seventy-one thousand and sixty-five by 90673.
- (b) 105719869 by 97482.

3. Multiply—

- (a) £376 14s. 2½d. by 639.
- (b) £404 15s. 6½d. by 702 and subtract the product from three millions sterling.

4. Divide—

- (a) £2,046,891 3s. 10½d. by 832.
- (b) £1,874,354 6s. 11d. by 619.

### ENGLISH.

One hour and a half.

1. Analyse the following :—" In this manner we began to find that every situation in life may bring its own peculiar pleasures; for every morning waked us to a repetition of toil, but the evening repaid it with vacant hilarity."

*[Be careful to state fully the nature of each sentence, and its relation to other sentences.]*

2. Parse fully according to Morell's scheme—

"The greatest stranger in this world was He that came to save it. He never had a house."

3. Write from dictation—

As the arts and sciences are slow in coming to maturity, it is requisite, in order to their perfection, that the state should be permanent which gives them reception. There are numberless attempts without success, and experiments without conclusion, between the first rudiments of an art and its utmost perfection; between the outlines of a shadow and the picture of an Apelles. Leisure is required to go through the tedious interval, to join the experience of our predecessors to our own, to enlarge our views by building on the ruined attempts of former adventurers. All this may be performed in a society of long continuance: but if the kingdom be but of short duration, as was the case of Arabia, learning seems coeval, sympathises with its political struggles, and is annihilated in its dissolution.

### HISTORY AND GEOGRAPHY.

Three hours.

1. Name the locality and indicate the general direction of these mountain ranges :—The Andes, the Blue Mountains, the Grampians, the Himalayas, the Pyrenees, the Ural Mountains.
2. Give some account of these rivers :—Amoor, Danube, Lena, Niger, Paraguay, St. Lawrence, stating where they rise, through what countries, in what direction, and into what seas they flow.
3. Name and indicate the position of six of the principal peninsulas of the Old World.
4. Indicate as clearly and precisely as you can the geographical position of Bombay, Edinburgh, Hobart Town, New York, Paris, Sydney.

5. Name in order, with the dates of their accessions, the sovereigns of England of the houses of Tudor and Stuart.
6. In whose reign, at what date, and against whom were fought the battles of Assaye, Crecy, Edgehill, Tchernaya, Toulouse, Trafalgar?
7. In whose reign, and in connection with what events do you read of Caxton, Cranmer, Newton, Washington, Wiclif, Wolsey?
8. In whose reign did the following events take place, and at about what dates:—Wat Tiler's Rebellion, the Indian Mutiny, the Great Fire of London, the Council of Clarendon, the Discovery of the New World, the Conquest of Wales?

### English.

Three hours.

M. H. IRVING, M.A., Examiner.

BYRON.—The Prisoner of Chillon. SCOTT.—Waterloo. Grammar and Composition.

1. Give in your own language, without quotations from Byron's poem, a brief account of the imprisonment and release of Bonivard.  
(*This should not exceed one sheet in length, and must not exceed two.*)
2. Analyse fully and exactly, according to Morell's Second Scheme, the following passage from Bacon:—  
"That learning should take up too much time or leisure, I answer, the most active or busy man that hath been or can be hath (no question) many vacant times of leisure, while he expecteth the tides of business (except he be of no dispatch or lightly ambitious to meddle in what may be better done by others), and then the question is but, how these spaces of leisure shall be filled, whether in pleasures or in studies."
3. Classify English Primary Derivatives. Give two instances of each class from your Byron or Scott.
4. What is meant by an Extension of the Predicate? What are the various kinds of Extensions?
5. Write notes on the origin and the use of the italicized words in the following:—  
*The more one sees. Such was our blindness that we did not know our own.*
6. Point out any grammatical errors in—  

<p>(a) As men's have grown from sudden fears.</p> <p>(b) Bid the banner of thy Patron flow.</p> <p>(c) Fetter'd in hand but pined in heart.</p>	<p>(d) I had no earthly hope but faith.</p> <p>(e) In this last loss of all the most.</p> <p>(f) Who of yore for empire enterprised.</p>
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7. Explain and refer to the context the following lines—  

<p>(a) And art thou he of Lodi's bridge?</p> <p>(b) Each Hulan forward with his lance.</p> <p>(c) His empty chain above it leant.</p> <p>(d) Piled high as autumn shocks.</p>	<p>(e) Such homage hath been paid By Roman and by Grecian voice.</p> <p>(f) The Roman lore thy leisure loved.</p> <p>(g) The valiant Polack left by thee.</p>
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(h) That yet imperial hope.
8. Explain the meaning and any peculiarity of the epithet in the following:—A living grave, fearful rein, foreign aid, massy waters, ponderous cuirassier, serried square.
9. Examine the mutual relation of the parts in the following compounds:—Athwart, dear-earned, endear, goodly, new-dug, snow-clad. For each give a word similarly compounded.
10. Give the meaning and the derivation of atmosphere, crisis, hermitage, martyr, panoply, scope, symptom, tenet.
11. Give the derivation and illustrate the formation of chain, couch, degree, escape, kerchief, orchard, peasant, scorch.
12. Define Metaphor and Personification. Give an instance of each from your Byron or Scott.
13. What is meant by Iambic and Trochaic rhythm? Quote a line of each. Scan the lines—  

(a) Of the pure elements of earth.

(b) And in his natural spirit gay.

(c) In a single night.
14. Quote a stanza from the conclusion of "Waterloo." What is it called? Explain its structure as to metre and rhyme.

## History and Geography.

Three hours.

M. H. IRVING, *M.A.*, Examiner.

Student's HUMB.—Book I. CORNWELL.—School Geography.

1. Give some account of the Roman Conquest of Britain from A.D. 43–85.
2. Who were the German Invaders of Britain? Whence did they come? Give some account of them generally; also specify the dates and localities of their successive invasions.
3. A brief outline of the connection of the Danes with the History of England.
4. Sketch as fully as you can, in a tabular form, the Genealogy of the House of Cerdic.
5. Give, with dates, some account of Beda, Dunstan, Lilla, St. Germain, Siward, Paulinus.
6. What were the Bayeux tapestry, Ceolas, Ealdorman, Rom-feoh, Stonehenge, Witenagemot? Explain the meaning of the names, and give some account of the things.
7. Draw a rough outline map of North America, marking the chief lakes, rivers, mountains, and towns; also the political divisions. (*Do not subdivide the United States.*)
8. Give an account of the British colonies in Australasia, their position, extent, population, government, imports, exports, &c.
9. Draw a rough outline of England. Mark on it the chief commercial and manufacturing towns; subjoin a list stating for what each town is known.
10. Give from your geography a concise account of Brazil.
11. Where and what are Acheen, Blenheim, Coomassie, Finisterre, Hainault, Java, Karakorum, Macao, Papua, Riesengebirge, Vosges, Yellowstone? Give approximately the latitude and the longitude of each.
12. Where and what are Abyssinia, Antwerp, Azores, Dublin, Ecuador, Llano, Marquesas, El Moghreb, Nanking, Pennsylvania, Sleswick, Unterwalden? Give the meaning of each name as stated in your geography.

## Latin.—I.

Four hours.

M. H. IRVING, *M.A.*, Examiner.

CICERO.—Speeches against Catiline I. II. III. VIRGIL.—Æneid III.

1. Translate—

Quem quidem ego cum ex Urbe pellebam, hoc providebam animo, Quirites, remoto Catilina, nec mihi esse P. Lentuli somnum, nec L. Cassii adipem, nec Cethegi furiosam temeritatem pertimescendam. Ille erat unus timendus ex his omnibus, sed tamdin, dum mœnibus Urbis continebatur. Omnia norat, omnium aditus tenebat: appellare, tentare, sollicitare poterat, audebat. Erat ei consilium ad facinus aptum; consilio autem neque lingua neque manus deerat. Jam, ad certas res conficiendas, certos homines delectos ac descriptos habebat. Neque vero, cum aliquid mandaverat, confectum putabat: nihil erat, quod non ipse obiret, occurreret, vigilaret, laboraret: frigus, sitim, famem ferre poterat.

Hunc ego, hominem tam acrem, tam paratum, tam audacem, tam callidum, tam in scelere vigilantem, tam in perditis rebus diligentem, nisi ex domesticis insidiis in castrense latrocinium compulsem, (dicam id, quod sentio, Quirites) non facile hanc tantam molem mali a cervicibus vestris depulissem.

2. Translate—

Jamque dies alterque dies processit; et auræ  
Vela vocant, tumidoque inflatur carbasus Austro.  
His vatem aggredior dictis, ac talia quæso:  
‘Trojugena, interpres divum, qui numina Phœbi,  
Qui tripodas, Clarii laurus, qui sidera sentis,  
Et volucrum linguas et præpetis omina pennæ,  
Fare age—namque omnem cursum mihi prospera dixit  
Religio, et cuncti suaserunt numine divi  
Italiam petere et terras tentare repostas;  
Sola novum dictuque nefas Harpyia Celæno  
Prodigium canit, et tristes denuntiat iras,  
Obscenamque famem—quæ prima pericula vito?  
Quidque sequens tantos possim superare labores?’

3. Translate refer to context and explain fully—(a) Cædem contulisse in a. d. v. Kal. Nov. (b) Ultus est hujus victoriæ crudelitatem postea Sulla. (c) Ipsi Jovi Statori gratia habenda est. (d) Infernique lacus Æææque insula Circes. (e) Aut quem tum vates Cassandra moveret. (f) Et formidatus nautis aperitur Apollo.

4. Decline throughout—*Ars, deus, ego, res publica.*
5. Parse—*Coelicolum, consertum, majorum, obliviscere, pexo, pulvinaria, remenso, victricia.*
6. Give two examples of each of the following—A correlative pronoun, a distributive numeral, a frequentative verb, an inceptive verb.
7. Give the meaning and explain fully the derivation of—*Armentum, audacia, coetus, illecebra, nequitia, seminarium, textilis, turritus, ultra, virgultum.* Give for each a word formed by the same termination.
8. Indicate the letter change in the formation of—*Flamma, rursus, stella, surgo, templum.* Quote for each a word similarly formed.
9. Translate and explain the construction in—(a) *Auro vi potitur.* (b) *Cetera Graius.* (c) *Cretæ considerare.* (d) *Mente captus.* (e) *Paucis ante diebus.* (f) *Si cui solutior visa est.*
10. Give the Latin for—(a) A man of great wisdom. (b) Believe me. (c) For the sake of preserving himself. (d) He lay on the ground. (e) I fear you will go. (f) You are in debt.
11. Where and what are—*Cybele, Forum-Aurelium, Massilia, Neritos, Pantagia, Præneste, Reate, Scylla.*
12. Write brief notes explaining—*Saturnalia, Senatus consultum, Sibyllina Fata.*
13. Scan and note any peculiarities in—
  - (1) *Insulæ Ionio in magno quas dira Celæno.*
  - (2) *Nereïdum matri et Neptuno Ægæo.*
  - (3) *Obstupui steteruntque comæ et vox faucibus hæsit.*
  - (4) *Thraces arant acri quondam regnata Lycurgo.*

### Latin.—II.

Four hours.

