

(No. 82.)



1869.

T A S M A N I A.

DEGREE OF ASSOCIATE OF ARTS.

EXAMINERS' REPORT FOR 1868.

Laid upon the Table by the Colonial Treasurer, and ordered by the House to be printed, September 16, 1869.



TASMANIAN COUNCIL OF EDUCATION.

DEGREE OF ASSOCIATE OF ARTS.—SEPTEMBER, 1868.

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.

EDWIN HUGHES, aged 18, Pupil of the High School, Hobart Town, Rev. R. D. Harris, M.A., Rector. Awarded the Council's Gold Medal, First Prize for English, First Prize for Greek, First Prize for Mathematics, and Second Prize for Latin.

WILLIAM FIELD BARRETT, aged 16, Pupil of the High School, Hobart Town, Rev. R. D. Harris, M.A., Rector. Awarded First Prize for Latin, First Prize for French, and Second Prize for Greek.

JOSEPH BENSON WALKER, aged 17, Pupil of the High School, Hobart Town, Rev. R. D. Harris, M.A., Rector. Awarded Second Prize for French, and a Prize for Drawing.

SECOND CLASS.

None.

THIRD CLASS.

SAMUEL OUSTON LOVELL, aged 17. Tutor, A. Cairnduff, Esq., Hobart Town.

THOMAS EDGAR CRESWELL, aged 16. Tutors, Messrs. Cairnduff and Schütz.

The Report of the Examiners, together with the General and Special Class Lists, and the Tabulated Results of the Examination, are subjoined.

By Order of the Council,

GEO. RICHARDSON, *Secretary.*

Hobart Town, 23rd September, 1868.

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 submit the following Report:—

Only five Candidates presented themselves. At the Preliminary Examination all acquitted themselves creditably in Reading aloud, and in answering on paper questions on History, Geography and English, but in Arithmetic there was so marked a want of that absolute essential, accuracy, that it was really doubtful whether one or two of the Candidates could be held to have satisfied the requirements of the Preliminary Examination in this branch. However, in consideration of the goodness of their answering in other subjects, all were allowed to pass. And having commented on the deficiency of some of the Candidates in this particular, the Examiners think it fair to add, that the attention of these Candidates having been called to their shortcomings, a very great improvement was shown in the Arithmetical Questions subsequently proposed in the Degree Examination.

The ordinary Examination commenced on Monday, 7th September, and ended at 1 P.M. on Monday, the 14th—a four hours' paper having been set every morning, and a three hours' paper every afternoon.

The Reports of the Examinations in the several subjects are as follow:—

I. ENGLISH, INCLUDING HISTORY AND GEOGRAPHY.—On the whole the answering in English was satisfactory. The more difficult passages set for analysis were well and carefully done; the Grammar had been thoroughly studied; and, with one exception, the original Compositions were neat and creditable. The main defect observed was in the answers to all questions touching on the history and formation of the language, derivations of words, and the like. The publication of Messrs. Chambers' excellent little Etymological Dictionary supplies a want which has hitherto been much felt by Candidates; and by the use of this, while reading the author prescribed, future Candidates may be able to do better in this particular branch of the study of their mother tongue.

The Paper on History and Geography was very fairly answered by all, with the exception of one Candidate, who seemed to have devoted his whole time to the questions on History, and left himself no opportunity of showing what he could have done in those on Geography.

So little original thought or power is required in this subject, and so much can be made safe by mere steady work, that it is somewhat strange that the average answering in it is not higher than it has been hitherto. This year, for the first time for some years past, the Examiners have been able to award a First Class in it. This distinction has been achieved by Hughes, who received 752 out of the 1000 marks allotted to the subject. The average attained was 604, which is decidedly good; and it is scarcely necessary to add that all the Candidates passed.

