

(No. 4.)



1864.

T A S M A N I A.

LEGISLATIVE COUNCIL.

DEGREE OF ASSOCIATE OF ARTS.

EXAMINERS' REPORT, 1863.

Laid on the Table by Mr. Whyte, and ordered by the Council to be printed,
June 29, 1864.



TASMANIAN COUNCIL OF EDUCATION.

DEGREE OF ASSOCIATE OF ARTS.—SEPTEMBER, 1863.

IN conformity with the Rules and Regulations of the Tasmanian Council of Education, the Council have 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, and upon whom that Degree has been conferred accordingly :—

FIRST CLASS.

None.

SECOND CLASS.

DAVID BARCLAY, Age 17, Hobart Town, Pupil of High School, Hobart Town, Rev. R. D. Harris, M.A., Rector. Awarded Prizes of Books of the value of Five Pounds each for Pure Mathematics and Natural Philosophy.

HENRY LEWIS GARRETT, Age 16, Hobart Town, Pupil of the Hutchins School, Hobart Town, Rev. J. R. Buckland, Head Master. Awarded a Prize of Books of the value of Five Pounds for Latin.

HUGH SUNDERLAND BARRETT, Age 16, Hobart Town, Pupil of High School, Hobart Town, Rev. R. D. Harris, M.A., Rector. Awarded a Prize of Books of the value of Five Pounds for French.

THIRD CLASS.

None.

On the recommendation of the Examiners, the Council's Certificate of Merit has been awarded to the under-mentioned Candidate who failed to obtain the Degree of Associate of Arts :—

WILLIAM TOWERS WATERHOUSE, Age 17, Hobart Town, Pupil of Horton College, Ross, W. W. Fox, Head Master.

The Report of the Examiners, the Examination Papers, and the Regulations for the Examination, are annexed.

By Order of the Council,

MURRAY BURGESS, *Secretary.*

EXAMINERS' REPORT.

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 have the honour to report as follows:—

The subjects of Examination, the values attached to them severally, and the number of marks qualifying for each class, remained unchanged.

PRELIMINARY EXAMINATION.

Six Candidates presented themselves.

The portion of this Examination conducted orally was on the whole satisfactory, the reading aloud was intelligent, and a fair amount of elementary knowledge of History and Geography was exhibited.

In the portion conducted by written answers, the handwriting and the spelling as tested by a passage written from dictation were good, and the answering to questions on English commendable; the knowledge of History fair, that of Geography less satisfactory. In Arithmetic, which cannot be properly tested orally, one Candidate failed from a total inability to work correctly the simplest sums in multiplication and division, and two others very narrowly escaped the same fate; gross carelessness and inaccuracy characterized the answers: the questions were worked in the proper manner, but the answers were full of blunders which ought not to have been made even on a first working, and which a careful revision must have enabled the Candidates to detect for themselves.

DEGREE EXAMINATION.

The five Candidates who passed the Preliminary Examination presented themselves for the Degree Examination.

The Reports of the Examiners in the several subjects presented are as follows:—

I. ENGLISH, INCLUDING HISTORY AND GEOGRAPHY.

Five Candidates: all passed.

For the first time in these Examinations a portion of an English Author was prescribed for study; viz.—Goldsmith's *Deserted Village*.

It did not appear from the answering of the Candidates that it had occurred to them that an English Author might be got up with the Dictionary like a Latin one; and that such study is indispensable to learning anything about our own language. With this exception the Candidates all displayed fair acquaintance with the books prescribed for study in English.

The period of History selected by the Council had also been fairly prepared; one Candidate, Barclay, obtaining in this three quarters of full marks.

But in Geography, both Physical and Political, there was a marked inferiority to last year. To the lack of knowledge in this it is mainly due that no Candidate appears this year as having passed with credit in English.

II. LATIN.

Four Candidates: all passed, one with credit.

It is gratifying to note that whereas last year three Candidates were rejected on elementary work,—that is for ignorance of grammar and inability to render easy Latin literally into English,—none were this year rejected on this ground. The answering was on the average not quite so good as last year's, but this may be accounted for by the fact that the higher paper was made somewhat more difficult, particularly by the introduction of that which the Council has judged it desirable to have in the Latin Examination, translation into Latin Verse.

One Candidate only shewed any capacity for doing this; and the translation into Latin Prose attempted by two Candidates only was not good. In the translation, however, of Latin not prepared beforehand there was a marked improvement; shewing that the Candidates had obtained some mastery over the language.

The great defect of the work was inaccuracy: the great defect in knowledge, an inability to trace the derivation and the meaning of compound words.

III. GREEK.

Two Candidates. Both passed.

Here as in Latin there is a marked improvement in the lower work. The answers to questions on the prescribed books were fair, deficient rather in quantity than in quality. In Greek as well as in Latin was seen the same apparent inability to trace the derivation, and the formation of words, to connect their meaning with their history.

A passage of Greek which had not been prepared beforehand was given for translation. Neither Candidate, however, attempted it.

IV. FRENCH.

Five Candidates. All passed, two with credit.

All the Candidates displayed a good knowledge of grammar and had carefully prepared the books prescribed. Four attempted the translation into French, but none exhibited much insight into the genius of the language or much facility in using it.

V. PURE MATHEMATICS.

Five Candidates presented themselves for Examination in this subject of whom three passed. The questions set on this occasion were much easier than those of last year, and four hours instead of three were allowed for each paper, so that every Candidate had ample time to answer all the questions. The questions consisted of propositions taken directly from the prescribed text books, or of simple applications of principles and methods requiring no ingenious artifices for their solution. One Candidate, Barclay, acquitted himself very creditably in this examination, shewing sound knowledge and considerable Mathematical power: as he failed to obtain a First Class for the Degree, mainly from not presenting Greek and Latin among his subjects, the Second Prize only could be awarded to him. As he also obtained a Prize of £5 in Natural Philosophy, the Examiner would have felt justified in recommending him specially for the Council's Gold Medal had it not been that his work was disfigured by systematic inaccuracy wherever arithmetical calculation occurred.

The Examiner does not consider he is stepping beyond his duty in urging upon those engaged in training Candidates the importance of insuring a thorough knowledge of all the elementary portions of Mathematics and *absolute accuracy* in its reproduction. An Examiner who understands his work will never allow a few high questions answered to compensate for ignorance of the earlier work or carelessness in its application. Euclid and Arithmetic are two subjects in which the Candidates might and should make sure of answering correctly every question. The Propositions from Euclid alone exclusive of deductions would if correctly written out have been sufficient to pass a Candidate in Mathematics. With one exception the answering in Euclid was extremely bad.

VI. NATURAL PHILOSOPHY.

Two Candidates only presented themselves both of whom passed. The answering of one was very good and obtained a prize, the other shewed a satisfactory acquaintance with the subject.

VII. GEOLOGY.

One Candidate presented himself, and passed, shewing considerable knowledge of the Text Books prescribed. He would doubtless have acquired a practical acquaintance with the subject, had he had the opportunity of studying collections and receiving field instruction.

It is to be regretted that no National Educational Geological collection has yet been formed, for consequently the knowledge of Geology hitherto exhibited by Candidates has been rather to be commended as a display of memory than as exhibiting any useful familiarity with the science.

VIII. DRAWING AND ARCHITECTURE.

One Candidate presented himself, and passed.

The Drawing was on the whole much better than last year's, but the questions given in Architecture though of the most simple elementary character were very imperfectly answered.

Such being the Reports of the Examiners on the several subjects, it remains to speak of the Examination as a whole, and the evidence afforded by it as to the education and training of the Candidates.

The comparison of the four years (omitting the Candidate who was over nineteen years of age when examined last year) is as follows:—

	1860.	1861.	1862.	1863.
Total number of Candidates	12	12	10	6
Rejected at Preliminary	3	2	2	1
Admitted to Examination for the Degree of A.A... ..	9	10	8	5
Passed for A.A.	4	8	4	3
First Class	3	2	0	0
Second Class.....	1	2	1	3
Third Class.....	0	4	3	0

The first point in this comparison which claims attention is the diminution in the number of Candidates. This is not really a ground for discouragement, but rather the reverse; for it is probably only a result of what seems to be a law at the institution of any system like that of this Examination. At first the real difficulties of the Examination are unknown, and as it is but the outset of the system Examiners are perhaps more indulgent. Hence for a year or two Candidates are very ready to come forward, then for a year or two there will be a reaction and a hesitation on the part of Candidates to present themselves, and of their Teachers to send them in till they are fully prepared.

The Class List this year proves that the Candidates were, on the whole, better prepared; for though none of them showed any extraordinary ability, all who have attained the Degree are placed in the Second Class. One half of the Candidates obtain the Degree, a larger proportion than in any year except 1861.

But there are still grave faults to be found with the style of the Candidates' work. It will never be satisfactory till they are trained, which they clearly are not at present, to answer questions on paper. From want of this practice, they constantly miss the scope of a question, state what they do know clumsily or inaccurately, make mistakes which are evidently not due to ignorance, but which yet an Examiner must treat as mistakes. The truth is, that in the oral examining common in Schools a Teacher does not wait to get an answer correctly stated, he is content when a boy's answer satisfies him, often by a mere hint, that the boy has the knowledge required. Paper work only will teach boys to express their knowledge quickly, clearly, pointedly, and completely, as they ought to do if they are to be placed in the First Class of the Associate of Arts.

It is worth noting that the Candidate highest on the list this year presented neither Latin nor Greek.