M. H. IRVING, *M.A., Examiner.*

#### TRANSLATION AT SIGHT AND COMPOSITION.

##### 1. Translate into English—

*Cernis autem eandem terram quasi quibusdam redimitam et circumdatam cingulis; e quibus duos, maxime inter se diversos, et cœli verticibus ipsis ex utraque parte subnixos, obriguisset pruina vides; medium autem illum et maximum solis ardore torreri. Duo sunt habitabiles; quorum australis ille (in quo qui insistent, adversa vobis urgent vestigia,) nihil ad vestrum genus. Hic autem alter subjectus aquiloni, quem incolitis, cerne quam tenui vos parte contingat. Omnis enim terra, quæ colitur a vobis, angusta verticibus, lateribus latior, parva quaedam insula est, circumfusa illo mari, quod Atlanticum, quod magnum, quem Oceanum appellatis in terris; qui tamen, tanto nomine, quam sit parvus, vides. Ex his ipsis cultis notisque terris, num aut tuum, aut cujusquam nostrum nomen, vel Caucasum hunc, quem cernis, transcendere potuit, vel illum Gangem transnatare? Quis in reliquis orientis aut obeuntis solis ultimis aut aquilonis austrive partibus tuum nomen audiet? quibus amputatis, cernis profecto, quantis in angustiis vestra se gloria dilatarî velit. Ipsi autem, qui de vobis loquuntur, quam diu loquuntur?*

##### 2. Translate into Latin Prose—

So the Romans turned from their flight, and Aulus and his chosen band fell upon the Tarquins; and Aulus prayed, and vowed that he would raise a temple to Castor and to Pollux, the twin heroes, if they would aid him to win the battle; and he promised to his soldiers that the two who should be the first to break into the camp of the enemy should receive a rich reward. When, behold! there rode two horsemen at the head of his chosen band, and they were taller and fairer than after the stature and beauty of men, and they were in the first bloom of youth, and their horses were white as snow. Then there was a fierce battle, when Octavius, the leader of the Latins, came up with aid to rescue the Tarquins; for Titus Herminius rode against him, and ran his spear through his body, and slew him at one blow; but as he was spoiling him of his arms, he himself was struck by a javelin, and he was borne out of the fight and died.

##### 3. Translate into Latin Verse—

He ceased; but ere the golden tongue was still  
An odorous mist had stolen up the hill;  
And to Admetus first the god grew dim,  
And then was but a lovely voice to him.  
And then at last the sun had sunk to rest,  
And a fresh wind blew lightly from the west;  
Rustling dry leaves about the windy place,  
Where even now had been the god-like face.

## Latin.—III.

Three hours.

M. H. IRVING, *M.A.*, Examiner.

HORACE.—Odes, Books III. IV.

[In valuing the answers special weight will be attached to the style of the Translations.]

1. Translate, with brief marginal notes of explanation:—

- (a) Audiat Lyde scelus atque notas  
 Virginum poenas, et inane lymphæ  
 Dolium fundo pereuntis imo,  
 Seraque fata,  
 Quæ manent culpas etiam sub Orco.  
 Impiæ, nam quid potuere majus?  
 Impiæ sponso potuere duro  
 Perdere ferro.  
 Una de multis, face nuptiali  
 Digna, perjurum fuit in parentem  
 Splendide mendax, et in omne virgo  
 Nobilis ævum.  
 "Surge," quæ dixit juveni marito,  
 "Surge, ne longus tibi somnus, unde  
 Non times, detur: socrum et scelestas  
 Falle sorores;  
 "Quæ, velut nactæ vitulos læenæ,  
 Singulos, eheu! lacerant. Ego, illis  
 Mollior, nec te feriam, neque intra  
 Claustra tenebo."

- (b) Phoebus volentem proelia me loqui  
 Victas et urbes increpuit lyra:  
 Ne parva Tyrrenum per æquor  
 Vela darem. Tua, Caesar, ætas  
 Fruges et agris rettulit uberes,  
 Et signa nostro restituit Jovi,  
 Derepta Parthorum superbis  
 Postibus, et vacuum duellis  
 Janum Quirinum clausit, et ordinem  
 Rectum evaganti frena Licentiæ  
 Injecit, emovitque culpas,  
 Et veteres revocavit artes:  
 Per quas Latinum nomen et Italiæ  
 Crevere vires, fama que et imperi  
 Porrecta majestas ad ortum  
 Solis ab Hesperio cubili.  
 Custode rerum Caesare, non furor  
 Civilis aut vis exiget otium,  
 Non ira, quæ prociudit enses,  
 Et miseræ inimicat urbes.

2. Write down, mark the scansion, and give the metrical name of these lines—(a) Cornua monstri.  
 (b) Dulcem elaborabunt soporem. (c) Egregius properaret exul. (d) Eques ipso melior  
 Bellerophonte neque pugno. (e) Exsomnia stupet Evias. (f) Flumina prætereunt.  
 (g) Herculis ritu modo dictus O plebs. (h) Huc omne principium huc refer exitum. State  
 the subject of, or otherwise indicate the ode from which each comes.
3. What are the mythological allusions in—(a) Aquosa raptus ab Ida. (b) Ambustus Phaeton.  
 (c) Diva triformis. (d) Inclusam Danaen. (e) Ityn flebiliter gemens. (f) Movit Amphion  
 lapides canendo. (g) Pelion imposuisse Olympo. (h) Proles Niobæa.
4. To what Roman customs is allusion made in—(a) Corticem astrictum pice. (b) Dominus terræ  
 fastidiosus. (c) Herile pensum. (d) I pete unguentum. (e) In morem Salium. (f) Per  
 Sacrum Clivum. (g) Sub trabe Cypria. (h) Vetita legibus alea?
5. What is the literal meaning of these words, and in what sense are they employed by Horace—  
 Adorea, balanus, Camenæ, funalia, Hesperia, onyx, puniceus, testudo?
6. What is the derivation of—Ales, auspex, bimestris, claustrum, exsultim, fruticetum, Jupiter,  
 segnis? Note and illustrate anything peculiar in the form of each.
7. Explain the constructions employed in—Culpari metuit, Docilis modorum, Dulces docta modos,  
 Legis expertes Latinæ, Niveus videri, Perrumpere amat, Regnata Cyro Bactra, Sepulta  
 distat inertia.
8. State what you know of these persons—Alcæus, Alyattes, Drusus, Pindar, Pyrrhus, Tullus.

9. Where, and what, are—Acherontia, Algidus, Aufidus, Cyclades, Sabini, Tanais, Tarentum, Tibur? What epithet is applied to each by Horace, and why?
10. What festivals took place on the following days—Calends of March, Ides of April, Nones of December? To what days in our calendar do they answer?
11. Give a brief account, with dates, of the events alluded to in—(a) *Testis Metaurum flumen.* (b) *Philippis versa acies retro.*
12. In what different ways have these lines been taken—(a) *O magna Carthago probrosis altior Italiae ruinis.* (b) *Non sumtuosa blandior hostia mollivit aversos Penates.*

### Greek.—I.

Three hours.

M. H. IRVING, M.A., Examiner.

XENOPHON—Anabasis IV.

#### 1. Translate—

“Ἐγὼ μὲν τοίνυν,” ἔφη ὁ Ξενοφῶν, “ἔτοιμός εἰμι τοὺς ὀπισθοφύλακας ἔχων, ἐπειδὴν δειπνήσωμεν, ἵνα καταληψόμενος τὸ ὄρος. Ἐχω δὲ καὶ ἡγεμόνας· οἱ γὰρ γυμνήτες τῶν ἐπομένων ἡμῖν κλωπῶν ἔλαβόν τινας ἐνεδρεύσαντες· τούτων καὶ πυνθάνομαι, ὅτι οὐκ ἄβατόν ἐστι τὸ ὄρος, ἀλλὰ νέμεται αἰεὶ καὶ βουσὶν· ὥστε, ἴανπερ ἄπαξ λάβωμέν τι τοῦ ὄρους, βατὰ καὶ τοῖς ὑποζυγίοις ἔσται. Ἐλπίζω δὲ οὐδὲ τοὺς πολεμίους μενεῖν ἔτι, ἐπειδὴν ἴδωσιν ἡμᾶς ἐν τῷ ὁμοίῳ ἐπὶ τῶν ἄκρων· οὐδὲ γὰρ νῦν ἐθέλουσι καταβαίνειν εἰς τὸ ἴσον ἡμῖν.”

#### 2. Translate—

Ἰδὼν δὲ αὐτοὺς διαβαίνοντας ὁ Ξενοφῶν πέμψας ἄγγελον κελεύει αὐτοῦ μένειν ἐπὶ τοῦ ποταμοῦ μὴ διαβάντας· ὅταν δ' ἄρξωνται αὐτοὶ διαβαίνειν, ἐναντίους ἔνθεν καὶ ἔνθεν σφῶν ἐμβαίνειν ὡς διαβησομένους, διηκυκλωμένους τοὺς ἀκοντιστὰς καὶ ἐπιβεβλημένους τοὺς τοξότας, μὴ πρόσω δὲ τοῦ ποταμοῦ προβαίνειν. Τοῖς δὲ παρ' αὐτῷ παρήγγειλεν, ἐπειδὴν σφενδόνη ἐξικνῆται καὶ ἀσπίς ψοφῇ, παιανίσαντας θεῖν αἰεὶ εἰς τοὺς πολεμίους· ἐπειδὴν δὲ ἀναστρέψωσιν οἱ πολέμοι καὶ ἐκ τοῦ ποταμοῦ ὁ σαλπικτῆς σημήνῃ τὸ πολεμικόν, ἀναστρέψαντας ἐπὶ δόρῳ ἡγεῖσθαι μὲν τοὺς οὐραγούς, θεῖν δὲ πάντας καὶ διαβαίνειν ὃ τι τάχιστα ἢ ἕκαστος τὴν τάξιν εἶχεν, ὡς μὴ ἐμποδίζεν ἀλλήλους· ὅτι οὗτος ἄριστος ἔσοιτο, ὃς ἂν πρῶτος ἐν τῷ πέραν γένηται.