II. LATIN.—Two Candidates, Barrett and Hughes, obtained credit: the remaining three passed.

The answering was very uneven in this subject. All did the elementary work very well, answered grammatical questions with correctness, and translated from Livy and Virgil satisfactorily. The translations of Horace were not nearly so good. The more general questions on the language and on Roman History were not, as a rule, well answered: and in the translation from a Latin author, not previously studied, and in turning English into Latin, only one or two showed any mastery over those principles of the language which all must have had constantly brought under notice in the course of their preparation. A passage for Latin verse was attempted by one only, and not with very great success. Considering all these deficiencies, the average standard of Marks obtained is fair, 490 out of 800; and this is due mainly to the careful preparation of the rudimentary work by the Candidates.

III. GREEK.—One Candidate failed, his work being defective throughout. Two—Hughes and Barrett—passed with credit; two others passed. Omitting all consideration of the work of the rejected Candidate, the Examiners have to make much the same report about the Greek as upon the Latin work. The Grammar and the books prescribed were well prepared; but a very simple passage from Thucydides given for translation was scarcely attempted, and only one Candidate, Barrett, showed any power in turning easy English sentences into Greek. In the answering of the more general questions in Greek, Hughes showed a marked superiority which placed him above Barrett in the Class List. The average of marks is almost exactly the same as in Latin—486 out of a possible 800.

IV. FRENCH.—Was presented by four only out of the five Candidates for the Degree. Two—Barrett and Walker—passed with credit; Hughes fell but very little, and Cresswell not far, short of the standard for credit.

This was, on the whole, the best part of the Examination. All the lower work was good, the translation from French at sight very creditable, and that of English into French better than it has usually been. The average of marks obtained is 403 out of a possible 600.

V. MATHEMATICS.—All the five Candidates presented and passed in this subject. One—Hughes—with credit.

The Arithmetic was, with one exception, very good. The answering of Hughes deserves special mention and commendation, as showing future Candidates what may be done by simple carefulness and attention. There was not a single error in his Arithmetical work, either in the Preliminary or in the Degree Examination.

In Euclid the answering in the 1st and 2nd books was, with one exception, excellent; and that in the 3rd and 4th books also (with the same exception) good. None of the Candidates attempted any of the easy deductions proposed.

In Algebra the lower questions were fairly worked by Walker and Creswell, and very well indeed by Barrett and Hughes. In the higher work Hughes alone showed any proficiency.

The Trigonometry was touched only by Hughes and Barrett, and very few marks were obtained by either.

It will thus be seen that it was in the lower work alone that Candidates did well; and yet, as compared with previous years, the average of marks is high,—320 out of a possible 800, whereas in 1867 the seven Candidates who passed averaged only 268, and two others were rejected.

VI. NATURAL PHILOSOPHY.—Presented by only one Candidate, Hughes. His answering was fair, and just entitled him to be returned as having passed with credit.

VII. DRAWING was presented by Walker only, who passed with credit. His Freehand Drawing was very good, evincing decided talent and giving proof of considerable application and practice. Had there been displayed in working out the Perspective Problems a corresponding acquaintance with the rudiments of that branch of the section, he would have gained a still larger number of marks than that which he received,—202 out of 300.

On summing up the marks in the several subjects, it was found that three Candidates,—Hughes, Barrett, and Walker, had more than sufficient to entitle them to a position in the First Class; the remaining two, Lovell and Creswell, being placed in the Third.

With regard to the Examination as a whole, a tabular comparison with the last eight years gives the following results (omitting all Candidates over 19):—

	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	TOTAL.
Total No. of Candidates.....	12	12	10	6	6	15	7	10	5	83
Rejected at Preliminary Examination.....	3	2	2	1	0	1	0	1	0	10
Admitted to Examination....	9	10	8	5	6	14	7	9	5	73
Passed for A.A.....	4	8	4	3	6	14	7	9	5	60
1st.....	3	2	0	0	2	6	2	4	3	22
2nd.....	1	2	1	3	2	2	2	3	0	16
3rd.....	0	4	3	0	2	6	3	2	2	22
Highest obtained.....	2247	2722	2028	2003	3295	2955	2836	2530	2999	2577*
Average of all who passed....	2132	2013	1788	1921	2228	2028	1932	2095	2205	2017*

* Average of previous years.