Not that the Examiners think it at all desirable that lads should be encouraged to neglect Classical studies; on the contrary, they consider them conjointly with Mathematics the best discipline that can be given to boys, apart altogether from the practical use of a knowledge of Latin. In the very case alluded to, the Candidate's ignorance of Latin went much against him in answering the paper on the English language, as of course it must do and ought to do, seeing how large an element of English has been derived from Latin.

But this instance shows that Classics are not indispensable to success.

The three Candidates who have passed for the Degree each take prizes of the Second Class only, as none are placed in the First Class,—Barelay for Pure Mathematics and for Natural Philosophy, Garrett for Latin, and Barrett for French.

One Candidate only fell below the Standard fixed for the Certificate of Merit. Another, Waterhouse, obtains the Certificate, falling very little short of the Standard for the Degree.

The Class Lists, General and Special, are appended to this Report.

The Examiners have to acknowledge the promptness and the courtesy of the Government Printer in the preparation of the Examination Papers.

(Signed)	M. H. IRVING, <i>M.A.</i> ,	} <i>Examiners.</i>
	W. P. WILSON, <i>M.A.</i>	
	C. GOULD, <i>B.A.</i> ,	
	H. HUNTER,	
	F. BUCK,	

TASMANIAN COUNCIL OF EDUCATION.

EXAMINATION FOR THE DEGREE OF ASSOCIATE OF ARTS—SEPTEMBER, 1863.

GENERAL CLASS LIST.

NAME.	MARKS.	AGE.		SCHOOL.	TEACHER.
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FIRST CLASS.

None.

SECOND CLASS.

Barclay, D.	2003	17	Prize of £5 for Pure Mathematics, and Prize of £5 for Natural Philosophy.	High School, Hobart Town.	Rev. R. D. Harris.
Garrett, H. L.	1943	16	Prize of £5 for Latin.	Hutchins School, Hobart Town.	Rev. J. R. Buckland.
Barrett, H. S.	1818	16	Prize of £5 for French.	High School, Hobart Town.	Rev. R. D. Harris.

THIRD CLASS.

None.

Candidate who failed to obtain the Degree of A.A., but is recommended by the Examiners for the COUNCIL'S CERTIFICATE of MERIT.

Waterhouse, W. T.	1364	17	—	Horton College, Ross.	W. W. Fox, Esq.
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For the Examiners,

M. H. IRVING, M.A., *Chairman.*

16th September, 1863.

SPECIAL CLASS LIST.

<i>English.</i>	<i>Latin.</i>	<i>Greek.</i>	<i>French.</i>	<i>Pure Mathematics.</i>	<i>Elementary Principles of Hydrostatics and Mechanics.</i>	<i>Drawing and Architecture.</i>	<i>Geology.</i>
FIRST CLASS.	FIRST CLASS.	FIRST CLASS.	FIRST CLASS.	FIRST CLASS.	FIRST CLASS.	FIRST CLASS.	FIRST CLASS.
None	Garrett	None	Barrett Garrett	Barclay.	Barclay	None	None
SECOND CLASS.	SECOND CLASS.	SECOND CLASS.	SECOND CLASS.	SECOND CLASS.	SECOND CLASS.	SECOND CLASS.	SECOND CLASS.
Barclay Garrett Barrett	Barrett	Garrett.	Barclay.	Barrett Garrett	Barrett	Barrett	Barclay.

For the Examiners,

M. H. IRVING, M.A., *Chairman.*

16th September, 1863.

TASMANIAN COUNCIL OF EDUCATION.

EXAMINATION for the Degree of ASSOCIATE of ARTS.—September, 1863.

TABULATED RESULTS.

NAME AND MOTTO.	AGE.	SCHOOL.	TEACHER.	English.	Latin.	Greek.	French.	Pure Mathematics.	Elementary Principles of Hydrostatics and Mechanics.	Drawing and Architecture.	Geology.	TOTAL No. OF MARKS.	RESULT.	
				Maximum Number of Marks.										
				1000	800	800	500	800	400	400	400	5100		
Barclay, David— "Pax"	17	High School, Hobart Town	Rev. R. D. Harris, M.A.	653	—	—	219	542c	314c	—	275	2003	Second Class.	
Garrett, Henry Lewis—" Ars".....	16	Hutchins School, ditto	Rev. J. R. Buckland, B.A.	511	482c	421	251c	278	—	—	—	1943	Second Class.	
Barrett, Hugh Sunderland—"Nox"	16	High School, ditto	Rev. R. D. Harris, M.A.	506	410	—	315c	304	140	143	—	1818	Second Class.	
Waterhouse, William Towers—"Lux"....	17	Horton College, Ross	W. W. Fox, Esq., B.A.	407	336	377	244	n.p.	—	—	—	1364	Certificate of Merit.	

NOTE.—n.p. not passed. c. passed with credit. — subject not attempted by Candidates.

For the Examiners,

M. H. IRVING, M.A., *Chairman.*

16th September, 1863.

TASMANIAN COUNCIL OF EDUCATION.

EXAMINATION FOR THE TASMANIAN SCHOLARSHIPS.—SEPTEMBER, 1863.

Preliminary Examination.

Professor Wilson. Professor Irving.

WEDNESDAY, 9TH SEPTEMBER. 9 A.M. to 1 P.M.

1. Multiply together the following numbers :—Three thousand and six, four thousand and seven, five thousand and fifty ; divide the product by fifteen thousand and thirty, and write down the quotient in words.
 2. The total population of a country was found, on a census being taken, to be eight millions twenty-three thousand and seven ; of these, five millions fifteen hundred and nine were under twenty years old ; the number of females above twenty was greater than half of the remainder by one hundred and thirteen. How many males above twenty were there ?
 3. If 973 sheep cost £1100 14s. 1½*d.*, what will be the cost of one of them ; and what will be the cost of 3752 at the same rate ?
 4. A man bought seven hundred and twenty-three ounces of gold at £3 17s. 10½*d.* the ounce, and gave in part payment three hundred pairs of boots at 6s. 6½*d.* the pair, one hundred and twenty-seven chests of tea at £5 11s. 6*d.* the chest, and one hundred and nine dozen of wine at £2 11s. 6*d.* the dozen. What was the balance remaining to be paid in cash ?
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5. Draw an outline map of Australia, marking Sydney, Melbourne, Adelaide, King George's Sound, Brisbane, Rockhampton ; Capes Howe, Leuwin, and York ; the Great Australian Bight and the Gulf of Carpentaria ; the course of the Murray and of the Darling.
 6. Through what countries, and into what seas, do these rivers run :—The Rhine, the Mississippi, the Brahmaputra, the Volga, the Euphrates, and the Yenisei ?
 7. Name in order from east to west ten of the principal islands in the Mediterranean.
 8. Where are Behring's Straits, the Strait of Sunda, the Straits of Magellan, Cape Race, Cape Comorin, the Skaw, Madagascar, St. Helena, Vienna, and Oporto ?
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9. What kings came to the throne of England in 1216, 1327, 1413, 1547, 1603, 1702 ; and whom did they severally succeed ?
 10. Between whom, and in whose reign, were fought the battles of Tewkesbury, Pinkie, Worcester, Blenheim, Hastings, Otterbourn ?
 11. In whose reign did the following persons live, and for what are they known in history :—Laud, Addison, Byng, George Grenville, Sir Robert Peel, Cade ?
 12. What were Domesday Book, the first Crusade, Magna Charta, the Armada, the Petition of Right, the Grand Alliance, and to whose reign do they severally belong ?
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Preliminary Examination.

WEDNESDAY, 9TH SEPTEMBER. 2 to 5 P.M.

1. Analyse this sentence :—

Of these kindred Constitutions the English was, from an early period, reputed the best.

2. Parse every word in the following sentence :—

At present the chief servants of the Crown form one body.

3. These words—
- beech, fir, pier, root, so, stare*
- have each a word or words of the same sound but differently spelt. Write down these words with their meanings, and also the meanings of the words given in the question.

4. Point out the errors of grammar and of spelling, and make the necessary corrections, in the following :—

Shee wos goin out o dores inn too toun wen i cum in and frighted she soe she stopd along of i.

Passage for Dictation.

TWO CITIES: A CONTRAST.—I remember a city, more nobly placed even than Edinburgh, which, instead of the valley now filled by lines of railroad, has a broad and rushing river of blue water sweeping through the heart of it; which, for the dark and solitary rock that bears your castle, has an amphitheatre of cliffs crested with cypresses and olive; which, for the two masses of Arthur's seat and the ranges of the Pentlands, has a chain of blue mountains higher than the haughtiest peaks of the Highlands; and which, for the far away Ben Ledi and Ben More, has the great central chain of the St. Gothard Alps; and yet as you go out of the gates, and walk in the suburban streets of that city—I mean Verona—the eye never seeks to rest on that external scenery, however gorgeous; it does not look for the gaps between the houses: it may for a few moments follow the broken line of the great Alpine battlements; but it is only where they form a background for other battlements, built by the hand of man. There is no necessity felt to dwell on the blue river or the burning hills. The heart and eye have enough to do in the streets of the city itself; they are contented there; nay, they sometimes turn from the natural scenery, as if too savage and solitary, to dwell with a deeper interest on the palace walls that cast their shade upon the streets, and the crowd of towers that rise out of that shadow, into the depth of the sky. That is a city to be proud of indeed.—*Lectures on Architecture and Painting*, Lect. 1.

The passages read at the Oral Examination were taken from Arnold's Lectures on Modern History and Macaulay's History of England.

Mathematics.—I.*Professor Wilson.*

THURSDAY, 10TH SEPTEMBER. 9 A.M. to 1 P.M.