#### 3. Translate—

Καὶ οὗτος, ὃ Γλαῦκων, ὁ μῦθος ἐσώθη καὶ οὐκ ἀπώλετο, καὶ ἡμᾶς ἂν σώσειεν, ἂν πειθώμεθα αὐτῷ, καὶ τὸν τῆς Λήθης ποταμὸν εὖ διαβησόμεθα καὶ τὴν ψυχὴν οὐ μινθησόμεθα· ἀλλ' ἂν ἔμοι πειθώμεθα, νομίζοντες ἀθάνατον ψυχὴν καὶ δυνατὴν πάντα μὲν κακὰ ἀνέχεσθαι, πάντα δὲ ἀγαθὰ, τῆς ἄνω ὁδοῦ αἰεὶ ἐξόμεθα καὶ δικαιοσύνην μετὰ φρονήσεως παντὶ τρόπῳ ἐπιτηδεύσομεν, ἵνα καὶ ἡμῖν αὐτοῖς φίλοι ὦμεν καὶ τοῖς θεοῖς, αὐτοῦ τε μένοντες ἐνθάδε, καὶ ἐπειδὴν τὰ ἄλλα αὐτῆς κομιζόμεθα, ὥσπερ οἱ νυκτφόροι περιαιγούμενοί, καὶ ἐνθάδε καὶ ἐν τῇ χιλιετεί πορεία, ἣν διεληλύθαμεν, εὖ πράττωμεν.

#### 4. Parse—

δασύ ἐρύματος ὄρη ὅτου πλείους πυρά τρισὶ χιόνος.

#### 5. Compare—

ἀσφαλῆς εὖ κρατερός μέγας πρόσω ταχύς.

#### 6. Give the tense, mood, and voice of—

ἀντιτετάχεται διεξεῦχθαι ἐάλω ἐρηγορέναι ὁρῶ παραρρνεῖν σπείσασθαι τέθνατον. Also give for each the Present Future Perfect and Aorist in use.

#### 7. Write down throughout these tenses—

1 Aor. Imp. Mid. ἄρχω; 2 Aor. Ind. Act. δίδωμι; 1 Fut. Ind. Pass. διασπᾶω; Imp. Ind. Act. εἶμι; 1 Aor. Opt. Act. φθάνω; 2 Aor. Imp. Pass. φθείρω.

#### 8. Which tenses in the Active Voice of ἵστημι are transitive, and which intransitive?

#### 9. Give the meaning and the full derivation of—

ἀκολουθεῖν ἀνθρώδης εὐώνυμος ἡγεμόσυνα νεόδαρτος παρεγγυᾶν τριπύχη φαρμακοποσία.

#### 10. Give a word from Xenophon formed by each of the following terminations: -δην -θεν -ιζω -ινος -ιος -μα -μων -σις. To what kind of words is each added, what words does it form, and with what meaning?

#### 11. What are the Greek words signifying—to become, to roll, to run, beautiful, a contest, fire, naked? Give an English derivative from each.

#### 12. Put into Greek—

(a) It seems to us that we ought to march. (b) They came near unobserved. (c) The depth of the snow was a fathom. (d) There came much rain. (e) He gave whatever they might want. (f) On condition that they did not burn the villages. (g) Some they killed, some they took alive.

## Greek.—II.

Three hours.

M. H. IRVING, M.A., Examiner.

EURIPIDES—Hecuba. HOMER—Iliad III.

## 1. Translate—

(a) κᾶτ' ἐκ γαληνῶν πῶς δοκεῖς προσφθεγμάτων  
εὐθὺς λαβοῦσαι φάσαν' ἐκ πέπλων ποθὲν  
κεντοῦσι παῖδας· αἱ δὲ πολέμιων δίκην  
ξυναρπάσασαι τὰς ἐμὰς εἶχον χέρας  
καὶ κῶλα· παισὶ δ' ἀρκέσαι χρῆζών ἐμοῖς,  
εἰ μὲν πρόσωπον ἐξανισταίνην ἐμόν,  
κόμης κατέειχον· εἰ δὲ κινοίην χέρας,  
πλήθει γυναικῶν οὐδὲν ἥνιον τάλας.  
τὸ λοιόσθιον δέ, πῆμα πῆματος πλέον,  
ἐξεργάσαντο δεῖν· ἐμῶν γὰρ ὀμμάτων,  
πόρπας λαβοῦσαι, τὰς ταλαιπώρους κόρας  
κεντοῦσιν, αἰμάσσουσιν· εἴτ' ἀνὰ στέγας  
φυγάδες ἔβησαν· ἐκ δὲ πηδήσας ἐγὼ  
θῆρ ὥς διώκω τὰς μαιφόνους κύνας,  
ἅπαντ' ἐρευνῶν τοῖχον, ὥς κυνηγέτης,  
βάλλων, ἀράσσω. τοιάδε σπεύδων χάριν  
πέπονθα τὴν σὴν, πολέμιόν τε σὸν κτανῶν.

(b) Αὔρα, ποντιάς αὔρα,  
ἄτε ποντοπόρους κομίζεις  
θοὰς ἀκάτους ἐπ' οἶδμα λίμνας,  
ποῖ με τὰν μελέαν πορεύσεις;  
τῷ δουλόσυνος πρὸς οἶκον  
κτηθεῖς ἀφίξομαι;  
ἢ Δωρίδος ὄρμον αἴας,  
ἢ Φθιάδος, ἐνθα καλλι-  
στων ὑδάτων πατέρα  
φασὶν Ἀπιδανὸν γῆρας λιπαίνειν;  
ἢ νάσων, ἀλιήρει  
κώπη πεμπομέναν τάλαιναν,  
οἰκτρὰν βιοτὰν ἔχουσιν οἴκοις,  
ἐνθα πρωτόγονός τε φοῖνιξ,  
δάφνη θ' ἱεροὺς ἀνέσχε  
πτόρθους Λατοῖ φίλῃ,  
ὠδίνος ἄγαλμα δίας.

## 2. Translate—

“Δαιμονίη, τί με ταῦτα λιλαίει ἡπεροπεύειν;  
Ἥ πῃ με προτέρω πολίων εὐναιομενῶν  
Ἄξεις ἢ Φρυγίης ἢ Μηονίης ἐρατεινῆς,  
Εἴ τίς τοι καὶ κείθι φίλος μερόπων ἀνθρώπων;  
Οὔνεκα δὴ νῦν δῖον Ἀλέξανδρον Μενέλαος  
Νικήσας ἐθέλει στυγερὴν ἐμὲ οἶκαδ' ἄγεσθαι,  
Τοὔνεκα δὴ νῦν δεῦρο δολοφρονέουσα παρέστης;  
Ἥσο παρ' αὐτὸν ἰοῦσα, θεῶν δ' ἀπόεικε κελεύθου,  
Μηδ' ἔτι σοῖσι πόδεσσιν ὑποστρέφειας Ὀλυμπον,  
Ἄλλ' αἰεὶ περὶ κείνον δίζυε καὶ ἐφύλασσε,  
Εἰς ὃ κέ σ' ἢ ἄλοχον ποιήσεται ἢ ὃ γε δούλην.  
Κεῖσε δ' ἐγὼν οὐκ εἴμι—νεμεσσητὸν δέ κεν εἴη—  
Κείνου πορσυνέουσα λέχος· Τρῶαί δέ μ' ὀπίσσω  
Πᾶσαι μωμήσονται· ἔχω δ' ἄχρ' ἄκριτα θυμῷ.”

## 3. Translate, explain, and refer to context—

- (a) οὐκ ἂν δὴ μείνειας ἀρήφιλον Μενέλαον.  
(b) δεινδρέω ἐφεζόμενοι ὅπα λειριόεσσαν ἰέσιν.  
(c) τιμὴν δ' Ἀργείοις ἀποτινέμεν ἥντιν' ἔοικε.  
(d) τριχθὰ τε καὶ τετραχθὰ διατρυφὲν ἐκπεσε χεῖρός.

## 4. Parse these Homeric Verbs, noting anything peculiar in their form,—ἄωρτο βιβάντα γείνατο ἔλλαβε ἐξείνισσα πέποσθε.

## 5. Give the meaning and the full derivation of—

- (a) αὐτοκασίγνητος ἐρίηρες ἥριος μοιρηγενῆς ξεινοδόκος πόσις.  
(b) ἀγνωσία ἄνασσα προπετής τιμωρεῖν φροῦδος χαλινωτήρια.

## 6. What were the leading Greek dialects? Point out and refer to the proper dialect the peculiarities of form in οὐριθρέπτan and πουλυβοτείρη and give another example of each.

## 7. Parse εἰργασαι ἐφεῖναι ἦσμεν του χρῆν.

## 8. Explain the mythological allusions in (a) οὐ γυναικες εἶλον Αἰγύπτου τέκνα; (b) ἡ Δαιδάλου τέχναϊσι.

## 9. Translate and explain the construction in (a) ἀλλ' οὔτι μὴ φύγητε. (b) ἀπὸ δὲ στεφάναν κέκαρσαι. (c) δέξαι χοάς μοι τάσδε. (d) ἦψω δὲ γονάτων τῶν ἐμῶν. (e) ὁ δ' αἰὲ ξυντυχῶν ἐπίσταται. (f) οὐ καταστάζω δάκρυ. (g) ποῖ μ' ὑπεξάγεις ποδα. (h) σφάξαι σε πρὸς τύμβον.

## 10. Scan and give the proper metrical name of (a) πέμψατε δαίμονες ἱκετεύω. (b) δρύπτεται δὲ παρειάν. (c) βακχείον ἐξ ἀλάστορος. (d) μήτε πατρῶον ἵκοιτ' ἐς οἶκον.

## 11. Construct short English sentences to show when the following are employed in Greek—Attraction, Accusative Absolute, Accusative of part affected, Accusative of Time, Genitive of Time, Partitive Genitive. Give the Greek for your sentences if you can.

## 12. Turn the following back into Iambics, and accentuate—

- (a) There are beside us no less wretched women.  
 (b) But with me he sends out secretly much gold.

**French.**

Three hours.

M. H. IRVING, *M.A., Examiner.*

MOLIERE—Le Malade Imaginaire. DE BONNECHOSE—Lazare Hoche. Grammar and Composition.