The small number of Candidates is the only point in this Examination which would cause regret; for in no other respect is there any falling off, but rather a manifest improvement. The number of marks obtained by the senior Associate has been exceeded once only, by Hogg, in 1864; and the average marks of all the Candidates is considerably above that hitherto maintained.

The Examination then, regarded as a whole, may be pronounced satisfactory. None of the Candidates displayed any marked ability or extensive knowledge; but all had evidently been carefully grounded, and, up to a certain point, their acquaintance with the several subjects

of examination was sound and accurate ; and, with the exception of the Preliminary Examination noticed before, faults of carelessness were less observed in this than they have been in earlier examinations.

The Prizes which, according to the Council's Regulations, must be awarded, are the following:—

The Council's Gold Medal to Edwin Hughes.
 First Prize for English to Edwin Hughes.
 First Prize for Latin to William Field Barrett.
 First Prize for Greek—Edwin Hughes.
 First Prize for French—William Field Barrett.
 First Prize for Mathematics—Edwin Hughes.

The following Prizes, which by the Regulations are left to the discretion of the Examiners, have also been awarded,—

Prize for Drawing—Joseph Benson Walker.
 Second Prize for Latin—Edwin Hughes.
 Second Prize for Greek—William Field Barrett.
 Second Prize for French—Joseph Benson Walker.

The General and Special Class Lists are appended.

The assistance hitherto so willingly rendered to the Examiners by Mr. Burgess has been this year no less efficiently and readily given by Mr. Richardson, to whom the Examiners are much indebted.

Nor would it be right to close this Report without adverting to the zealous co-operation of Mr. Barnard, by whom all the papers, though they reached his hands late and amid a heavy press of public work, were most rapidly and carefully printed.

For the Examiners,

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

18th September, 1868.

Appended will be found the Class Lists, general and special, and the detailed Table of Marks.

TASMANIAN COUNCIL OF EDUCATION.

EXAMINATION FOR THE DEGREE OF ASSOCIATE OF ARTS—SEPTEMBER, 1868.

GENERAL CLASS LIST.

FIRST CLASS.

NAME.	MARKS.	AGE.		SCHOOL.	TEACHER.
		yrs. mths.			
1. Edwin Hughes.	2999	18 2	The Council's Gold Medal, First Prizes of Books value £10 each for English, Greek, and Mathematics, and Second Prize value £5 for Latin. First Prizes of Books value £10 each for Latin and French, Second Prize value £5 for Greek. Prize of Books value £5 for Drawing, Second Prize value £5 for French.	High School, Hobart Town.	Rev. R. D. Harris, M.A.
2. William Field Barrett.	2652	16 4		High School, ditto.	Rev. R. D. Harris, M.A.
3. Joseph Benson Walker.	2411	16 11		High School, ditto.	Rev. R. D. Harris, M.A.

SECOND CLASS.

None.

THIRD CLASS.

4. Samuel Ouston Lovell.	1488	17 0	—	—	A. Cairnduff, Esq.
5. Thomas Edgar Creswell.	1473	16 5	—	—	A. Cairnduff, Esq., and — Schütz, Esq.

14 September, 1868.

For the Examiners,
M. H. IRVING, M.A.

SPECIAL CLASS LIST.

English.	Latin.	Greek.	French.	Mathematics.	Natural Philosophy.	Drawing.
FIRST CLASS.	FIRST CLASS.	FIRST CLASS.	FIRST CLASS.	FIRST CLASS.	FIRST CLASS.	FIRST CLASS.
Hughes.	Barrett.	Hughes.	Barrett.	Hughes.	Hughes.	Walker.
—	Hughes.	Barrett.	Walker.	—	—	—
SECOND CLASS.	SECOND CLASS.	SECOND CLASS.	SECOND CLASS.	SECOND CLASS.	SECOND CLASS.	SECOND CLASS.
Walker.	Walker.	Walker.	Hughes.	Barrett.	None.	None.
Barrett.	Lovell.	Lovell.	Creswell.	Walker.	—	—
Lovell.	Cresswell.	—	—	Creswell.	—	—
Creswell.	—	—	—	Lovell.	—	—

14 September, 1868.

For the Examiners,
M. H. IRVING, M.A.