1. Define the following terms :—A plane angle : a plane rectilineal angle : a right angle : a right-angled triangle : an acute-angled triangle : parallel straight lines. State the axiom about parallel lines, and draw a figure shewing the angles referred to. Draw a right-angled triangle FGH having F for its right angle.
2. From a given point draw a straight line equal to a given straight line. Take F in the last figure for the given point, and GH for the given straight line.

3. Shew that parallelograms on the same base and between the same parallels are equal to one another.
 4. Divide a given straight line into two parts so that the rectangle contained by the whole and one of the parts may be equal to the square described on the other part.
If AB is the given line and it is divided in C so that the square on AC is equal to the rectangle under AB , BC shew that the square on AB is equal to the rectangle under AC and the line made up of AB and AC .
 5. Shew that if two circles touch each other externally the straight line which joins their centers will pass through the point of contact.
Hence shew that if two equal circles touch each other externally all circles drawn so as to touch them both will have their centers in a straight line.
 6. Shew that the opposite angles of any quadrilateral figure which can be inscribed in a circle are together equal to two right angles.
If $FGHK$ is such a quadrilateral figure and FG is produced to M shew that the angle HGM is equal to the angle K .
 7. Inscribe a circle in a given triangle.
 8. Reduce one-sixth of five-sevenths of a guinea to the decimal of £1.
 9. Reduce the fractions $\frac{1}{15}$, $\frac{3}{8}$, $\frac{7}{12}$, $\frac{11}{35}$, $\frac{2}{56}$ to others having a common denominator; find their sum, and express it in its lowest terms.
 10. Extract the square root of 893.729 to four places of decimals. If you were restricted to two places of decimals what would be the nearest value of the square root?
 11. Multiply together $a^2 - 2ab + 3b^2$ and $a^2 + 2ab - 3b^2$; and divide $x^{10} - 32a^5$ by $x^2 - 2a$.
 12. Divide $\frac{x^3}{y^3} - \frac{x}{y} + \frac{y}{x} - \frac{y^3}{x^3}$ by $\frac{x}{y} - \frac{y}{x}$.
 13. Reduce to its simplest form—

$$\left\{ \frac{a-b}{2(a+b)} - \frac{a+b}{2(a-b)} - \frac{2b^2}{a^2-b^2} \right\} \frac{b-a}{2b}.$$
 14. If $\frac{a}{b} = \frac{c}{d}$ shew that $\frac{a+b}{a-b} = \frac{c+d}{c-d}$.
 15. Solve the Equations—

$$\frac{3x+4}{5} - \frac{7x-9}{12} = 5.$$

$$3x^2 - 21x + 50 = 14.$$
 16. In a party which consists of men, women, boys, and girls, five more than one-quarter are men, five more than one-third are women, five more than one-sixth are boys, and one-eighth are girls: of how many did the party consist?
 17. When are numbers said to form a Series? When are a series of numbers said to be in Arithmetical Progression? Give an example of an increasing and of a decreasing Arithmetical Progression. Prove the formula for the sum of n terms of a series of quantities in Arithmetical Progression.
 18. Find the sum of 13 terms of the series 1, 11, 21, &c.
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English.

MORELL—Grammar and Analysis. TRENCH—English Past and Present. GOLDSMITH—The Deserted Village.

Professor Irving.

THURSDAY, 10TH SEPTEMBER, 1863. 2 to 5 P.M.

1. Name the letters called Mutes. Why are they so called? Give the two modes of classifying them.
 2. When is a verb called Intransitive? What are the varieties of the Intransitive Verb?
 3. How many and what are the fundamental and the subordinate parts of the Simple Sentence? Illustrate your answer by constructing an example.
 4. Give an analysis by Morell's second scheme of the following passage :—

Some dream that they can silence when they will
 The storm of passion and say 'Peace, be still';
 But 'thus far and no farther' when addressed
 To the wild waves or wilder human breast
 Implies authority which never can
 And never ought to be the lot of man.
 5. In the last two lines of the preceding there is a slight grammatical inaccuracy. Point it out.
 6. By what terminations and with what meanings are Saxon Secondary Derivative Adjectives formed? Give an example of each.
 7. What distribution of the words of our language according to their origin is made by Dean Trench?
 8. What are the meanings of the following and whence were they borrowed—Prestige, Spheterize, Solidarity, Æsthetic, Folk Lore?
 9. At what period and from what causes did the great influx of French words into the English Language take place?
 10. The following Saxon words—Wanhope, Soothsaw, Medeful, Foretalk, Eyebite—have now passed out of use. What were their meanings and by what words of Latin origin have they been replaced?
 11. Shew by examples the tendency of English verbs to substitute weak preterites for strong. To what more general principle is this referred by Trench?
 12. Give the meaning and so far as you can trace the etymology of the following words as they occur in 'The Deserted Village'—Resignation, Surly, Decent, Mansion, Welfare, Disaster, Vista, Lawn, Smith, Whisper, Pensive, Brocade.
 13. Parse each word in the following—

His heaven commences ere the world be past.
 14. Analyse according to Morell's second and third schemes the following lines—

To them his heart his love his griefs were given,
 But all his serious thoughts found rest in heaven;
 As some tall cliff that lifts its awful form
 Swells from the vale and midway meets the storm,
 Though round its breast the rolling clouds are spread
 Eternal sunshine settles on its head.
 15. There are three places mentioned in the Deserted Village. Name them, state where they are situate, and how each is mentioned in the poem.
 16. Give in your own language without quotations a brief sketch of the poem called 'The Deserted Village.'
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Mathematics.—II.

Professor Wilson.

FRIDAY, 11TH SEPTEMBER. 9 A.M. to 1 P.M.

1. Shew that if two triangles have one angle in the one equal to one angle in the other and the sides about these angles proportionals the triangles are equiangular and those angles are equal which are opposite the homologous sides.
2. Shew that equiangular parallelograms are to one another in the ratio compounded of the ratios of their sides.
3. Shew that the rectangle contained by the diagonals of any quadrilateral figure which can be inscribed in a circle is equal to the sum of the rectangles contained by its opposite sides.
4. When is a straight line said to be perpendicular to a plane? Shew how to draw a straight line perpendicular to a plane from a given point above it.
5. Shew that if two parallel planes be cut by a third plane their common sections with it are parallel.
6. What is the sine of an angle and the supplement of an angle? Shew that the sine of any angle is equal to the sine of its supplement.
7. Prove the following formulæ :—

$$\tan A = \frac{\sin A}{\sqrt{1 - \sin^2 A}} \qquad \tan (A + B) = \frac{\tan A + \tan B}{1 - \tan A \tan B}$$

8. Shew that in any triangle the sides have the same ratios to one another as the sines of the angles opposite to them.
 9. Shew that the area of a triangle is $\frac{1}{2}ab \sin C$ where C is the angle contained by the sides a and b .
Two sides of a triangle are 19 chains and 23 chains and the included angle is 150° , find its area and express it in acres.
 10. A man whose eye is 5 ft. 6 in. from the ground just sees the top of a steeple over a wall 29 feet distant; a boy whose eye is only 4 feet from the ground has to stand 3 feet farther back to see it; find the height of the wall.
 11. The lengths of two sides of a field which are parallel to one another are 57 chains and 23 chains, and the length of a side which cuts one of them at an angle of 30° is 49 chains, find the area of the field.
 12. Find the diameter of a circular field containing $31\frac{2}{3}$ acres.
 13. A room is 24 feet long and 18 feet wide, how much carpet three-quarters of a yard wide will be required to cover it?
 14. Solve the equations

$$\begin{array}{l} x+y=5 \\ x^2+y^2=13 \end{array} \quad \begin{array}{l} x-y=17 \\ xy=60 \end{array} \quad x^2 + \frac{1}{x^2} + x + \frac{1}{x} = \frac{27}{4}$$
 15. Define a logarithm; shew that the sum of the logarithms of two numbers is the logarithm of the product of those numbers; hence shew that the logarithms to base ten of all numbers consisting of the same digits in the same order will differ only in their characteristics.
 16. Explain the distinction between the Permutations and the Combinations of things: find the number of different permutations which can be formed with the letters of the word Tasmania taken all together.
 17. The sides of a triangle are 193·21, 100·17 and 99·04 chains; calculate its angles and its area.
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Geography and History.*Professor Wilson. Professor Irving.*FRIDAY, 11TH SEPTEMBER, 1863. 2 to 5 P.M.