## 1. Translate—

Malgré son calme, il avait été un peu inquiet lui-même. Après nous avoir quittés, il n'avait pas assez pris garde de suivre la trace que nous avions laissée derrière nous, et ce n'avait été qu'après avoir marché près du double du chemin que nous avions fait, qu'il avait compris qu'il s'était égaré. Alors il s'était tranquillement assis par terre pour allumer un cigare et réfléchir. Son parti avait été bientôt pris; il avait cassé quelques arbustes tout autour de lui, et prenant sa petite boussole en main, il avait fait un mille au nord, direction dans laquelle il croyait trouver la lagune; ayant bien soin de marquer fortement ses pas sur le sol et de casser des branches sur son passage. Alors il avait appelé à plusieurs reprises et, ne recevant pas de réponse, il était revenu à l'endroit d'où il était parti.

## 2. Translate into French—

Certainly it needs courage to risk considerable amounts in enterprises like this. These journeys are always overwhelming with fatigue, and are made during the winter rains; for whole droves, delayed till summer by some unforeseen reason, have perished on the Liverpool plains. Whatever may be the number of men that one takes with one, the master's eye ought never, so to speak, to be closed, and it is when the fatigue is greatest that he ought to display most vigilance. However, if these expeditions are accompanied by fatigue and dangers of all kinds, the profits ensured to him who arrives happily at the end of the journey are so considerable that there are always found energetic men ready to try the enterprise. Besides, is not energy the commonest virtue in the Colonies?

## 3. Write down throughout—Pres. subj. of pouvoir, imperfect subjunctive of agir, pret. def. of tenir, pres. ind. of devoir.

## 4. Put into French—(a) That wine of yours is not good. Don't give me any of it. (b) You might have seen two beautiful rainbows yesterday afternoon. (c) He is going from bad to worse. He has no pity for his relations. (d) Both you and I were very wrong, when we fought the day before yesterday for such a trifle.

## 5. From what Latin words are derived—Arrêter, éveiller, pousser, raison, songer, traiter. Illustrate the formation of each.

## 6. Distinguish the meaning of but, bout, butte; dessein, dessin; dénûment, dénouement; défait, défaite, défaut; toi, toit, toise; soi, soie, soit.

## 7. Translate—

Mon Dieu! mon frère, ce sont pures idées dont nous aimons à nous repaître; et, de tout temps, il s'est glissé parmi les hommes de belles imaginations que nous venons à croire parce qu'elles nous flattent, et qu'il serait à souhaiter qu'elles fussent véritables. Lorsqu'un médecin vous parle d'aider, de secourir, de soulager la nature, de lui ôter ce qui lui nuit et lui donner ce qui lui manque, de la rétablir, et de la remettre dans une pleine facilité de ses fonctions; lorsqu'il vous parle de rectifier le sang, de tempérer les entrailles et le cerveau, de dégonfler la rate, de raccommorder la poitrine, de réparer le foie, de fortifier le cœur, de rétablir et conserver la chaleur naturelle, et d'avoir des secrets pour étendre la vie à de longues années, il vous dit justement le roman de la médecine. Mais, quand vous en venez à la vérité et à l'expérience, vous ne trouvez rien de tout cela; et il en est comme de ces beaux songes, qui ne vous laissent au réveil que le déplaisir de les avoir crus.

## 8. Translate—

Mais alors, comme toutes les fois que, depuis l'époque de la conquête normande une invasion de l'étranger avait menacé l'Angleterre, son heureux destin détournait d'elle le péril. Jamais ce fait n'a été plus saisissant que sous la Révolution et l'Empire; et, pour peu qu'on veuille réfléchir, la raison demeure confondue devant les obstacles sans nombre et tout à fait indépendants de la volonté et du génie de l'homme, qui, à diverses époques et durant huit siècles, se sont interposés entre l'Angleterre et ses ennemis. Peut-être alors est-il permis de demander s'il n'entraîne pas dans les mystérieux desseins de cette Providence qui régit les destinées humaines, que la liberté fondée sur le respect des droits et de l'ordre légal eût quelque part en Europe un inviolable asile.

## 9. Translate explain and refer to the context—

- (1) Emporter cette position pour aller prendre au revers les Autrichiens sur le versant opposé.  
 (2) Elles disparurent tout à coup et furent moissonnées dans leur printemps.

- (3) Faisant alors démasquer de redoutables batteries, il les accabla sous une pluie de mitraille, d'obus et de boulets.  
 (4) Il ne s'y passe point d'acte où il n'aille argumenter à l'outrance pour la proposition contraire.  
 (5) C'est que vous avez mon frère un dent de lait contre lui.  
 (6) Et de l'hydropisie dans la privation de la vie, où vous aura conduit votre folie.
10. Retranslate the following passages from your books—  
 (a) In summer, begging employment from the gardeners, he drew water, watered and dug for them. (b) He showed himself as ready to forget his own wrongs as to avenge those of others. (c) Happy dweller in the Morbihan, who livest only to adore God, I envy thy lot. Why am I not in thy place? (d) I have to do with it myself, besides that the match is more advantageous than they think. (e) Don't speak so loud, for fear you should shake the master's brains. (f) 'Tis a wicked way of making oneself loved by any one, to do them violence.
11. Give the French for—(a) A recruiting serjeant. (b) A paid army. (c) War without truce. (d) The low tide. (e) A baked apple. (f) Roast or boiled meat.
12. Give the French for—Blindly, breath, crew, to cure, to extinguish, the offering, a peninsula, the scaffold; and the English of—Assouvir, croquignole, déguenillé, disette, escrime, gruaux, manchot, oublie, suppôt.

### German.

F. S. DOBSON, M.A., LL.D., *Examiner.*

Three hours.

SCHILLER—*Maria Stuart.*

#### 1. Translate—

MARIA.

- (A) Und wenn ich's  
 Gethan? Ich hab' es nicht gethan—Jedoch  
 Gesetzt, ich that's! Mylord, man hält mich hier  
 Gefangen wider alle Völkerrechte.  
 Nicht mit dem Schwerte kam ich in dies Land,  
 Ich kam herein, als eine Bittende,  
 Das heil'ge Gastrecht fordernd, in den Arm  
 Der blutsverwandten Königin mich werfend—  
 Und so ergriff mich die Gewalt, bereitete  
 Mir Ketten, wo ich Schutz gehofft—Sagt an!  
 Ist mein Gewissen gegen diesen Staat  
 Gebunden? Hab' ich Pflichten gegen England?  
 Ein heilig Zwangsrecht üb' ich aus, da ich  
 Aus diesen Banden strebe, Macht mit Macht  
 Abwende, alle Staaten dieses Welttheils  
 Zu meinem Schutz aufführe und bewege.

Act 1, Scene 7.

(B)

TALBOT.

- Nicht Stimmenmehrheit ist des Rechtes Probe,  
 England ist nicht die Welt, dein Parlament  
 Nicht der Verein der menschlichen Geschlechter.  
 Dies heut'ge England ist das künft'ge nicht,  
 Wie's das Vergangene nicht mehr ist—Wie sich  
 Die Neigung anders wendet, also steigt  
 Und fällt des Urtheils wandelbare Woge.  
 Sag' nicht, du müssest der Nothwendigkeit  
 Gehorchen und dem Dringen deines Volks.  
 Sobald du willst, in jedem Augenblick  
 Kannst du erproben, dass dein Wille frei ist.  
 Versuch's! Erkläre, dass du Blut verabscheust,  
 Der Schwester Leben willst gerettet sehn,  
 Zeig denen, die dir anders rathen wollen,  
 Die Wahrheit deines Königlichen Zorns,  
 Schnell wirst du die Nothwendigkeit verschwinden  
 Und Recht in Unrecht sich verwandeln sehn.

Act 2, Scene 3.

(C)

MARIA.

Eilende Wolken, Segler der Lüfte!  
 Wer mit euch wanderte, mit euch schiffte!  
 Grüsset mir freundlich mein Jugendland  
 Ich bin gefangen, ich bin in Banden,  
 Ach ich hab' keinen andern Gesandten!  
 Frei in Lüften ist eure Bahn,  
 Ihr seyd nicht dieser Königin unterthan.

KENNEDY.

Ach theure Lady! Ihr seyd ausser euch,  
 Die langentbehrte Freiheit macht euch schwärmen.

Act 3, Scene 1.

## 2. Translate—

ELIZABETH.

(Nachdem sie den Brief gelesen, ihre Thränen  
 trocknend.)

Was ist der Mensch! Was ist das Glück der Erde!  
 Wie weit ist diese Königen gebracht,  
 Die mit so stoltzen Hoffnungen begann,  
 Die auf den ältesten Thron der Christenheit  
 Berufen worden, die in ihrem Sinn  
 Drei Kronen schon aufs Haupt zu setzen meinte.

Act 2, Scene 4.

ELIZABETH.

Wer soll mich hindern? Euer Oheim gab  
 Das Beispiel allen Königen der Welt,  
 Wie man mit seinen Feinden Frieden macht.  
 Die Sanct Barthelemi sey meine Schule?

Act 3, Scene 4.

Explain the historical references in these two pieces.

3. Decline Das schöne Haus, Ihre junge Tochter, Das Schaf, Der Ochse, Der Wolf.
4. Give the rule for the declension of nouns of the neuter gender in German, stating any exceptions that you may remember.
5. Parse the following words :—Schwamm, gelenket, herunterstiess, betrogen, vollbracht, abgewogen, knüpft.
6. Give the principal parts of the following verbs, with their meaning :—Laden, nehmen, riechen, schaffen, streichen, verdriessen, zeihen, ziehen.
7. Write down throughout the present indicative active of stehlen, the past conditional of loben, and the perfect indicative of schlafen.
8. Translate into German the following expressions :—  
 Had I known that you would have behaved in this way I would have acted otherwise.  
 What do you want? you seem to have stopped writing.  
 What does it matter to me what becomes of him?  
 Many years ago there lived a king.
9. Give, with examples, the force of the following prefixes :—er, ab, ver, aus.
10. Translate into English :—

“Als ich um neun Uhr nach Sterzingen gelangte, gab man mir zu verstehen, dass man mich gleich wieder wegwünsche. In Mittelwald punkt Zwölf Uhr fand ich alles in tiefem Schläfe, ausser dem Postillion, und so ging es weiter auf Brixen, wo man mich wieder gleichsam entführte, so dass ich mit dem Tage in Colman ankam. Die Postillions fuhren dass einem Sehen und Hören verging, und so leid es mir that, diese herrlichen Gegenden mit der entsetzlichsten Schnelle und bei Nacht wie im Fluge zu durchreisen, so freute es mich doch innerlich, dass ein günstiger Wind hinter mir herblies und mich meinen Wünschen zujagte.”—Goethe, *Italiänische Reise*. (*Vom Brenner bis Verona*.)