TASMANIAN COUNCIL OF EDUCATION.

EXAMINATION for the Degree of ASSOCIATE of ARTS.—September, 1868.

TABULATED RESULTS.

No.	NAME.	DATE OF BIRTH.	SCHOOL.	TEACHER.	English.	Latin.	Greek.	French.	Mathematics.	Natural Philosophy.	Drawing.	TOTAL No. OF MARKS.	
					Maximum Number of Marks.								
					1000	800	800	600	800	300	300		
1	Edwin Hughes	27 June, 1850	High School, Hobart Town	Rev. R. D. Harris, M.A.	752 <i>c</i>	604 <i>c</i>	587 <i>c</i>	392 <i>p</i>	464 <i>c</i>	200 <i>c</i>	—	2999	First Class.
2	William Field Barrett	21 April, 1852	High School, ditto	Rev. R. D. Harris, M.A.	595 <i>p</i>	680 <i>c</i>	559 <i>c</i>	441 <i>c</i>	377 <i>p</i>	—	—	2652	First Class.
3	Joseph Benson Walker....	26 Sept. 1851	High School, ditto	Rev. R. D. Harris, M.A.	605 <i>p</i>	458 <i>p</i>	439 <i>p</i>	412 <i>c</i>	295 <i>p</i>	—	202 <i>c</i>	2411	First Class.
4	Samuel Ouston Lovell	8 Sept. 1851	Private Tuition	A. Cairnduff, Esq.	545 <i>p</i>	354 <i>p</i>	360 <i>p</i>	—	229 <i>p</i>	—	—	1488	Third Class.
5	Thomas Edgar Creswell ..	18 March, 1852	Private Tuition	Messrs. Cairnduff and Schütz	524 <i>p</i>	346 <i>p</i>	<i>n.p.</i>	368 <i>p</i>	235 <i>p</i>	—	—	1473	Third Class.

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

For the Examiners,

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

14 September, 1868.

TASMANIAN COUNCIL OF EDUCATION.

EXAMINATION FOR THE DEGREE OF ASSOCIATE OF ARTS.—SEPTEMBER, 1868.

MONDAY, 7TH SEPTEMBER. 9 A.M. to 1 P.M.

Preliminary Examination.

1. Multiply seven thousand four hundred and eighty-three by twenty thousand and eighty-seven. Write down the answer in words as well as figures.
 2. Divide one hundred and sixty billions four thousand and fifty millions two hundred and eight thousand two hundred and seven by two hundred and nine millions seventy-three thousand and eight. Write down the quotient and the remainder in words.
 3. Find the value of 45678 ounces of gold at £3 17s. 10½d. per ounce.
 4. A certain amount of meat costs £5 14s. 0½d. at 6½d. a pound. What will be the cost of the same quantity when meat is 7½d. a pound?
 5. A clock gains 5½ seconds daily. If it was 10 minutes and 40 seconds slow at noon on Jan. 1st, how much too fast will it be at noon on July 1st?
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6. Name the south points of Africa, Asia, Australia, South America, Hindostan, England, Greece, and Malaya.
 7. Name the chief rivers of England in order, commencing at Berwick and going round the coast to the Solway Firth.
 8. By what straits is Europe separated from Asia, Europe from Africa, Asia from Africa, the Northern from the Middle Island of New Zealand, Norway from Denmark, Australia from Tasmania, Hindostan from Ceylon, North America from Greenland?
 9. Where and what are the following :—Amazon, Baltic, Calcutta, Carpentaria, Dresden, Guadiana, Lombardy, Nile, Owhyhee, Scafell, Tchad, Vistula?
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10. Name in their proper order, with dates, the kings of England from 1400. to 1500 A.D.
 11. What important event took place in 1314, and who was the reigning king of England?
 12. State briefly with dates what you know of the history of the Duke of Monmouth.
 13. At what date, in whose reign, and under what conditions, was the Union of England and Scotland effected?
 14. What events were associated, and at what dates, with Runnymede, Naseby, and Hastings?
 15. Name three victories gained by Nelson. Give dates, and his opponents in each.