1. Give a brief general description of the form of the earth and of the distribution of land and water on its surface : illustrate your description by diagrams and rough maps of the larger masses of land.
 2. What is a mountain ? a mountain chain ? What are some of the names given to the summits of mountains according to their forms ? Describe briefly the changes in the temperature and pressure of the air and the character of the vegetation observed on ascending a mountain. Give a sketch from memory of the appearance of any mountain you have seen.
 3. Describe the general character of a river from its source to the ocean. What is a glacier ? Name some rivers that have their origin in glaciers. What other sources have rivers ? Why are springs of water generally found on mountains ?
 4. What is the " Gulf Stream " ? Describe briefly its course and its effect on the climate of Great Britain.
 5. What is a magnetic needle ? What is meant by the variation of the compass ? a dipping needle ? the dip of the needle ? the magnetic equator ? Mention some atmospheric phenomenon which is found to disturb a magnetic needle when delicately suspended.
 6. What are the principal sea-ports of Scotland ? What commodities are mutually supplied by England and Scotland ?
 7. Describe the course of the Thames, mentioning its chief tributaries and the principal towns upon it.
 8. In what part of Europe is the Austrian Empire situated ? Mention its boundaries, its size, its chief political divisions, and its principal natural products.
 9. What is meant by Oceania ? What are its divisions, and the sub-divisions of these ?
 10. What and where are Ala Tau, Atacama, Callao, Caracas, Jungfrau, New Orleans, Popocatpetl, Sahara, Sudetes, Toledo, Yenikale, Zambezi ?
 11. Construct a genealogical table of the Stuart Family from James I.
 12. Explain these names—*the main, thorough, the cabal, the meal-tub plot*.
 13. What were the events known as ' the accusation of the five members ' and ' the acquittal of the bishops ' ? What led to them and in what years did they occur ?
 14. What were the principal foreign campaigns of Britain during the reign of Queen Anne ? By what event were they terminated ?
 15. Narrate briefly the progress of the Great Rebellion from the setting up of the King's standard to the giving up of the King by the Scots.
 16. What events took place between the death of Cromwell and the return of Charles II. to England ?
 17. What was the Triple Alliance ? When and by whom and with what objects was it formed ? and how was it overthrown ?
 18. What were these Acts and when were they passed ; viz.—the Conventicle Act, the Test Act, the Habeas Corpus Act, the Act of Settlement ?
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Latin.

Professor Irving.

SATURDAY, 12TH SEPTEMBER, 1863. 9 A.M. to 1 P.M.

[To enable the Candidate to pass in Latin the first six questions must be satisfactorily answered.]

1. Decline throughout tempus, virgo, mos, dea, manus, fortis, (adj.)
2. Parse and write down the present, the perfect, the supine, and the infinitive active of detur, tegerem, favete, pendet, appetebat, viderunt.
3. Write down the dat. fem. sing. part. pass. of quatio, the 3rd sing. pluperf. subj. act. of quæro, the acc. masc. sing. fut. part. act. of perficio, the 3rd plur. imp. subj. act. of fero.
4. Give the Latin for 'I fear that he will come'—'Full of wine'—'After the building of Rome'—'On the rear'—'The good are believed.'
5. Translate literally—

Primis tenebris silentio mota castra, boves aliquanto ante signa acti. Ubi ad radices montium viasque angustas ventum est, signum extemplo datur ut accensis cornibus armenta in adversos concitentur montes. Et metus ipse relucens flammæ ex capite calorque jam ad vivum ad imaque cornuum adveniens velut stimulatos furore agebat boves. Quo repente discursu, haud secus quam silvis montibusque accensis, omnia circum virgulta ardere; capitumque irrita quassatio excitans flammam hominum passim discurrentium speciem præbebat.

6. In the preceding extract parse the words tenebris, cornibus, concitentur, ardere, capitum, speciem. Give the reason for the case or the mood of each.

7. Translate carefully—

Hæc in Hispania quoque secunda æstate Punici belli gesta, cum in Italia paulum intervalli cladibus Romanis sollers cunctatio Fabii fecisset; quæ ut Hannibalem non mediocri sollicitum cura habebat, tandem eum militiæ magistrum delegisse Romanos cernentem, qui bellum ratione, non fortuna gereret, ita contempta erat inter cives armatos pariter togatosque, utique postquam absente eo temeritate magistri equitum, læto verius dixerim quam prospero eventu, pugnatum fuerat. Accesserant duæ res ad augendam invidiam dictatoris, una fraude ac dolo Hannibalis, quod cum a perfugis ei monstratus ager dictatoris esset, omnibus circa solo æquatis ab uno eo ferrum ignemque et vim omnem hostium abstineri jussit, ut occulti alicujus pacti ea merces videri posset; altera ipsius facto, primo forsitan dubio, quia non expectata in eo senatus auctoritas est, ad extremum haud ambigue in maximam laudem verso, in permutandis captivis, quod sicut primo Punico bello factum erat, convenerat inter duces Romanum Pœnumque, ut quæ pars plus reciperet quam daret, argenti pondo bina et selibras in militem præstaret. Ducentos quadraginta septem cum plures Romanus quam Pœnus recepisset, argentumque pro eis debitum, sæpe jactata in senatu re, quoniam non consulisset Patres, tardius erogaretur, inviolatum ab hoste agrum misso Romam Quinto filio vendidit, fidemque publicam impendio privato exsolvit.

8. Give the meaning and the derivation of hiberna, interdiu, multiplex, auspicia, dimidium, collega, nequiequam, malo, impensa, redimere.

9. Translate carefully—

Me fabulosæ Vulture in Apulo
 Altricis extra limen Apuliæ
 Ludo fatigatumque somno
 Fronde nova puerum palumbes
 Texere, mirum quod foret omnibus,
 Quicumque celsæ nidum Acherontiae
 Saltusque Bantinos et arvum
 Pingue tenent humilis Forenti.
 Ut tuto ab atris corpore viperis
 Dormirem et ursis, ut premerer sacra
 Lauroque collataque myrto,
 Non sine Dis animosus infans.
 Vester, Camenæ, vester in arduos
 Tollor Sabinos, seu mihi frigidum
 Præneste seu Tibur supinum
 Seu liquidæ placuere Baiæ.

Vestris amicum fontibus et choris
 Non me Philippis versa acies retro,
 Devota non exstinxit arbor,
 Nec Sicula Palinurus unda.
 Utcunque mecum vos eritis, libens
 Insanientem navita Bosporum
 Tentabo et arentes arenas
 Litoris Assyrii viator.
 Visam Britannos hospitibus feros
 Et lætum equino sanguine Concanum
 Visam pharetratos Gelonos
 Et Scythicum inviolatus amnem.

10. Give the meaning and the derivation of *arbusta*, *incestus*, *judex*, *superstes*, *sepulcrum*, *serpens*, *juvenesco*, *Hesperia*, *patefacere*, *pecunia*.

11. Translate carefully—

Ast, ubi digressum Siculæ te admoverit oræ
 Ventus, et angusti rarescent claustra Pelori,
 Læva tibi tellus et longo læva petantur
 Æquora circuitu ; dextrum fuge litus et undas.
 Hæc loca, vi quondam et vasta convulsa ruina,
 Tantum ævi longinqua valet mutare vetustas !
 Dissiluisse ferunt, quum protenus utraque tellus
 Una foret ; venit medio vi pontus, et undis
 Hesperium Siculo latus abscidit, arvaque et urbes
 Litore diductas angusto interluit æstu.
 Dextrum Scylla latus, lævum implacata Charybdis
 Obsidet, atque imo barathri ter gurgite vastos
 Sorbet in abruptum fluctus, rursusque sub auras
 Erigit alternos, et sidera verberat unda.
 At Scyllam cæcis cohibet spelunca latebris,
 Ora exsertantem, et naves in saxa trahentem.
 Prima hominis facies, et pulchro pectore virgo
 Pube tenus ; postrema immani corpore pistris,
 Delphinum caudas utero commissa luporum.
 Præstat Trinacrii metas lustrare Pachyni
 Cessantem, longos et circumflectere cursus,
 Quam semel informem vasto vidisse sub antro
 Scyllam, et cæruleis canibus resonantia saxa.

12. Give the meaning and the derivation of *secundus*, *victricia*, *imperium*, *lanigerus*, *immundus*, *nefas*, *Trojugena*, *remigium*, *nivalis*, *illætabilis*, *terebrare*.
13. Give the geographical position of *Æneadæ*, *Ardea*, *Capua*, *Colchis*, *Dirce*, *Fæsulæ*, *Ithaca*, *Ortygia*, *Thurii*, *Xanthus*.
14. Write down words formed by the terminations *-tor*, *-ax*, *-bundus*, *-culum*, *-tio*, *-mentum*. To what classes of words are they appended, and what meanings do they give in the new words?
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Geology.CHARLES GOULD, *Examiner.*SATURDAY, 12TH SEPTEMBER, 1863. 9 A.M. to 1 P.M.

1. Discuss the practical bearings of Geology, and the connection between it and other Sciences.
2. Mention any facts observed with regard to the temperature of the earth, and any theories deduced from them.
3. Mention any physical conditions regulating the distribution of land and marine animals, illustrating your remarks by reference to the Fauna characterising different Geological epochs.
4. Define and explain the terms stratified, unstratified, dip, strike, escarpment, anticlinal, synclinal.
5. Explain the terms conglomerate, breccia, amygdaloid.
6. What do you mean by a rock, and how would you proceed to determine the relative ages of any series of rocks in a new country?
7. Mention the principal varieties of the igneous rocks, and state their composition.
8. Enumerate the systems of stratified rocks, in descending order.
9. Mention the distinguishing characters of the four great orders of fishes, and give examples of each order.
10. Give a short account of the Silurian System.
11. Of what formations are the following fossils characteristic :—Calceola, Nummulites, Labyrinthodon, Glyptodon, Coccosteus?
12. How do you explain the formation of chalk and flint?
13. Mention useful products of the Silurian, Carboniferous, and Triassic Systems.
14. Are there any evidences of variation in the climate of Britain during past epochs?
15. Give some account of the formation and structure of coral islands.
16. Refer to their proper Zoological position Trilobites, Pterodactyles, Ammonites, Belemnites.
17. Is there any thing remarkable about the Oolitic mammals?

Latin.—II.*Professor Irving.*SATURDAY, 19TH SEPTEMBER. 2 to 5 P.M.

1. Translate and explain the following passages—
 - (a). Infernique lacus, Æææque insula Circae.
 - (b). Formidatus nautis aperitur Apollo.
 - (c). Martiis cœlebs quid agam Calendis.
 - (d). Contracta pisces æquora sentiunt
Jactis in altum molibus.
 - (e). Trojæ renascens alite lugubri
Fortuna tristi clade iterabitur.