## 11. Translate into German—

A lawyer who was fond of country life, and had acquired a large fortune through business, bought a large estate and settled there. Soon he made the acquaintance of all his neighbours, amongst whom he found one who pleased him much, because he united good sense with integrity. Some time after, as the lawyer sat at breakfast and read the newspaper, a farmer entered with a serious expression on his face, and, without greeting him, began: “What has happened has pained me much, and I am heartily glad that it has not happened through any fault of mine.”

Write this if you can in German characters.

## Italian.

SILVIO PELLICO—Le Mie Prigioni.

Three hours.

Rev. D. F. X. BEECHINOR, *Examiner*.

1. What is the age of the Italian language, for what is it particularly remarkable, and what relationship does it bear with the Latin, Spanish, and French languages?
2. What is that part of Grammar which treats of the different sorts of words, and their various modifications, called?
3. How many and what are the parts of speech in Italian?
4. How many and what parts of speech are *variable*, that is, change their terminations? and how many *invariable*?
5. How many letters in the alphabet? What letters are not used in Italian which we use in English, and under what circumstances do they sometimes occur?
6. How are verbs generally divided?
7. What are the Auxiliary verbs?
8. In the sentence, *Io amo la virtù*, which is the verb, the agent, and what is the object acted upon?
9. In the sentence, *La virtù è amata da me*, what sort of a verb is *amata*, and what is the agent?
10. What is a *pronominal* verb? and what use is made of the *conjunctive pronouns* *mi, ti, si, ci, vi, si*, in such verbs as *pentirsi*, to repent one's self: *io mi pénto*, I repent myself; *tu ti pénti*, thou repentest thyself; *egli si pénte*, he repents himself; *ella si pénte*, she repents herself, &c.
11. Translate the following into Italian:—

Good morning, Sir! I wish you a very happy day. I am indeed happy to see you in such good health, although you are now passed sixty years of age. Is your good sister returned yet from Italy? No, though it is a year now since she left. In what part of Italy does she spend most of the time? She lived in Rome during the winter, and from her last letter I ascertained that she and her family had arrived more than a month since in Florence. The climate of Rome is delightful during the winter, but the heat is terrible there in summer, and that is the reason why all the visitors go to Florence during that season.

What is the news now in England? Nothing of importance. The Queen is at Windsor since the beginning of August. I beg you will ring the bell, as I am getting tired.

I found the little Italian song so charming, that I regret now not having committed it to memory.

Farewell until we meet again.

12. Translate the following into English:—

In quella mia nuova stanza, così tetra e così immonda, privo della compagnia del caro muto, io era oppresso di tristezza. Stava molte ore alla finestra la quale metteva sopra una galleria, e al di là della galleria vedeasi l'estremità del cortile e la finestra della mia prima stanza. Chi erami succeduto colà? Io vi vedeva un uomo che molto passeggiava colla rapidità di chi è pieno d'agitazione. Due o tre giorni dappoi, vidi che gli avevano dato da scrivere, ed allora se ne stava tutto il dì al tavolino.

Finalmente lo riconobbi. Egli usciva della sua stanza accompagnato dal custode: andava agli esami. Era Melchiorre Gioja!

Mi si strinse il cuore. Anche tu, valentuomo, sei qui!—(Fu più fortunato di me. Dopo alcuni mesi di detenzione, venne rimesso in libertà.)

La vista di qualunque creatura buona mi consola, m'affeziona, mi fa pensare. Ah! pensare ed amare sono un gran bene! Avrei dato la mia vita per salvar Gioja di carcere; eppure il vederlo mi sollevava.

Dopo essere stato lungo tempo a guardarlo, a congetturare da' suoi moti se fosse tranquillo d'animo od inquieto, a far voti per lui, io mi sentiva maggior forza, maggior abbondanza d'idée, maggior contento di me. Ciò vuol dire che lo spettacolo d'una creatura umana, alla quale s'abbia amore, basta a temprare la solitudine. M'avea dapprima recato questo beneficio un povero bambino muto, ed or me lo recava la lontana vista d'un uomo di gran merito.

Forse qualche secondino gli disse dov' io era. Un mattino aprendo la sua finestra, fece sventolare il fazzoletto in atto di saluto. In gli risposi collo stesso segno. Oh, quale piacere m'inondò l'anima in quel momento! Mi pareva che la distanza fosse sparita, che fossimo insieme. Il cuore mi balzava come ad un innamorato che rivede l'amata. Gesticolavamo senza capirci, e colla stessa premura, come se ci capissimo: o piuttosto ci capivamo realmente; que' gesti voleano dire tutto ciò che le nostre anime sentivano, et l'una non ignorava ciò che l'altra sentisse.

Qual conforto sembravanmi dover essere in avvenire que' saluti! E l'avvenire giunse, ma que saluti non furono più replicati! Ogni volta ch'io rivedea Gioja alla finestra, io faceva sventolare il fazzoletto. Invano! I secondini mi dissero che gli era stato proibito d'eccitare i miei gesti o di rispondervi. Bensì guardavammi egli spesso, ed io guardava lui, e così ci dicevamo ancora molte cose.

**Pure Mathematics.—I.**

Three hours.

M. H. IRVING, *M.A., Examiner.***ALGEBRA.**

- Express by algebraical symbols the following statement,  $a$  is contained  $c$  times in  $b$  with a remainder  $d$ . If  $d = x^3$ ,  $c = 1 + x + x^2$ , and  $a = 1 - x$ , find  $b$ .
- Resolve into simple factors the expression  $16x^4 - 81y^4$ .
- Divide  $1 - 5x + 10x^2 - 10x^3 + 5x^4 - x^5$  by  $1 - 3x + 3x^2 - x^3$ .
- Show that  $a^2 - \left(\frac{a^2 + b^2 + c^2}{2b}\right)^2 = \frac{(a + b + c)(a + b - c)(a + c - b)(b + c - a)}{4b^2}$
- Reduce to its simplest form  $\frac{(1 - a^2)(1 - b^2)(1 - c^2) - (c + ab)(a + bc)(b + ac)}{1 - a^2 - b^2 - c^2 - 2abc}$
- Prove that the fraction  $\frac{a + b + c}{d + e + f}$  is less than the greatest, and greater than the least of the three fractions  $\frac{a}{d}$ ,  $\frac{b}{e}$ ,  $\frac{c}{f}$ .
- State the Binomial Theorem. By it expand  $(1 + \sqrt[3]{x})^{-6}$  to 5 terms.
- Define a Series in Geometrical Progression. Calculate a formula for the sum of  $n$  terms of such a series. Deduce the sum to infinity of a series in which the common ratio is numerically less than 1.
- Hence prove the correctness of the Arithmetical Rule for the value of a recurring decimal. Apply it to reduce  $\cdot 3\bar{2}14$  to a Vulgar Fraction.
- Prove that if  $\sqrt{a + \sqrt{b}} = x + \sqrt{y}$ , then  $\sqrt{a - \sqrt{b}} = x - \sqrt{y}$ .  
Apply this to find the square root of a binomial surd, one of whose terms is rational and the other a quadratic surd. Ex. Find  $\sqrt{17 + 12\sqrt{2}}$ .
- Investigate a formula for the amount of a given sum, in a given time, at a given rate at compound interest. Find the compound interest on £200 for four years, at five per cent. interest, payable yearly.
- Prove that the difference between any number, and that formed by reversing the order of its digits, is divisible by 9.
- Solve these Equations—

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

$$(4) \frac{2}{x} + \frac{1}{y} = \frac{3}{z}$$

$$(2) \frac{3x-3}{4} - \frac{3x-4}{3} = \frac{21-4x}{9}$$

$$\frac{3}{z} - \frac{2}{y} = 2$$

$$\frac{1}{x} + \frac{1}{z} = \frac{4}{3}$$

$$(3) \frac{2}{3} (a - (b - x)) - \frac{3}{4} (x - (b - a)) - \frac{4}{5} (b - (a + x)) = \frac{5}{6} (x + a - b)$$

14. Solve the following Quadratics—

$$(1) 2\sqrt{x} + \frac{2}{\sqrt{x}} = 5$$

$$(3) \frac{13}{x+2} + \frac{4}{x} = 3\frac{1}{3}$$

$$(2) \cdot 0075 x^2 + \cdot 75x = 150$$

$$(4) \sqrt[3]{x} + \sqrt[3]{y} = 3 \\ x + y = 9$$

**Pure Mathematics.—II.**

Four hours.

M. H. IRVING, *M.A., Examiner.*

EUCLID—Books I.—IV. inclusive. ARITHMETIC.

- If two triangles have two angles of the one equal to two angles of the other, each to each, and the sides adjacent to the equal angles also equal, then shall the other sides be equal each to each, and also the third angle of the one to the third angle of the other.

2. Given any point within or without a given triangle. Prove that the sum of its distances from the angles of the triangle is greater than half the sum of the sides of the triangle.
3. In any right-angled triangle the square on the side subtending the right angle is equal to the squares on the sides containing it.
4. Two triangles of equal area stand on opposite sides of the same base. Prove that the line joining their vertices is bisected by the base, or the base produced.
5. If a straight line be divided into any two parts the square on the whole line is equal to the squares on the parts together with twice the rectangle contained by the parts.
6. Construct a rectangle equal to the difference of two given squares.
7. Equal straight lines in a circle are equally distant from the centre.
8. In a circle, the angle in a semicircle is a right angle, and that in a segment greater than a semicircle is less than a right angle.
9. Two circles have a common chord. Prove that the chord produced bisects the line tangent to both circles.
10. About a given circle describe a triangle equiangular to a given triangle.

[If the full working of a question be not sent up, no credit will be given for the answer, even if correct.]