MONDAY, 7TH SEPTEMBER. 2 to 5 P.M.

Preliminary Examination.

1. Analyse the following passage, distinguishing clearly and naming the several sentences in it :—

That iron is a cankering thing,
For in these limbs its teeth remain,
With marks that will not wear away,
Till I have done with this new day,
Which now is painful to these eyes,
Which have not seen the sun to rise
For years—I cannot count them o'er,
I lost their long and heavy score
When my last brother droop'd and died,
And I lay living by his side.—BYRON.

2. Parse, according to Morell's scheme, every word in the following :—
The beginning of nations, those excepted of whom sacred books have spoken, is, to this day unknown.—MILTON.

3. Parse every "that" which occurs in the following :—
That that I say is this, that, that that gentleman has advanced is not that that he should have proved.—ADDISON.
4. Write down two simple sentences and then combine them (1) into a compound, (2) into a complex sentence.
5. There is a slight grammatical error in the extract given above from Byron. Point it out and correct it.
6. Supply fully the ellipses and explain the construction in the following sentences :—
(a) He is wiser than I.
(b) More persons attended than might have been expected.
7. What is the meaning of the following English words :—Bough, Dew, Hie, Maze, New, Pore ? Write down with their meanings words similarly pronounced but differently spelt.
8. In the following simple sentence, the King loved his people, insert (1) an adjectival sentence qualifying the subject, (2) an adverbial sentence of time qualifying the predicate.
9. Explain and correct the grammatical mistakes in the following :—
(a) With the most boldest and best hearts of Rome.
(b) So he with us go on our way rejoicing.
(c) Nought shall I give thee neither gold or silver.
10. Give Morell's table of nouns and classify under it the following,—Chillon, Year, Monarch, Shape, Freedom, Repose, Paradise, Race.
11. Morell divides the irregular verbs in English into three classes. How does he make this division ? Write down three verbs of each class.
12. Give the general rule for the formation of plural nouns in English. Name the various classes of exceptions, and give one example of each.

Passage for Dictation.

The divine Socrates is here represented in a figure worthy his great wisdom and philosophy, worthy the greatest mere man that ever breathed. But the modern discourse is written upon a subject no less than the dissolution of nature itself. Oh ! how glorious is the old age of that great man, who has spent his time in such contemplations as have made this being, what only it should be, an education for heaven ! He has according to the lights of reason and revelation which seemed to him clearest traced the steps of Omnipotence. He has, with a celestial ambition, as far as it is consistent with humility and devotion, examined the ways of Providence from the Creation to the dissolution of the visible world.

How pleasing must have been the speculation, to observe Nature and Providence move together, the physical and moral world march the same pace : to observe paradise and eternal spring the seat of innocence, troubled seasons and angry skies the portion of wickedness and vice !

When this admirable author has reviewed all that is past or is to come, which relates to the habitable world, and run through the whole fate of it, how could a guardian angel, that had attended it through all its courses or changes, speak more emphatically at the end of his charge, than does our author when he makes, as it were, a funeral oration over this globe, looking to the point where it once stood ?—ADDISON.

TUESDAY, 8TH SEPTEMBER. 9 A.M. to 1 P.M.

Euclid.