(f). Ceratis ope Dædalea
Nititur pennis vitreo daturus
Nomina Ponto.

(g). Decretum est majoribus hostiis sacrificaretur, et lectisternium fieret.

(h). Per urbem Saturnalia diem ac noctem clamata.

2. Construct a scale of the Sapphic and the Alcaic stanza.
3. Mention any words (not more than twelve) borrowed from the Greek and used in your Horace or Virgil.
4. Explain the formation of these words—nuncupare, prudens, sollers, stipendium, exemplum, arum; and if you can quote other words similarly formed.
5. Narrate briefly the events of the year 216 B.C. Between what years did the second Punic War take place?
6. Translate carefully—

Sed quum plerique arbitrentur, res bellicas majores esse, quam urbanas, minuenda est hæc opinio. Multi enim bella sæpe quæsierunt propter gloriæ cupiditatem: atque id in magnis animis ingeniisque plerumque contingit, eoque magis, si sunt ad rem militarem apti et cupidi bellorum gerendorum. Vere autem si volumus judicare, multæ res exstiterunt urbanæ majores clarioresque, quam bellicæ. Quamvis enim Themistocles jure laudetur, et sit ejus nomen, quam Solonis, illustrius, citeturque Salamis clarissimæ testis victoriæ, quæ anteponatur consilio Solonis ei, quo primum constituit Areopagitas: non minus præclarum hoc, quam illud, judicandum est. Illud enim semel profuit, hoc semper proderit civitati: hoc consilio leges Atheniensium, hoc majorum instituta servantur. Et Themistocles quidem nihil dixerit, in quo ipse Areopagum adjuverit: at ille vere, ab se adjutum Themistoclem. Est enim bellum gestum consilio senatus ejus, qui a Solone erat constitutus. Licet eadem de Pausania Lysandroque dicere: quorum rebus gestis quamquam imperium Lacedæmonis dilatatum putatur; tamen me minima quidem ex parte Lycurgi legibus et disciplinæ conferendi sunt. Quin etiam ob has ipsas causas et parentiores habuerunt exercitus et fortiores.

7. Translate into Latin Prose—

Now all, both Senate and People, were shocked at this unnatural deed; and though they owed so much to Horatius, they ordered him to be tried before two Judges appointed by the King. These Judges found Horatius guilty, and condemned him to be hanged with a rope, according to the law; nor had they power to lighten his punishment. But Horatius appealed to the People, and they pardoned him, because he had fought so well for them, and because old Horatius, the father, entreated for him, and said that his daughter had been rightly slain, and that he would himself have slain her, as he had a right to do, because he was her father; for by the old Roman law the father had this terrible power over his children. But to atone for the bloodshed, the father was ordered to make certain sacrifices at the public expense; and the heads of the Horatian Gens continued to offer these sacrifices ever afterwards.

8. Translate into Latin Elegiacs—

Since my country and God, O my sire,
Demand that thy daughter expire:
Since thy triumph was bought by thy vow,
Strike the bosom that's bared for thee now.

Though the virgins of Salem lament,
Be the Judge and the Hero unbent.
I have won the great conflict for thee,
And my Sire and my Country are free!

- Or into Latin Hexameters—

Then to the ships she came, the gifts of Vulcan bearing;
And o'er Patroclus' corse she found Achilles
Weeping,—while many men around him wept.
Among them then that fairest goddess stood
And clasped his hand, and called on him by name.
My son, though grieving, we must let him lie,
For 'twas by Heaven's decree alone he died,
But thou from Vulcan take these glorious arms,
Such as no mortal yet on shoulders bore.

Greek.—I.

Professor Irving.

MONDAY, 14TH SEPTEMBER. 9 A.M. to 1 P.M.

[To enable Candidates to pass in Greek the first five Questions must be satisfactorily answered.]

- Decline throughout *ἀνάβασις*, *ὄρος*, *ποταμός*, *παῖς*, *ὀπλίτης*, *ἄλλος*.
- Give the future the perfect and an aorist of the following presents—*βαίνω*, *γίγνομαι*, *φέρω*, *ἔχω*, *λαμβάνω*, *τίθημι*.
- Write down throughout the 1st Aor. Opt. Pass. of *τύπτω*, the Plur. Fut. Part. Act. of *βουλεύω*, the Imperf. Ind. Mid. of *ποιέω*, and the 2 Aor. Ind. Act. of *δίδωμι*.
- Translate literally

Εἰς δὲ τὴν ὑστεραίαν γίνεται χεიმὼν πολλὸς, ἀναγκαῖον δ' ἦν πορεύεσθαι· οὐ γὰρ ἦν ἱκανὰ τὰ ἐπιτήδεια. Καὶ ἡγεῖτο μὲν Χειρίσοφος, ὡπισθοφυλάκει δὲ Ξενοφῶν. Καὶ οἱ πολέμοι ἰσχυρῶς ἐπετίθεντο, καὶ, στενῶν ὄντων τῶν χωρίων, ἐγγὺς προσιόντες ἐτόξευον καὶ ἐσφενδύον· ὥστε ἠναγκάζοντο οἱ Ἕλληνες ἐπιδιώκοντες καὶ πάλιν ἀναχάζοντες σχολῇ πορεύεσθαι· καὶ θαμινὰ παρήγγειλεν ὁ Ξενοφῶν ὑπομένειν, ὅτε οἱ πολέμοι ἰσχυρῶς ἐπικέειντο.
- In the preceding extract supply the ellipse after *ὑστεραίαν*. Why is *ἦν* singular? τῶν χωρίων genitive? ἐτόξευον imperfect? ἐπικέειντο optative? parse fully *χεიმὼν*, *ἡγεῖτο*, *σχολῇ*.
- Translate carefully

Ἐνθα δὲ προσέρχεται Ξενοφῶντι τῶν πελταστῶν ἀνὴρ, Ἀθήνησι φάσκων δεδουλευκέναι, λέγων, ὅτι γινώσκω τὴν φωνὴν τῶν ἀνθρώπων. “Καὶ οἶμαι,” ἔφη, “ἐμὴν ταύτην πατρίδα εἶναι· καὶ εἰ μὴ τι κωλύει, ἐθέλω αὐτοῖς διαλεχθῆναι.” “Ἄλλ’ οὐδὲν κωλύει,” ἔφη, “ἀλλὰ διαλέγου καὶ μάθε πρῶτον, τίνες εἰσίν.” Οἱ δ’ εἶπον ἐρωτήσαντος, ὅτι Μάκρωνες. “Ἐρώτα τοίνυν,” ἔφη, “αὐτοὺς, τι ἀντιτετάχεται καὶ χρῆζουσιν ἡμῖν πολέμοι εἶναι.” Οἱ δ’ ἀπεκρίναντο· “Ὅτι καὶ ὑμεῖς ἐπὶ τὴν ἡμετέραν χώραν ἔρχεσθε.” Λέγειν ἐκέλευον οἱ στρατηγοὶ, ὅτι “Οὐ κακῶς γε ποιήσουντες, ἀλλὰ βασιλεῖ γε πολεμήσαντες ἀπερχόμεθα εἰς τὴν Ἑλλάδα, καὶ ἐπὶ θάλατταν βουλόμεθα ἀφικέσθαι.” Ἡρώτων ἐκεῖνοι, εἰ δοῖεν ἂν τούτων τὰ πιστά. Οἱ δ’ ἔφασαν καὶ δοῦναι καὶ λαβεῖν ἐθέλειν. Ἐντεῦθεν διδόασιν οἱ Μάκρωνες βαρβαρικὴν λόγχην τοῖς Ἕλλησιν, οἱ δὲ Ἕλληνες ἐκείνοις Ἑλληνικὴν ταῦτα γὰρ ἔφασαν πιστὰ εἶναι· θεοὺς δὲ ἐπεμαρτύραντο ἀμφοτέροι.
- Give the meanings and the derivations of *ὠμοβόειος*, *αἰχμάλωτος*, *ἰσοχειλῆς*, *λοχαγός*, *ταξιάρχης*, *εὐώνυμος*, *ληϊζέσθαι*, *παγκράτιον*.
- Parse *ἐλάττους*, *ἦλω*, *φθάσαι*, *κατέαξαν*, *διεσπάρθησαν*, *προστατῆσαι*.
- Translate carefully

ΕΚ. ὦ θύγατερ, οὐκ οἶδ’ εἰς ὃ τι βλέψω κακῶν, πολλῶν παρόντων· ἦν γὰρ ἄψωμαί τινος, τόδ’ οὐκ ἔα με, παρακαλεῖ δ’ ἐκείθεν αὖ λύπη τις ἄλλη διάδοχος κακῶν κυκοῖς. καὶ νῦν τὸ μὲν σὸν ὥστε μὴ στένειν πάθος οὐκ ἂν δυναίμην ἐξαλείψασθαι φρενός· τὸ δ’ αὖ λίαν παρείλες, ἀγγεληθείσά μοι γενναῖος. οὐκ οὖν δεινὸν, εἰ γῇ μὲν κακῇ τυχοῦσα καιροῦ θεόθεν εὖ στάχυν φέρει, χρηστὴ δ’ ἁμαρτοῦς ὦν χρεῶν αὐτὴν τυχεῖν κακὸν δίδωσι καρπὸν, ἄνθρωποι δ’ αἰεὶ ὁ μὲν πονηρὸς οὐδὲν ἄλλο πλὴν κακός, ὁ δ’ ἐσθλὸς ἐσθλός, οὐδὲ συμφορᾶς ὑποφύσιν διέφθειρ’, ἀλλὰ χρηστός ἐστ’ αἰεὶ.
- In the preceding extract point out and explain any differences of Idiom between Greek and English.
- Give the meanings and the derivations of *Χερσονήσιος*, *ἀνθρωποσφαγεῖν*, *ἄρδην*, *ἀσφαλῆς*, *κατάρυχες*, *περιπτυχή*, *πρόσφθεγμα*, *θραυστομεῖν*.
- Parse *ῥκισται*, *ἀραμένη*, *προπετῇ*, *ἐμβεβῶτα*, *ἐκπεσεῖ*, *ἐχοῖν*.
- Where are *Stymphalus*, *Athens*, *Troy*, *Chios*, *Thrace*, *Lemnos*, *Phrygia*, *Argos*?
- What classes of words are formed in Greek by the terminations *-ίων* *-σις*, *-μα* *-ιος*? From what other words and with what change of meaning? Give one example of each formation.