1. Taking the year at 365 days 6 hours; how many complete years will there be in ten million minutes, and how many minutes will there be over? Write down this remainder in words.
2. A coach starts at the rate of  $8\frac{1}{2}$  miles an hour. An hour and a quarter after it has started, a horseman starts after it at the rate of 14 miles an hour. If both continue at the same pace how far from the starting point will he catch it, and in what time?
3. If 1825 men consume, in 60 days, 73 tons 9 cwt. 2 qrs. 16 lbs. of solid food, how much will 15,000 men require for half a year at the same rate of consumption, taking the year at 365 days?
4. Reduce  $\frac{.211}{.21}$  to a vulgar fraction with integral numerator and denominator.
5. Of the revenue of a country if  $\frac{1}{5}$  be spent on education,  $\frac{1}{5}$  on the army and navy,  $\frac{1}{5}$  on interest of debt,  $\frac{1}{5}$  on expenses of Government,  $\frac{1}{5}$  on collection, and the surplus is £1,325,678 9s. 4d.; find the total revenue.
6. Find the value to the decimal of a penny of 17.6 kilogrammes of standard gold, worth £3 17s. 10½d. an ounce, if a kilogramme contains 15432 grains.
7. Simplify  $\frac{8\frac{4}{7} - 2\frac{5}{9}}{14\frac{5}{12} - 3\frac{1}{14}} \times \frac{6\frac{1}{3} + \frac{1}{11}}{7\frac{1}{9} - 2\frac{1}{10}}$ , and reduce the resulting fraction to a decimal, correct to 5 places.
8. A square paddock of 10 acres is measured by a chain which is really 18 inches too short. How many square yards over its real content will it seem to contain? (Decimals of a square yard may be neglected.) What fraction of the true content will the apparent excess be?

### Mathematics.—III.

Four hours.

M. H. IRVING, M.A., Examiner.

EUCLID VI.—XI. LOGARITHMS. TRIGONOMETRY.

1. The sides about the equal angles of equiangular triangles are proportionals.
2. Similar triangles are to one another in the duplicate ratio of their homologous sides.
3.  $BAC$  is a triangle.  $PQ, XY$ , are two lines drawn parallel to  $BC$ , intersecting  $BA, CA$ , in the points  $X, Y$ , and  $P, Q$ , respectively. Prove that the area  $AXQ$  varies as the rectangle contained by  $XY$  and  $PQ$ .
4. If two similar parallelograms have a common angle, and be similarly situated, they are about the same diameter.
5. If an angle of a triangle be bisected by a straight line which also cuts the base, state what must be added to the rectangle contained by the segments of the base to make it equal to the rectangle contained by the sides. Prove your statement.
6. In any segment of a circle there can be inscribed two and only two similar triangles having the chord as their common base.

7. If a solid angle be contained by three plane angles, these three are together less than four right angles.
8. Two lines are given which are not in the same plane. Draw a third line perpendicular to both.
- 
9. Find  $x$  if  $2^x : 2^{2x} :: 8 : 1$ .
10. Given in the common system  $\log. 3 = .47712$ , and  $\log. 25 = 1.39794$ , calculate  $\log. 20$ ,  $\log. 83\frac{1}{3}$ ,  $\log. \sqrt[3]{12}$ ,  $\log. .144$ .
- 
11. Taking the correct value of  $\pi$  to 5 places of decimals, find the depth of a well in feet, inches, and decimals of an inch, if a cord, of which there are 50 turns round a roller 8 inches in diameter, just reaches the bottom.
12. What is the relation between a degree and a grade? Prove that the number of grades in the angle of a regular octagon is equal to the number of degrees in that of a dodecagon.
13. If  $\tan A = \frac{a}{b}$  find the value of  $1 - \frac{\sin^2 A}{1 + \cot A} - \frac{\cos^2 A}{1 + \tan A}$ .
14. Show that in any triangle (a)  $\frac{\sin A + \sin C}{\cos A + \cos C} = \cot \frac{B}{2}$ .  
 or, (b)  $\frac{\cot \frac{A}{2} + \cot \frac{C}{2}}{\cot \frac{B}{2} + \cot \frac{C}{2}} = \frac{\sin B}{\sin A}$ .
15. Investigate a formula for the area of a Quadrilateral whose opposite angles are supplementary.
16. Find, without logarithms, the other parts and the area of the triangle  $ABC$ , in which  $AB = 200$  yds.,  $BC = 100$  yds., and  $ABC = 60^\circ$ .
17. Find  $x$  having given  $\cos^{-1} \frac{1-x^2}{1+x^2} + \tan^{-1} \frac{2x}{1-x^2} = \frac{4\pi}{3}$ .
- 

### Natural Philosophy.

Three hours.

M. H. IRVING, M.A., Examiner.

- Four forces,  $A, B, C, D$ , of 2, 3,  $2\sqrt{3}$ , 7 pounds respectively, act on a point.  $A$  and  $C$  are at right angles,  $B$  and  $D$  also at right angles,  $B$  lies between  $A$  and  $C$ ,  $C$  between  $B$  and  $D$ , and  $B$  and  $C$  are inclined at an angle of  $30^\circ$ . Find the magnitude and direction of the resultant.
- A weight hangs vertically by a cord 13 feet long. A horizontal pressure of 10 lbs. pushes the weight 5 feet out of the perpendicular. Find the weight, and the strain on the cord in pounds.
- To what order of levers does a wheelbarrow belong?  
 If the distance from the end of the handles to the axle be  $4\frac{1}{2}$  feet, and a weight of 1 cwt. be placed 24 inches from the axle, find what lift in pounds a man must exert to lift the legs of the barrow off the ground. Assume that he exerts his strength to the best advantage, that the weight of the wheelbarrow is 28 lbs., and that its centre of gravity is 21 inches distant from the axle.
- Shew how the position of the centre of gravity of a triangle is determined.  
 Out of a square of cardboard whose diagonal is 12 inches, is cut an equilateral triangle having its vertex at one angle of the square and its base on the diagonal. Having given that in an equilateral triangle, side : perpendicular  $:: 2 : \sqrt{3}$ , and that the area of any triangle  $= \frac{1}{2}$  base  $\times$  perpendicular, find the distance in inches from the angle of the square of the centre of gravity of the remaining figure.
- If a body is in equilibrium under the action of (a) Two Forces, (b) Three Forces, state carefully all the conclusions that can be drawn about their magnitude and direction.  
 Supposing the handles of an unloaded wheelbarrow to be horizontal, and the arms of a man lifting the handles to be inclined, not perpendicular to them, draw a figure shewing the direction of the pressure of the axle on its socket.

6. Describe an ordinary balance. What is the position of the beam when the pans are unloaded, or loaded with equal weights? What does this tell you about the relative positions of the centre of gravity of the balance and the point of suspension?  
If the length of the beam be 18 inches, and a weight of 15 ounces in one pan be balanced by a weight of 16 in the other, what is the balance called, and what must be the length of each arm?
7. What is the use of a fixed pulley, and of a moveable pulley? In any system of pulleys, by what principle is the ratio of the power to the weight found?  
If there be one string and three moveable pulleys all in one block, and this ratio be  $\cdot 5$ , find the ratio of the weight of the block to the weight raised.
8. State the laws of motion. How is their truth established? If a person jumps up in a Railway carriage moving at the rate of 30 miles an hour, where will he come down?
9. What is the connexion between the acceleration of a moving body, its mass, and the force by which it moves?  
Supposing the carriage in the last question to be suddenly detached from the train, at what distance from the place where it was set free will it stop, supposing its weight to be 5 tons, and the friction between it and the rails to be  $\frac{1}{20}$  of its weight?  
[In this and the following questions take the integral value for  $g$ .]
10. A body is projected vertically upwards with a velocity  $V$ . After what time will it first come to rest, and at what height from the ground?  
A bullet fired vertically upwards reaches the height of 800 yards. What was the velocity in miles per hour at which it left the gun?
11. A stone is whirled in a sling a yard long, it leaves the sling when vertical over the hand, in what direction will it begin to move?  
Supposing the hand to be then four feet above the ground, in how many seconds will it reach the ground?
12. If a mile be the unit of space, and an hour the unit of time, what number represents the acceleration of gravity?
13. Describe the safety-valve of a steam boiler.  
If the area of the valve be four square inches, the distance from the pin resting on it to the fulcrum three inches, the length of the lever a yard, and the pressure of the steam 80 pounds per square inch, what weight must be hung on the end of the lever that steam may just escape?
14. Define specific gravity. What are the standards adapted for liquids and gases respectively? Shew how to find the specific gravity of a body (*a*) heavier than, (*b*) lighter than, water.  
Compare the specific gravity of a Sydney sovereign alloyed with one-twelfth of its weight of silver, and that of an English sovereign alloyed with the same proportion of copper. (s. g.—gold 19.3, silver 10.5, copper 8.9.)  
If the two sovereigns are exactly the same weight and diameter, by what fraction of itself must the thickness of the English sovereign exceed that of the Sydney one?

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### Chemistry.

Three hours.

H. M. ANDREW, M.A., *Examiner*.

[Questions 3, 8, 10, must be answered satisfactorily for passing; and Question 13 or 14 for passing well.]

- What is a spectrum? How do the spectra of the sun, incandescent lime, the flame of an elementary gas differ? Suppose light from the lime to pass through the vapour of sodium before reaching the prism, how would its spectrum be affected? Explain briefly the application of these principles to Spectrum Analysis. What is the characteristic of the spectrum of H, Na, K, Li?
- If water, hydric chloride, and sodic sulphate respectively be subjected to electrolysis, what substance would be set free at the positive and negative electrode in each case?
- State the four laws of chemical combination, giving an example of each.
- Distinguish between atom and molecule. Express the chemical decomposition which takes place during the preparation of hydrogen by zinc water and hydric sulphate, (1) by an atomic equation, (2) by a molecular equation. Why is the latter preferable?
- What is meant by the atomicity of any element? Give the atomicity and molecular formulæ and atomic weight of each of the elements which have been examined in a state of vapour.
- Give the chemical names and symbols of oil of vitriol, aqua fortis, bleaching powder, sugar of lead, smelling salts, plumbago, nitre, water, iron pyrites, marble.

7. Describe the preparation of nitrogen from potassic nitrite, and ammoniac chloride. Indicate the reactions by an equation or by a diagram.
8. Give with its formula the name of the principal compound of nitrogen with hydrogen; describe a method of preparing it.
9. What is meant by "Allotropism?" Describe the allotropic forms of sulphur, and state how they may be obtained from ordinary sulphur. Mention two other elements which exist in allotropic conditions, and briefly contrast the allotropic with the simple form in each case.
10. Describe fully the preparation of hydric sulphate, showing clearly by equations the action of the water and nitric oxide used in the process.
11. Why is hydric sulphate called a bibasic acid? What is meant by acid sulphates, and what by neutral sulphates? Give an example of each with the formula.
12. How many grammes of potassic chlorate must be used to make a cubic metre of oxygen at normal pressure and temperature? The weight of a cubic decimetre of hydrogen is .0896 gramme.
13. Name the metals which are precipitated from solution by hydric chloride. In what form do they come down? show this by an equation. Supposing a solution contained one only of these metals, how would you determine it?
14. To a portion of a solution known to contain a simple salt ammoniac sulphide is added and it causes a flesh-coloured precipitate. To another portion baric chloride is added and it causes a heavy white precipitate insoluble in hydric nitrate. What was the salt?