1. Prove that upon the same base, and on the same side of it, there cannot be two triangles that have their sides which are terminated in one extremity of the base equal to one another, and likewise those which are terminated in the other extremity.
 2. Prove that any two angles of a triangle are together less than two right angles.
 3. Prove that if a straight line fall upon two parallel straight lines it makes the alternate angles equal to one another; and the exterior angle equal to the interior and opposite upon the same side; and likewise the two interior angles upon the same side together equal to two right angles.
 4. Prove that the opposite sides and angles of a parallelogram are equal to one another, and the diameter bisects it, that is, divides it into two equal parts.
 5. Prove that if the square described upon one of the sides of a triangle be equal to the squares described upon the other two sides of it, the angle contained by these two sides is a right angle.
 6. Prove that if a straight line be bisected and produced to any point, the rectangle contained by the whole line thus produced, and the part of it produced, together with the square on half the line bisected, is equal to the square on the straight line which is made up of the half and the part produced.
 7. Divide a given straight line into two parts, so that the rectangle contained by the whole and one of the parts shall be equal to the square on the other part.
 8. Prove that if in an obtuse-angled triangle a perpendicular be drawn from either of the acute angles to the opposite side produced, the square on the side subtending the obtuse angle is greater than the squares on the sides containing the obtuse angle by twice the rectangle contained by the side upon which, when produced, the perpendicular falls, and the straight line intercepted without the triangle between the perpendicular and the obtuse angle.
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9. Prove that if in a circle two straight lines cut one another which do not both pass through the centre they do not bisect each other.
 10. Prove that the angles in the same segment of a circle are equal to one another.
 11. Prove that if from a point outside a circle there be drawn two straight lines, one of which cuts the circle, and the other meets it, and if the rectangle contained by the whole line which cuts the circle and the part of it without the circle be equal to the square on the line which meets the circle, that line touches the circle.
 12. Inscribe a circle in a given triangle.
 13. In a given circle inscribe an equilateral and equiangular pentagon.
 14. Prove that the sides about the equal angles of equiangular triangles are proportionals.
 15. Prove that equiangular parallelograms have to one another the ratio compounded of the ratios of their sides.
 16. Prove that two straight lines each parallel to the same straight line and not in the same plane with it are parallel to each other.
 17. Having given a base a , construct upon it a triangle with sides $2a$ and $\frac{3a}{2}$.
 18. Prove that the vertices of all triangles of the same area and on the same base lie in one straight line.
 19. Prove that the lines joining the extremities of parallel chords in a circle are equal.
 20. Prove that if the straight line bisecting the vertical angle of a triangle also bisects the base, the triangle is isosceles.
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TUESDAY, 8TH SEPTEMBER. 2 to 5 P.M.

History.

1. What were the circumstances which led to the elder Pitt's resignation? What change in the policy of England immediately followed? In what year did Pitt again take office?
2. By whom and with what object was the Stamp Act extended to America? On what grounds did the colonists object? Who repealed it?
3. Narrate briefly the events of the war in America from 1775—1781 inclusive.
4. What actions were fought, under what commanders, and at what dates, at the following places :—Camperdown, Corunna, Maida, Plassy, Trafalgar, Ushant?
5. State what you know of the career of Warren Hastings.
6. Narrate the events of the Peninsular War from Sir Arthur Wellesley becoming Commander-in-Chief to the battle of Vittoria.
7. State briefly the events connected with these persons,—Wilkes, Lord George Gordon, Sir Francis Burdett.
8. Name in order, with dates, the Prime Ministers of England from 1800 till the death of George III.

Geography.

1. What is a River? Name and explain the principal terms used in describing the course of a River.
2. How many Zones are there? How are they divided from one another? What names do they bear, and why? Explain clearly why no place can have more than 180° of longitude.
3. Give the greatest length and the greatest breadth of Europe. Specify the points from which you measure. Briefly explain the reasons for the peculiarities of the climate of Europe.
4. Draw an outline map of Australia, marking the divisions of the several Colonies, the chief towns, rivers, and mountains.
5. What is the Government of the United States? Name six of the principal towns of the United States, and the State in which each is situated.
6. What is a Volcano? Name six of the principal Volcanoes, and state the geographical position of each.
7. Name the principal groups of islands in Polynesia. How are they situated relatively to each other and to the equator?
8. Name the principal vegetables (of all sorts) introduced from America into the Old World, and *vice versa*? What are the following, and where are they found :—Beaver, condor, ermine, gymnote, rhinoceros, walrus?
9. Name the countries of Asia and the chief town of each.
10. Where and what are the following :—Armagh, Azores, Burra-Burra, Cherbourg, Drave, Elbourz, Florence, Geysers, Holstein, Jamaica, Liège, Maelstrom, Niger, Onega, Pindus, Punjaub, Selva, Shanghae, Uppernavik?

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

Algebra.

1. The number b is added to twice the number a and the sum is divided by three times the product of a and b ; write down the expression for a number which when multiplied by itself will produce the quotient so obtained.