Natural Philosophy.

*Professor Wilson.*MONDAY, 14TH SEPTEMBER. 9 to 1.

1. Explain the meaning of the following terms :—force ; the resultant of two or more forces ; the resolved part of a force in any direction ; the moment of a force about any point.
 2. Explain what is meant when two lines are said to represent two forces : state the proposition called “The Parallelogram of Forces.”
 3. Shew that a body which can turn in one plane about a fixed point and is acted on by two forces in that plane will be in equilibrium when the moments of the forces about that point are equal and the forces tend to turn the body in opposite directions.
 4. A uniform rod eight feet long and weighing ten pounds is supported on two points in the same horizontal line distant five feet from one another, one of them being one foot distant from one extremity of the rod : find the pressure on each point.
 5. Weights of one pound each are placed at the angles A, B and C of a square in a horizontal plane ; find what weight must be placed at the remaining angle D in order that the resultant of the four may act at a point half-way between D and the center of the square.
 6. The threads of a screw are one inch apart, measured in a direction parallel to the axis of the cylinder, and the length of the lever is 3 feet 6 inches : calculate the force requisite to produce a pressure of 1056 pounds, neglecting friction.
 7. Enunciate the First Law of Motion and the Second.
 8. A body which falls freely from rest during t seconds acquires a velocity v and falls through a distance s ; write down the equations which give the values of v and s .
Calculate the height through which a body must fall to acquire a velocity of thirty miles an hour.
 9. Two weights, 15·6 oz and 16·6 oz. respectively, are connected by a string which passes over the pulley of an Atwood's Machine, calculate the distance through which the greater will raise the less in ten seconds ; enunciate the law of motion on which your calculation depends and explain its application.
 10. A body is projected vertically upwards with a velocity sufficient to carry it to a height of 145 feet, after what time will it return to the ground ?
 11. Explain what is meant when it is said that fluids press equally in all directions ; describe the construction of Bramah's Hydraulic press and explain the application of the principle of fluid pressure in it.
The cylinders of a Bramah's press are half an inch and one foot in diameter and the mechanical advantage of the pump handle is 4 ; calculate the pressure exerted when a pressure of 50 pounds is applied to the handle.
 12. Shew that the resultant pressure of a fluid on the surface of a solid wholly immersed in it is equal to the weight of the fluid displaced and acts vertically upwards through the center of gravity of the fluid displaced.
 13. What is meant by the specific gravity of a body ? The weight in air of a piece of steel is 39 ounces, the apparent weight in water is 34 ounces, determine the specific gravity of steel.
 14. An alloy of gold and copper weighs 1128 grains and loses 80 grains when weighed in water ; calculate the quantity of gold, the specific gravity of gold being 19·3 and of copper 8·9.
 15. Describe the construction of the barometer. State approximately the pressure of the air on each square inch of surface : what change in the pressure on each square inch would correspond to a rise or fall of one inch in the barometer, the specific gravity of mercury being 13·6.
 16. Describe the common pump : what is the greatest depth from which such a pump will draw water ? If a common pump were erected on the top of a mountain where the barometer usually stands at 26 inches what would be the greatest depth from which it would draw water ?
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French.

MONDAY, 14TH SEPTEMBER. 2 to 5 P.M.

1. Translate into English the following passage :—

Octave.—Mon cher Scapin, que ne dois-je point à tes soins. Que tu es un homme admirable ! et que le ciel m'est favorable de t'envoyer à mon secours !

Léandre.—Ah ! Ah ! vous voilà ! je suis ravi de vous trouver, monsieur le coquin.

Scapin.—Monsieur, votre serviteur. C'est trop d'honneur que vous me faites.

Léandre, (mettant l'épée à la main).—Vous faites le méchant plaisant. Ah ! je vous apprendrai.....

Scapin, (se mettant à genoux).—Monsieur.

Octave, (se mettant entre eux deux, pour empêcher Léandre de frapper Scapin).—Ah Léandre.

Léandre.—Non, Octave, ne me retenez point, je vous prie.

Scapin, (à Léandre).—Hé, Monsieur.

Octave, (retenant Léandre).—De grâce.

Léandre, (voulant frapper Scapin).—Laissez moi contenter mon ressentiment.

Octave.—Au nom de l'amitié, Léandre, ne le maltraitez point.

Scapin.—Monsieur, que vous ai-je fait ?

Léandre, (voulant frapper Scapin).—Ce que tu m'as fait, traître !

Octave, (retenant encore Léandre).—Hé ! doucement.

Léandre.—Non, Octave, je veux qu'il me confesse lui-même tout-à-l'heure la perfidie qu'il m'a faite. Oui, coquin, je sais le trait que tu m'as joué, on vient de me l'apprendre ; mais je veux en avoir la confession de ta propre bouche, ou je vais te passer cette épée au travers du corps.

2. Give the following parts of each of the verbs occurring in the above passage :—The third person plural of the Preterit Definite ; the first person plural of the Imperative ; the Participle Past.

3. Translate into English :—

Ma mère et moi nous rentrions et sortions sans cesse de notre appartement, pour savoir ce qui ce passait ; quant à mon père, il va sans dire qu'il ne quittait pas Monsieur. *Tantôt l'on disait* que toute la garde nationale de Paris arrivait, tantôt *que c'était* un faux bruit. Enfin, à neuf heures du soir, nous entendîmes le tocsin que le peuple sonnait : l'ordre fut donné aux gardes du corps de se retirer dans leurs quartiers ; mais quand on les vit s'ébranler on tira sur eux. On les fit ensuite ranger sur la terrasse derrière le château, et de là partir pour Rambouillet ; il ne resta que ceux qui étaient de service dans l'intérieur du château. Les bandes parisiennes augmentaient à chaque instant. Une partie de la garde nationale de Versailles, qui était sous les armes, se joignit à elles. M. Collet, officier de cette garde, se jeta entre le peuple et les gardes du corps pour faire cesser le feu. Il fut atteint de deux balles, mais on ne tira plus. Les gardes du corps avaient ordre de ne point riposter ; ils se retirèrent comme je l'ai dit.

Pendant que nous entendions le tocsin, la générale et les coups de fusil, le comte de Calvimont entra chez ma mère, et sans pouvoir dire une parole tomba évanoui. Il venait de Paris, et avait fait à pied un détour de plus de dix lieues pour arriver à Versailles, en évitant les colonnes parisiennes, qui forçaient tout ce qu'elles rencontraient à marcher avec elles. Il avait entendu les tambours pendant toute la route, et en entrant à Versailles, les coups de fusil lui firent croire qu'on se battait. Il était parvenu jusqu'au château, dont il trouva les portes fermées ; mais comme il avait été page, il vint à bout d'entrer.

4. State, with reference to the above passages in Italics,—

1°. The cases where "l'on" is used instead of "on," and when "on" should not take an "l."

2°. When is "it was" rendered by "c'était," and when by "il était?"

5. Express the following phrases in French :—

The few vestiges which remain.

The more successful a man is, the less proud he ought to be.

He is the cleverest workman I ever met with.

Do not speak to her about it unless she is well.

We did not see the shore, but we were quite near it.
 They and I can never agree.
 You tread upon my feet.
 He wants a book of mine. Which? This one or that one?
 His honour is at stake.
 I have been told by a friend of yours that either this house or that one is to be sold.

6. Correct the following sentences :—

Lyons est située sur la Rhone et Londres est située sur le Tamise.
 En mille huit cents et soixante deux elle a reçue deux cent lettres de la France.
 Vous m'avez achetée de toile bonne.
 Il est un voisin des vôtres qui m'a en parlé.
 Sont ce là vos enfans? Oui, ce sont.
 J'ai vu vos petits sœurs dansant sur le gazon.

7. What is the government of the following verbs?—

consentir, <i>to consent.</i>	s'ennuyer, <i>to be weary.</i>	consister, <i>to consist.</i>
s'occuper, <i>to employ one's self.</i>	lutter, <i>to struggle with.</i>	daigner, <i>to deign</i>
se plaire, <i>to take delight in.</i>	abuser, <i>to abuse.</i>	s'amuser, <i>to amuse one's self.</i>
achever, <i>to finish.</i>		

8. State the distinction in French between the following words, giving instances of each :—

an—année, <i>year.</i>	amener—apporter, <i>to bring.</i>	plus—davantage, <i>more.</i>
casser—rompre, <i>to break.</i>	avant—devant, <i>before.</i>	second—deuxième, <i>second.</i>

9. Give three instances each in which the verb “to have” is expressed by the verb “être,” and the verb “to be” by “avoir.”