### Geology.

Three hours.

F. GOLDSTRAW, M.A., Examiner.

Page's Advanced Text-book.

1. Name the principal kinds of Granitic rocks, giving their constitution, and show how they differ from Trappean rocks.
2. Give Lyell's definition of a Volcano, and name and describe the chief volcanic products.
3. What are the two theories of Crater formation? Give Page's views on them.
4. Name the theoretical causes producing Metamorphism, and show to which we may suppose the cleavage of clay slate is due.
5. How does Page regard the theory of "the gradation and progress which mark the successive geological epochs?"
6. Give an account of the formation of Coal.
7. Give a description of the principal "Chemical deposits."
8. Enumerate the British beds from the base of the Lower Eocene to the top of the Lower Miocene.
9. Assign these strata to their proper positions in the systems :—Cornbrash, Saliferous Shales, Purbeck Beds, Millstone Grit, Caradoc Sandstone.
10. In what formations do you find,—Labyrinthodon, Pterodactylus, Lamna, Eozoon, Walchia, Spirifera, Oldhamia, Megatherium, Cephalaspis, Pentamerus?
11. Mention six vegetable forms characteristic of the Upper Coal Measures, and four of the Cretaceous system. Make a sketch of each.
12. Explain the meanings of these terms,—Fault, outliers, strike, Lehm, anticline, trachyte, geodes, dunes, ichthyodolites, atolls.

### Drawing.

H. HUNTER, Esq., Examiner.

No. 1.—FROM THE FLAT.

One hour and a half.

Copy in pencil, with clear outline, the figure of vase, given—same size as the original, but without using any means of measurement.

No. 2.—PERSPECTIVE.

Two hours.

[Work out the Problems given. At least three of them must be attempted.]

1. Tessellated pavement to be shown horizontally, below the level of the eye and touching the "picture plane." The "points of sight" and "distance" are marked S and D respectively.

2. A row of three square pillars, the size given at A—the first one to touch the “transparent plane.” The distance between the pillars, (which are to recede from the spectator,) is shown on “ground line.” The “centre” and “distance” points marked C and D on the “horizontal line.”
3. The circle and pentagon contained within it to be placed horizontally, also touching the “plane of delineation.” The “centre” and “distance” marked A and B on “horizontal line.”
4. A rectangular vertical plane to be drawn at right angles to the “picture plane,” with the openings shown. The nearest edge of the figure to be placed within the transparent plane at X. The “horizontal line” is marked A A, and upon it the “perspective centre” and “point of distance” O and P.
5. Represent a cube, the size given marked B. One angle touching the “transparent plane” to the right of spectator. The principal points for perspective delineation are given, marked S, X, V 1, and V 2. Name these various points and lines, and draw the cube (as though it were transparent) underneath—the “ground line” and “horizontal line” being marked G G and H H.

No. 3.—FROM A MODEL.

Two hours.

Sketch the chair and hat as placed before you.

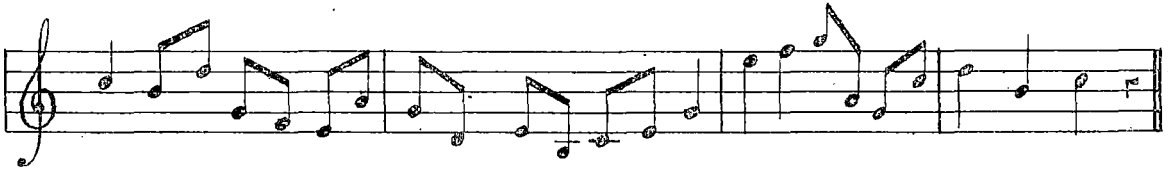


**Theory of Music.**

Three hours.

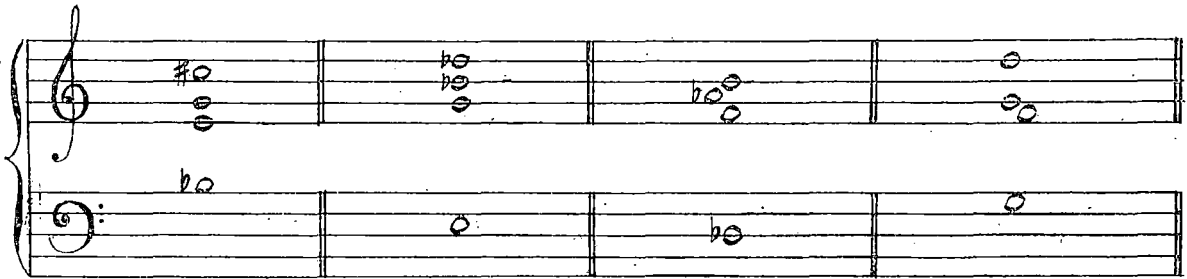
J. SUMMERS, Mus. Bac. Oxon, *Examiner.*

1. What are the characteristic chords of a key?
2. Explain the chords of the augmented sixth; the diminished seventh; the chord of the triad on the sub-tonic; and name how many classes of chords there are in use.
3. Name the melodic graces; also the terms to denote the rate or speed of a movement with their approximate metronomic figures.
4. Give examples of the various harmonic cadences.
5. Transpose the following air to the Alto, Tenor, and Bass Clef.

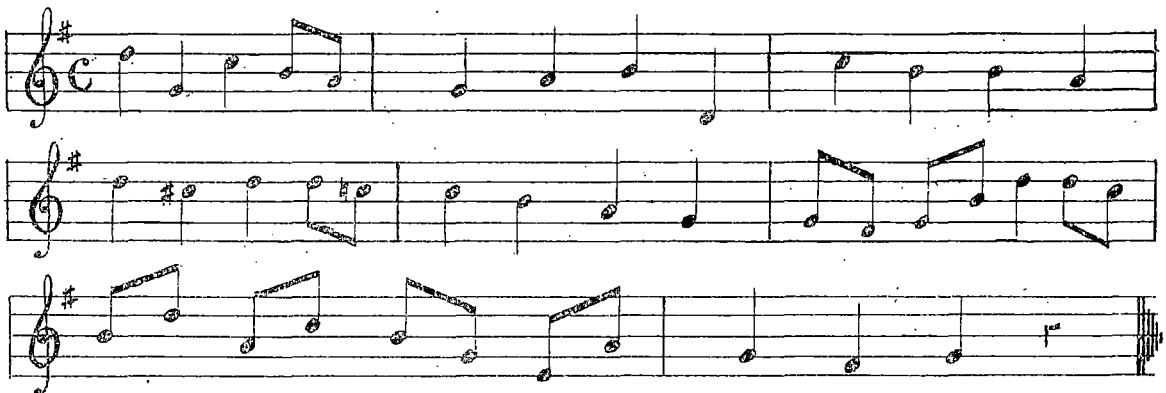


*The above must be answered satisfactorily to entitle a Candidate to pass.*

6. Name the intervals C to C sharp, and C to D flat; also from D flat to G sharp, and what they would become when inverted.
7. What are transient or passing notes, and when they occur on the accented part of the bar what are they called?
8. Resolve the following chords:—



9. Harmonise the following air in four parts:—



10. What is the character of the English, German, French, and Italian Schools of Music? Name some composers and their works in each school.



## TASMANIAN COUNCIL OF EDUCATION.

Hobart Town, 17th April, 1873.

## EXAMINATION FOR THE DEGREE OF ASSOCIATE OF ARTS, 1874.

## MALE CANDIDATES.

THE Council of Education have directed the publication of the following Regulations and Scheme of Examination for the Degree of Associate of Arts for the year 1874.

By Order of the Council,

GEORGE RICHARDSON, *Secretary*.

## REGULATIONS.

The Degree of Associate of Arts shall be open to persons of any age: but Candidates for that Degree above the age of nineteen years, who may take honors, shall be placed in separate class lists, and shall not be eligible for any Prizes that may be awarded by the Tasmanian Council of Education.

In determining the Classes, account will be taken of every part of the Examination; but no credit will be given for knowledge in any subject unless the Candidates attain a standard of marks to be fixed by the Council.

Every successful Candidate for the Degree of Associate of Arts shall receive a Certificate of his having obtained such Degree; and such Certificate shall be on parchment, under the Seal, and signed by the President of the Council. The Certificate shall specify the subjects in which the Candidate has passed, and the Class, if any, that he has attained.

The examination for those Students who have satisfactorily passed the preliminary examination will comprise the subjects mentioned in the following thirteen sections, in four of which, at least, Latin being one, the Candidate must pass:—

- |                      |   |
|----------------------|---|
| 1. English.          | 8. The Elementary Principles of Hydrostatics and Mechanics. |
| 2. Latin.            | 9. The Elements of Chemistry.                               |
| 3. Greek.            | 10. Zoology and Botany.                                     |
| 4. French.           | 11. Geology.  |
| 5. German.           | 12. Drawing.  |
| 6. Italian.          | 13. Music.  |
| 7. Pure Mathematics. |   |

## SCHEME of Examination for the Year 1874.

## PRELIMINARY EXAMINATION.

Previously to the Examination for the Degree of Associate of Arts, every Candidate will be required to satisfy the Examiners in—

1. Reading aloud a passage from some English prose author.
2. Writing from dictation.
3. The Analysis and Parsing of a passage from some standard English author.
4. The first four Rules of Arithmetic, Simple and Compound.
5. Geography. Under this head a competent knowledge will be required of the chief ranges of mountains, the principal rivers, the principal towns, and the coast-line of one or more of the countries in the following list:—England, Scotland, Ireland, Europe, Asia, Africa, North America, South America, Australasia.
6. The outlines of English History since the Conquest; that is to say, the succession of Sovereigns, the chief events, and some account of the leading men in each reign.

## ORDINARY EXAMINATION.

1. **ENGLISH.**—*Language.*—The Candidate will be examined in Sections VI. and VII. of Morell & Ihne's Poetical Reading Book, with Questions on the Etymology and Grammatical construction of the Language; and will be required to write a short original Composition, or a Report founded upon some abstract of facts furnished to him. Books recommended: Poetical Reading Book with Aids for Grammatical Analysis, &c., by Morell & Ihne, (Gordon); Morell's Grammar and Analysis with the Exercises, (Constable). *History.*—History of England, *Student's Hume, Book I.* Book recommended: Smith's Student's Hume, (Murray). *Geography.*—Physical, Commercial, and Political Geography. Book recommended: Cornwell's School Geography.