Calculate the value of the number when a stands for twelve and b for one.

2. A person starts from P at a minutes past twelve o'clock and walks to Q in $2b$ minutes; he stays at Q for $2a - b$ minutes and then walks back in $a - b$ minutes more than it took him to walk out: at what time will he reach home?

3. Add together $\frac{2x}{3a + 2x}$, $\frac{3a}{3a - 2x}$, and $\frac{(3a + 2x)^2}{9a^2 - 4x^2}$.

4. Divide $243a^5 - 32x^5 + 6ax(27a^3 - 8x^3)$ by $9a^2 - 4x^2$.

5. Arrange the expression $a^3 + (2 - 3x)a^2 - (3 - 4x + 5x^2)a + 1 - 2x + 3x^2 - 4x^3$ according to ascending powers of x so that when the same power of x occurs in more than one term the coefficients of x in those terms shall be collected in brackets.

6. Substitute $1 + 2x - x^2$ for y in the expression $5(x^2 + y) - (y - 2x)^2 - 8(1 + 2x - y)^3$.

7. Substitute $-x$ for x in the expression $\frac{a + bx - cx^2 - cx^3}{3x(1 + x)}$.

8. A clock which loses uniformly x minutes in 24 hours is y minutes fast at 9 A.M. to-day: what will be its error at 6 P.M. to-morrow?

9. Solve the equation—

$$\frac{4x + 5}{6} - \frac{2x - 3}{7} = \frac{37}{21}.$$

10. Solve the equation—

$$5ax - 2b = 3\left(c - \frac{x}{3}\right).$$

11. Solve the equations—

$$\begin{aligned} 3x + 4y &= 25. \\ x - y + 1 &= 0. \end{aligned}$$

12. Solve the equation—

$$x(x + 1) - 13(x - 3) = 4.$$

13. Form an equation which shall be satisfied by the values $2, \frac{1}{2}, 3, \frac{1}{3}$.

14. If $\frac{a}{b} = \frac{b}{c} = \frac{c}{d}$ shew that $\frac{a - d}{c - d} = \frac{b + c + d}{d}$.

15. Investigate an expression for the sum of n terms of a series of quantities in Arithmetical Progression.

Ex.: Let $a = 9$, $d = 5$, $n = 10$. Find l and s .

16. Explain the distinction between the permutation and the combination of things, and investigate an expression for the number of different permutations of n different things r together.

17. There are n groups each containing r different things: how many combinations can be formed, one being taken out of each group for each combination?

Ex.: Let $n = 4$, $r = 13$.

18. State the Binomial theorem generally; and assuming its truth for a positive integral index,

$$\begin{aligned} &\text{and also assuming that } \left(1 + mx + \frac{m(m-1)}{1 \cdot 2} x^2 + \dots\right) \left(1 + nx + \frac{n(n-1)}{1 \cdot 2} x^2 + \dots\right) \\ &= 1 + (m+n)x + \frac{(m+n)(m+n-1)}{1 \cdot 2} x^2 + \&c., \text{ prove it for a fractional index.} \end{aligned}$$

19. Write down the first five terms of the expansion of $\sqrt[3]{2ax^2 - 3a^2x}$, 1st according to ascending powers of x , 2nd according to descending powers of x .
20. Find the sum of n terms of the series $1 + 2x + 3x^2 + 4x^3 + \&c.$ Calculate the value of 10 terms if $x = 2$.

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

English.

MORELL.—Grammar and Analysis. BYRON.—The Prisoner of Chillon.

1. "His withered cheek and tresses grey
Seemed to have known a better day."

Analyse fully and explain clearly in what the enlargement of the predicate consists, and what its grammatical structure is.

2. *Th* has two distinct sounds in English. Give a word to exemplify each of these; and state precisely the difference between them. Is this difference the same as that between *p* and *f*, or that between *f* and *v*?
3. Define a Preposition. What was the original use of prepositions? Explain the gradual extension of that use.
4. In what portion of the English Language are Greek words most found? Give the reason for the fact, and illustrate your answer by examples.
5. What account have you in Morell of the origin of the pronouns *Her*, *Them*, *One*, *Which*?
6. What are the roots, and what the forming terminations of the following, and what is the meaning given by the termination in each; viz.—*Cleft*, *Feebleness*, *Foremost*, *Lineal*, *Livid*, *Lovely*, *Mighty*, *Sleepless*?