10. State the rule for the formation of the plural of the compound nouns, and give three examples.

11. Translate the following :—

La communication de la Mer-Rouge et de la Méditerranée, cette question dont l'origine remonte à l'antiquité la plus reculée, tant étudiée et tant débattue depuis trois mille ans, et, sauf une seule exception, si complètement oubliée depuis dix siècles, est en ce moment même agitée de nouveau. Au premier aspect, il est difficile d'expliquer l'oubli dans lequel elle est tombée de plus en plus, à mesure que s'accroissaient et l'importance des résultats à obtenir et la puissance des moyens d'exécution dont disposent les nations modernes. Comment ce grand problème, dont la solution a été recherchée avec tant de persévérance par les pharaons, par les rois de Perse, par les Ptolémées, par les césars, par les kalifes, a-t-il cessé d'occuper le monde? Comment, après tant de travaux et d'efforts, la barrière entre les deux mers existe-t-elle encore? En quoi consistent les tentatives faites depuis Rhamsés le Grand pour la franchir? Quels en ont été les résultats? Quelles sont les difficultés qui en ont entravé le succès ou anéanti les traces? Quels obstacles en ont empêché le renouvellement dans les temps modernes?

12. Translate into French :—

On the 29th January, 1620, five years before Charles the First ascended the throne, there was born in the Tower of London Lucy Apsley, daughter of Sir Allen Apsley, Lieutenant-Commandant of the Tower, a devoted servant of the King's, and whose sons, when the war between the King and Parliament broke out, sided with the most loyal cavaliers.

“My father and mother,” says Mrs. Hutchinson in her Memoirs, “thinking me very pretty at that time, and more intelligent than people usually are, thought of me with particular care, and did not spare any expense to give me a good education, which made me very early an object of admiration for all those who wished to flatter the paternal fondness. I remember that, when about seven, I had for some time eight masters at once, masters for languages, music, dancing, writing, needlework. . . . I used to like a book better than all that, and go and hide myself wherever I could find means to read at ease. My father wanted to make me learn Latin; and notwithstanding the incapacity of my master, who was the chaplain of the house, I succeeded in surpassing my brothers who went to school. My mother would have cared less for this kind of study, and would have liked me to devote myself with more ardour to other subjects.

Greek.—II.

Professor Irving.

TUESDAY, 15TH SEPTEMBER. 9 A.M. to 1 P.M.

1. Give a translation with a full explanation of the meaning and the construction of the following—

- (a). ὅτου δὴ παρεγγυήσαντος.
 (b). ἄλλος ἄλλη ἐτράπετο.
 (c). ὅσω δὴ πλείους ἐγίγνοντο.
 (d). οἱ αἰεὶ ἐπίοντες ἔθουν.
 (e). ξυγγνώσθ' ὅταν τις κρείσσον' ἢ φέρειν κακὰ
 πάθῃ ταλαίνης ἐξαπαλλάξαι ζόης.
 (f). μόνον μ' εἰσάγει
 δόμους ἔν' ἄλλος μήτις εἰδείη τάδε.
 (g). τίς χρεῖα σ' ἐμοῦ;
 (h). ὥς δ' ὅτε χεῖμαρροι ποταμοὶ κατ' ὄρεσφι ῥέοντες
 ἐς μισγάγκειαν συμβάλλετον ὄβριμον ὕδωρ.

2. Translate—

Ἐνθ' ἔβαλ' Ἀνθεμίωνος υἱὸν Τελαμώνιος Αἴας,
 Ἥϊθεον θαλερὸν, Σιμοείσιον, ὃν ποτε μήτηρ
 Ἰδῆθεν κατιοῦσα παρ' ὄχθησιν Σιμόεντος
 Γεῖνατ', ἐπεὶ ῥα τοκεῦσιν ἅμ' ἔσπετο μῆλα ἰδέσθαι.
 Τοῦνεκά μιν κάλεον Σιμοείσιον οὐδὲ τοκεῦσιν
 Θρέπτρα φίλοις ἀπέδωκε, μινυνθάδιος δέ οἱ αἰὼν
 Ἐπλεθ' ὑπ' Αἴαντος μεγαθύμου δουρὶ δαμέντι.
 Πρῶτον γάρ μιν ἰόντα βάλε στῆθος παρὰ μαζὸν
 Δεξιόν· ἀντικρὺ δὲ δι' ὤμου χάλκεον ἔγχος
 ἤλθεν· ὁ δ' ἐν κονίῃσι χαμαὶ πέσεν, αἰγείρος ὥς,
 Ἥ ῥά τ' ἐν εἰαμενῇ ἔλεος μεγάλοιο πεφύκη
 Λεῖν, ἀτάρ τέ οἱ ὄζοι ἐπ' ἀκροτάτῃ πεφύασιν·
 Τὴν μὲν θ' ἄρματοπηγὸς ἀνὴρ αἰθωνι σιδήρῳ
 Ἐξέταμ', ὄφρα ἔτυν κάμψῃ περικαλλεῖ δίφρῳ
 Ἥ μὲν τ' ἀζομένη κείται ποταμοῖο παρ' ὄχθας.

3. Parse these words—ιδρῶ, ἀναίξειαν, πετάσσας, ὅσσε, εἰληλούθει, ἰστάμενος, ἐπιπρόεμεν, τλαίης.
 4. What would be the form in Xenophon's Greek of the Homeric forms βάλλεο, σέθεν, παρίσχεμεν, ἄμμι, ὁρόωτε, εἰο, κάππεσεν, νήεσσιν? Give also the meaning of each.
 5. Distinguish the meanings of ὥς, ὥς· οἱ, οἱ· οἶος, οἶος· ἦν, ἦν, ἦν· ὦν, ὦν·
 6. Give the meanings and the derivations of φέρτερος, ἐκατόμβη, αἰθοψ, ἡνορέηφι, μεταμώνια, πολυπάμων, αἰολοθώρηξ, καυστειρός.
 7. Shew by examples that an initial aspirate in Greek frequently corresponds with an initial *s* in Latin.
 8. Decline βασιλεύς singular and plural, as the forms would be found in Xenophon and in Homer.
 9. Mention any Greek verbs which are irregular either in the Temporal Augment, or in Reduplication, or in their contracted forms.
 10. Translate the following passage—

Τοῦ δ' αὐτοῦ χειμῶνος καὶ Δῆλον ἐκάθησαν Ἀθηναῖοι κατὰ χρησμόν δὴ τινα. ἐκάθηρε μὲν γὰρ καὶ Πεισίστρατος ὁ τύραννος πρότερον αὐτὴν, οὐχ ἅπασαν, ἀλλ' ὅσον ἀπὸ τοῦ ἱεροῦ ἐφεωράτο τῆς νήσου· τότε δὲ πᾶσα ἐκαθάρθη τοιῷδε τρόπῳ. θῆκαι ὅσαι ἦσαν τῶν τεθνεώτων ἐν Δήλῳ πάσας ἀνείλον καὶ τὸ λοιπὸν προεῖπον μήτε ἐναποθνήσκειν ἐν τῇ νήσῳ μήτε ἐντίκτειν, ἀλλ' ἐς τὴν Ῥήνειαν διακομίζεσθαι. ἀπέχει δὲ ἡ Ῥήνεια τῆς Δήλου οὕτως ὀλίγον ὥστε Πολυκράτης ὁ Σαμίων τύραννος ἰσχύσας τινὰ χρόνον ναυτικῶς καὶ τῶν τε ἄλλων νήσων ἄρξας καὶ τὴν Ῥήνειαν ἐλὼν, ἀνέθηκε τῷ Ἀπόλλωνι τῷ Δηλίῳ ἀλύσει δῆσας πρὸς τὴν Δῆλον. καὶ τὴν πεντητηρίδα τότε πρῶτον μετὰ τὴν κάθαρσιν ἐποίησαν οἱ Ἀθηναῖοι, τὰ Δίλια. ἦν δὲ ποτε καὶ τὸ πάλαι μεγάλη ξύνδοδος ἐς τὴν Δῆλον τῶν Ἰωνῶν τε καὶ περικτιόνων νησιωτῶν. ξύν τε γὰρ γυναιξὶ καὶ παισὶν ἐθεώρουν ὥσπερ νῦν ἐς τὰ Ἐφέσια Ἴωνες, καὶ ἀγῶν ἐποιεῖτο αὐτόθι καὶ γυμνικὸς καὶ μουσικὸς, χοροὺς τε ἀνῆγον αἱ πόλεις. ὕστερον δὲ τοὺς μὲν χοροὺς οἱ νησιῶται καὶ οἱ Ἀθηναῖοι μεθ' ἱερῶν ἐπεμπον, τὰ δὲ περὶ τοὺς ἀγῶνας καὶ τὰ πλεῖστα κατελύθη ὑπὸ ξυμφορῶν. ὥς εἰδὼς, πρὶν δὴ οἱ Ἀθηναῖοι τότε τὸν ἀγῶνα ἐποίησαν καὶ ἵπποδρομίας, δὲ πρότερον οὐκ ἦν.

Drawing and Architecture.

TUESDAY, 15TH SEPTEMBER, 1863. 8·30 to 10·30 A.M.

1. Describe the positions, in the Grecian Doric Order, of the Abacus, Echinus or Ovolo, Architrave, Triglyphs, and Metopes.
2. Explain the difference between a Grecian and a Roman Echinus or Ovolo, and give an example of each.
3. What are the characteristics of Norman Architecture? during what period was it flourishing in England? and name the Styles that succeeded it.
4. Explain the use and meaning of a Buttress.
5. What is the purpose of an Arch? and how must it be constructed to serve that purpose?
6. What is meant by a Geometrical Drawing?