2. **LATIN.**—Virgil, *Aeneid, Book III.*, Horace, *Odes, Books III. and IV.*; Cicero, *Orations against Catiline*, 1, 2, and 3. Questions will also be given on the Language, and the historical and geographical allusions. A passage for translation from some other Latin author; and passages of English for translation into Latin Prose and Verse.

3. GREEK.—Xenophon, *Anabasis, Book IV.*; Euripides, *Hecuba*. Homer's *Iliad, Book III*. Questions on the Language, and the historical and geographical allusions. A passage for translation from some other Greek author.

4. FRENCH.—Bonnechose, *Lazare Hoche* (Bibliothèque des Chemins de Fer); Molière, *Le Malade Imaginaire*. Questions on the Language, and the historical and geographical allusions; a passage from some other French author for translation into English, and from some English author into French.

5. GERMAN.—Schiller, *Maria Stuart*. Questions on the Language, and the historical and geographical allusions; a passage from some other German author for translation into English, and from an English author into German.

6. ITALIAN.—Silvio Pellico, *Le Mie Prigioni*, with questions on the Language, and the grammatical construction; a passage from some other Italian author for translation into English, and from an English author into Italian.

7. PURE MATHEMATICS.—Euclid, *Books I. II. III. IV.*, Arithmetic and Algebra. Candidates for Honours will be required to satisfy the Examiners in Euclid, *Book VI. and Book XI. to the 21st Proposition inclusive*, Plane Trigonometry, (Text Books—Colenso's Trigonometry, 1st Part, or Todhunter's Trigonometry for Beginners), and the use of Logarithms.

8. NATURAL PHILOSOPHY.—Newth's First Book of Natural Philosophy,—not including the Eighth and Ninth Chapters.

9. CHEMISTRY.—Inorganic Chemistry. Book recommended—Wilson's Chemistry, by Madan, (Chambers).

10. ZOOLOGY AND BOTANY.—Elementary questions will be set on the description and classification of animals, their habits and geographical distribution; and on the mercantile and industrial uses of animal products. Also, the description and classification of plants, their uses, and geographical distribution. Plants, and parts of plants, will be given for description. Text Books: Milne Edwards's Zoology, 7s. 6d., (Renshaw), and Lindley's Elements of Botany, 12s., (Bradbury).

11. GEOLOGY.—Book recommended—Page's Advanced Text Book of Geology, 5s., (Blackwood).

12. DRAWING.—Drawing from the Flat, from Models, and in Perspective. A fair degree of skill in freehand Drawing will be required in order that a Student may pass in this section. Text Books: J. R. Dicksee's Linear Perspective for use of Schools, 8vo., 5s., (Virtue), and R. S. Burn's Illustrated Drawing Book, 8vo., 2s., (Ward & Lock).

13. MUSIC.—A knowledge of the Elements of Harmony and Musical Composition will be required; questions will also be set upon the history and principles of the Art.

#### SCALE OF MARKS.

		Full Marks obtainable.
1. English	Language .....	600
	History .....	250
	Geography.....	250
2. Latin .....		800
3. Greek .....		800
4. French.....		600
5. German .....		600
6. Italian .....		600
7. Pure Mathematics .....		800
8. Elementary Principles of Hydrostatics and Mechanics .....		250
9. Chemistry .....		250
10. Zoology and Botany .....		250
11. Geology .....		250
12. Drawing .....		200
13. Music .....		200
		Marks.
Standard for First Class .....		2350
Standard for Second Class .....		1900
Standard for Third Class .....		1350

#### PRIZES.

1. The Council's Gold Medal, of the value of Ten Pounds, will be awarded to the Senior Associate, provided he be placed by the Examiners in the First Class of Associate of Arts.

2. A Prize to the value of Ten Pounds will be awarded in Sections 1, 2, 3, 4, 5, 6, and 7, to the Candidate who most distinguishes himself in each of those subjects, provided he be placed by the Examiners in the First Class of the Associates of Arts.

3. A Second Prize to the value of Five Pounds will be awarded for each of the above-named Subjects, at the discretion of the Examiners.

4. Prizes of the value of Five Pounds each will, at the discretion of the Examiners, be awarded to the Candidates who most distinguish themselves in Sections 8, 9, 10, 11, 12, and 13, provided their names appear in the Class List of those recommended for the Degree.

## TASMANIAN COUNCIL OF EDUCATION.

Hobart Town, 17th April, 1873.

## EXAMINATION FOR THE DEGREE OF ASSOCIATE OF ARTS, 1874.

## FEMALE CANDIDATES.

THE Council of Education has directed the publication of the following Regulations for the Examination of Female Candidates for the Degree of Associate of Arts, together with the Scheme of Examination for the year 1874.

By Order of the Council,

GEO. RICHARDSON, *Secretary*.

## REGULATIONS.

I. The Examination for the Degree of Associate of Arts shall be open to persons of any age; but Candidates for that Degree above the age of nineteen years shall not be eligible for any Prizes that may be awarded by the Tasmanian Council of Education.

II. In determining the Classes, account will be taken of every part of the Examination; but no credit will be given for knowledge in any subject unless the Candidates attain a Standard of Marks to be fixed by the Council.

III. Every successful Candidate for the Degree of Associate of Arts shall receive a Certificate of having obtained such Degree: and such Certificate shall be on parchment, under the Seal, and signed by the President of the Council. The Certificate shall specify the subjects in which the Candidate has passed and the Class attained.

IV. The examination, for those Students who have satisfactorily passed the Preliminary Examination, will comprise the subjects mentioned in the following thirteen sections. In four of these, English and one Ancient or Modern Language being essential, the Candidate must pass:—

- |                      |   |
|----------------------|---|
| 1. English.          | 8. The Elementary Principles of Hydrostatics and Mechanics. |
| 2. Latin.            | 9. The Elements of Chemistry.                               |
| 3. Greek.            | 10. Zoology and Botany.                                     |
| 4. French.           | 11. Geology.  |
| 5. German.           | 12. Drawing.  |
| 6. Italian.          | 13. Music.  |
| 7. Pure Mathematics. |   |

## SCHEME OF EXAMINATION FOR THE YEAR 1874.

## PRELIMINARY EXAMINATION.

Previously to the Examination for the Degree of Associate of Arts every Candidate will be required to satisfy the Examiners in—

1. Reading aloud a passage from some English prose author.
2. Writing from dictation.
3. The Analysis and Parsing of a passage from some standard English author.
4. The first four Rules of Arithmetic, Simple and Compound.
5. Geography. Under this head a competent knowledge will be required of the chief ranges of mountains, the principal rivers, the principal towns, and the coast-line of one or more of the countries in the following list:—England, Scotland, Ireland, Europe, Asia, Africa, North America, South America, Australasia.
6. The outlines of English History since the Conquest; that is to say, the succession of Sovereigns, the chief events, and some account of the leading men in each reign.

## ORDINARY EXAMINATION.

1. **ENGLISH.—Language.**—The Candidate will be examined in Sections VI. and VII. of Morell and Ihue's Poetical Reading Book, with Questions on the Etymology and Grammatical construction of the Language; and will be required to write a short original Composition, or a Report founded upon some abstract of facts furnished to her. Books recommended: Poetical Reading Book with Aids for Gram-

mathematical Analysis, &c., by Morell and Ihne; Morell's Grammar and Analysis with the Exercises. *History*.—History of England, *Student's Hume, Book I.* Book recommended: Smith's Student's Hume, (Murray). *Geography*.—Physical, Commercial, and Political Geography. Book recommended: Cornwell's School Geography.

2. **LATIN**.—Virgil, *Aeneid, Book III.*; Cicero, *Orations against Catiline, I, 2, and 3.* Questions will also be given on the Language, and the historical and geographical allusions. A passage for translation from some other Latin author; and passages of English for translation into Latin Prose and Verse.

3. **GREEK**.—Xenophon, *Anabasis, Book IV.* Questions on the Language, and the historical and geographical allusions.

4. **FRENCH**.—Bonnechose, *Lazare Hoche* (Bibliothèque des Chemins de Fer); Molière, *Le Malade Imaginaire*. Questions on the Language, and the historical and geographical allusions; a passage from some other French author for translation into English, and from some English author into French.

5. **GERMAN**.—Schiller, *Maria Stuart*. Questions on the Language, and the historical and geographical allusions; a passage from some other German author for translation into English, and from an English author into German.

6. **ITALIAN**.—Silvio Pellico, *Le Mie Prigioni*, with questions on the Language, and the grammatical construction; a passage from some other Italian author for translation into English, and from an English author into Italian.

7. **PURE MATHEMATICS**.—Euclid, *Books I. II. III. IV.*, Arithmetic and Algebra. (Books recommended: "Colenso's Algebra, Part I." or "Todhunter's Algebra for Beginners.")

8. **NATURAL PHILOSOPHY**.—Newth's First Book of Natural Philosophy,—not including the Eighth and Ninth Chapters.

9. **CHEMISTRY**.—Inorganic Chemistry. Book recommended: Wilson's Chemistry, by Madan, (Chambers).

10. **ZOOLOGY AND BOTANY**.—Elementary questions will be set on the description and classification of animals, their habits and geographical distribution; and on the mercantile and industrial uses of animal products. Also the description and classification of plants, their uses, and geographical distribution. Plants, and parts of plants, will be given for description. Text Books: Milne Edward's Zoology, (Renshaw), and Lindley's Elements of Botany, (Bradbury).

11. **GEOLOGY**.—Book recommended: Page's Advanced Text Book of Geology, (Blackwood).

12. **DRAWING**.—Drawing from the Flat, from Models, and in Perspective. A fair degree of skill in freehand Drawing will be required in order that a Student may pass in this section. Text Books: J. R. Dicksee's Linear Perspective for use of Schools, 8vo., and R. S. Burn's Illustrated Drawing Book, 8vo.

13. **MUSIC**.—A knowledge of the elements of Harmony and Musical Composition will be required; questions will also be set upon the history and principles of the art.

#### SCALE OF MARKS.

		Full Marks obtainable.
1. English	{ Language .....	600
	{ History .....	250
	{ Geography .....	250
2. Latin .....		600
3. Greek .....		600
4. French .....		600
5. German .....		600
6. Italian .....		600
7. Pure Mathematics .....		600
8. Elementary Principles of Hydrostatics and Mechanics .....		250
9. Chemistry .....		250
10. Zoology and Botany .....		250
11. Geology .....		250
12. Drawing .....		200
13. Music .....		400
		Marks.
Standard for First Class .....		2000
Standard for Second Class .....		1800
Standard for Third Class .....		1200