(The following must be attempted.)

Draw, to scale of one-eighth of an inch to an inch, a geometrical elevation of the Door of the Examining Room, showing the mouldings round, and the skirting adjoining the same.

TUESDAY, 15TH SEPTEMBER, 1863. 10·30 to 11·30 A.M.

[FROM MODEL.]

Sketch very carefully the Chair as placed before you.

TUESDAY, 15TH SEPTEMBER, 1863. 11·30 A.M. to 1 P.M.

[PERSPECTIVE.]

1. Give a definition of Linear Perspective.
2. What is the difference between parallel and angular Perspective?
3. What is the 'horizontal line,' and why is it so called?
4. What is meant by the 'transparent plane?' and what is its position, with regard to the spectator, and the object seen?
5. How many kinds of angles are there? Name them.
6. What is a Cube?

(At least two of the problems must be attempted.)

1. Put into perspective a horizontal square of 2 feet, as seen directly in front of the spectator, at a distance of 4 feet, 1 foot 6 inches below the eye, and one of its sides touching the 'transparent plane.'
2. The same, 4 feet below the eye, the nearest angle of the square to be 18 inches to the left of the spectator.
3. A chessboard, 15 inches square, divided into 8 squares each way, placed horizontally in front of the spectator, the nearest side touching the 'transparent plane,' 12 inches below the eye, distance 10 feet.

The scale used for the above to be $\frac{1}{2}$ an inch to a foot.

TUESDAY, 15TH SEPTEMBER, 1863. 1 to 2 P.M.

[FROM MEMORY.]

Make a sketch of a Grindstone, fixed in a framework of wood, with iron handle, &c. complete.

TUESDAY, 15TH SEPTEMBER, 1863. 3 P.M. to 4·30 P.M.

[FROM THE FLAT, SHADED.]

Sketch carefully, and shade a portion with Indian ink or sepia, the *Quatrefoil only*, from the Photograph set before you.

TUESDAY, 15TH SEPTEMBER, 1863. 4·30 P.M. to 5·30 P.M.

[DESIGN IN PEN AND INK.]

Sketch a figure (body and legs nude) in the act of running, to be about 6 inches high.

Or—An arrangement of vine leaves or other foliage suitable for carving in stone, to fill the spandril of the Gothic Arch given.

EXAMINATION for the Degree of Associate of Arts—September, 1863.

T I M E T A B L E .

<i>Wednesday, 9th September.</i>	<i>Thursday, 10th September.</i>	<i>Friday, 11th September.</i>	<i>Saturday, 12th September.</i>	<i>Monday, 14th September.</i>	<i>Tuesday, 15th September.</i>
<p>9 to 1. PRELIMINARY EXAMINATION.</p> <p>ARITHMETIC, HISTORY, AND GEOGRAPHY.</p>	<p>9 to 1. MATHEMATICS, I.</p>	<p>9 to 1. MATHEMATICS, II.</p>	<p>9 to 1. LATIN, I. GEOLOGY.</p>	<p>9 to 1. GREEK I. NATURAL PHILOSOPHY.</p>	<p>GREEK, II. 9 to 1.</p>
<p>2 to 5. PRELIMINARY EXAMINATION.</p> <p>ENGLISH.</p>	<p>2 to 5. ENGLISH LANGUAGE.</p>	<p>2 to 5. HISTORY AND GEOGRAPHY.</p>	<p>2 to 5. LATIN, II.</p>	<p>2 to 5. FRENCH.</p>	<p>DRAWING AND ARCHITECTURE.</p> <p><i>First Paper—8·30 to 10·30.</i></p> <p>DITTO. <i>Second Paper—</i> 10·30 to 11·30 A.M.</p> <p>DITTO. <i>Third Paper—</i> 11·30 A.M. to 1 P.M.</p> <p>DITTO. <i>Fourth Paper—</i> 1 to 2 P.M.</p> <p>DITTO. <i>Fifth Paper—</i> 3 to 4·30 P.M.</p> <p>DITTO. <i>Sixth Paper—</i> 4·30 to 5·30 P.M.</p>

DIRECTIONS TO CANDIDATES.

I. Look carefully at the annexed Time Table, in which the hours are fixed for the subjects of Examination on each day, and always *be at your seat in the Examination Room five minutes before the time.*

II. When the Questions are given you, read them over carefully, and *mark those which you think you can answer best; and do them first.* If, after that, you still have time to spare, try some of the others.

III. Before you begin to write your answers, insert in the blank spaces at the top of your paper,—

1. The *motto* by which you are known in the Examination.
2. The *subject* in which the questions are set which you are about to answer.
3. The number of the question. Not more than one question is to be answered on each sheet.

IV. In writing your answers—Write only on the ruled side of the paper.

V. As soon as notice is given, (which will be five minutes before the end of the time), finish your papers, and see that they are numbered rightly, and in their proper order.

VI. You are not to leave the Room until the Examination is closed, except by special permission of the Examiners.

N.B.—Candidates are strictly forbidden to communicate with one another during the Examination. Any Candidate taking an unfair advantage will be dismissed from the Examination.

TASMANIAN COUNCIL OF EDUCATION.

Hobart Town, 8th March, 1862.

EXAMINATION FOR THE DEGREE OF ASSOCIATE OF ARTS, 1863.

THE Council of Education have directed the publication of the following Scheme of Examination for the Degree of Associate of Arts for the Year 1863.

The Conditions upon which the Degree is granted, and Honours and Prizes are awarded, are also published for general information.

By Order of the Council,

MURRAY BURGESS, *Secretary to the Council.*

SKETCH of the Examination for the Degree of ASSOCIATE OF ARTS for the Year 1863.

ENGLISH.—The Candidate will be examined in Goldsmith's "Deserted Village," with Questions on the Etymology and Grammatical construction of the Language; in English History, from the Accession of James I. to death of Anne; and will be required to write a short original Composition, or a Report founded upon some abstract of facts furnished to him. He will also be examined in Physical, Commercial, and Political Geography. Books recommended: Trench's English, Past and Present, (3s. 6d., Parker); Morell's Grammar and Analysis with the Exercises, (3s. 6d., Constable); Cornwell's School Geography, (3s. 6d., Simpkin & Co.); and Hughes's Physical Geography, (3s. 6d., Longman.)

LATIN.—Virgil, *Æneid*, Book III., Horace, Odes, Books III. and IV.; and Livy, Book XXII. Questions will also be given on the parsing, 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.

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

FRENCH.—Passages will be given from Molière's *Les Fourberies de Scapin*, and Madame de la Rochejaquelein's *Memoirs of the Vendean War*, for translation into English; with questions on parsing, and the historical and geographical allusions. Also a passage from some other French author for translation into English, and from some English author into French.

GERMAN.—Passages will be given from Schiller's *Revolt of the Netherlands*, or *Wallenstein*, with questions on the parsing, and the historical and geographical allusions; also a passage from some other German author for translation into English, and from an English author into German.

ITALIAN.—Candidates in this Section will be examined in Silvio Pellico, with questions on the parsing, and grammatical construction; also a passage from some other Italian author for translation into English, and from an English author into Italian.

PURE MATHEMATICS.—Questions will be set in Euclid, Books I. II. III. IV., Arithmetic, and Algebra. Candidates for Honours will be required to satisfy the Examiners in Euclid, Books VI. and XI., as far as proposition xxi., Plane Trigonometry, the use of Logarithms, and Mensuration.

NATURAL PHILOSOPHY.—The Candidate must be prepared to answer questions set in Newth's first Book of Natural Philosophy.

CHEMISTRY.—The Candidate will be examined in Inorganic Chemistry. Book recommended: Wilson's Chemistry, (3s., Chambers' Educational Course.)

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).

GEOLOGY.—The Candidate will be examined in Page's Introductory Text Books of Geology, (5s., Blackwood.)

DRAWING AND ARCHITECTURE.—Drawing from the Flat, from Models, from Memory, and in Perspective, and Drawing from Plans, Sections, and Elevations. Design in Pen and Ink and in Colour. A fair degree of skill in freehand Drawing will be required in order that a Student may pass in this section.

BOOKS RECOMMENDED.—Field on Colour, 2s., Weale's Series; Dobson's Rudiments of the Art of Building, 1s., Weale's Series; Burn's Illustrated Architectural and Engineering Drawing-book, 2s., Ward and Lock; Burn's Ornamental Drawing and Architectural Design, 2s., Ward and Lock.

PRELIMINARY EXAMINATION FOR THE DEGREE OF ASSOCIATE OF ARTS.

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.

EXAMINATION FOR THE DEGREE OF ASSOCIATE OF ARTS.

The examination for those Students who have satisfactorily passed the preliminary examination will comprise the subjects mentioned in the following ten sections, in four of which at least, Latin or Pure Mathematics being one, the Candidate must satisfy the Examiners:—

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

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. Books to the value of Ten Pounds will be awarded as the First Prize in Sections 1, 2, 3, 4, and 5, 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. Books to the value of Five Pounds will be awarded as the Second Prize for each of the above-named Subjects, at the discretion of the Examiners.

4. Prizes of the value of £5 each will, at the discretion of the Examiners, be awarded to the Candidates who most distinguish themselves in Sections 6, 7, 8, 9, and 10, provided their names appear in the Class List of those recommended for the Degree.

5. In the event of any Candidate being specially recommended by the Examiners as displaying a *very* high order of proficiency in English, Greek, Latin, or Mathematics, the Council will be prepared to award their Gold Medal to such Candidate.