For each give one similarly formed word.

7. Analyse the following:—

I had not strength to stir, or strive,
But felt that I was still alive—
A frantic feeling, when we know
That what we love shall ne'er be so.
I knew not why
I could not die,
I had no earthly hope—but faith,
And that forbade a selfish death.

8. 'My limbs are bow'd.' 'Their heavy score.' What English roots are involved in the words underlined? Give their meanings and trace them in other derivatives.

9. Analyse—

And thus together—yet apart
'Twas still some solace in the dearth
Of the pure elements of earth
To hearken to each other's speech,
And each turn comforter to each.

10. Explain the meaning of these passages—

- (1.) A polar day which will not see
A sunset till its summer's gone.
(2.) A double dungeon wall and wave
Have made—and like a living grave.

11. Explain clearly the grammatical relation of the former to the latter part of each of the following compounds occurring in your Byron—*New-dug*, *dwelling-place*, *snow-white*, *dungeon-light*.

12. Parse the verbs *ought* and *had* in the following:—

- (a) I was the eldest of the three,
And to uphold and cheer the rest
I ought to do—and did—my best.
(b) — I was glad,
For thought of them had made me mad.

13. Give fully the derivation of the words *atmosphere*, *assuage*, *dungeon*, *fancy*, *hermitage*, *inure*, *martyr*, *meteor*, *tenet*.

14. The following words are derived from Latin through French:—Chain, degree, eagle, isle, prison, seal, space, stranger. Name the Latin words from which they come, and illustrate the change on each by giving instances of words similarly altered.
15. Write a letter of advice to a friend, who, desiring to teach himself Latin, has written requesting your advice as to books and his mode of proceeding generally.

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

Latin.—I.

VIRGIL.—Æneid, Book IV. LIVY, Book I.

In parsing a word, if a Noun give case, number, gender, together with nominative and genitive singular; if a Verb give person, number, tense, mood, voice, together with the first person singular present and perfect indicative, the supine in -um, and the infinitive: wherever practicable explain the construction fully.

1. Decline throughout these nouns—hospes, ignis, opus, filia, aries; these adjectives—tenax, saluber, major; and the pronouns hic and ille.
2. Write down throughout—imperf. subj. act. of possum, fut. indic. of fio, perf. ind. act. of cerno, the imperative of facio, plup. ind. act. of sumo, fut. perf. ind. of do, the fut. subj. of sum, the imp. subj. act. of capio.
3. Write down the 1st person singular of these tenses—fut. perf. act. of consideo, plup. subj. act. of aperio, the pres. subj. of eo, plup. ind. act. of fero, imp. subj. pass. of audio, the perf. ind. pass. of gradior; and the principal parts of affligo, cresco, gero, hæreo, persuadeo, quæro, pingo, suspendo, tero, venio.
4. Translate literally—

Ancus, demandata cura sacrorum flaminibus sacerdotibusque aliis, exercitu novo conscripto, profectus, Politorium urbem Latinorum vi cepit; secutusque morem regum priorum, qui rem Romanam auxerant, hostibus in civitatem accipiendis, multitudinem omnem Romam traduxit: et quum circa Palatium sedem veteres Romani, Sabini Capitolium atque arcem, Cælium montem Albani implessent, Aventinum novæ multitudini datum; additi eodem haud ita multo post, Tellenis Ficanaque captis, novi cives. Politorium inde rursus bello repetitum, quod vacuum occupaverant prisce Latini: eaque causa diruendæ urbis ejus fuit Romanis, ne hostium semper receptaculum esset.
5. In the foregoing point out (a) an ablative of the instrument, (b) a dativus commodi, (c) an accusative of motion towards, (d) a subjunctive of purpose, (e) an objective genitive, (f) an ellipse.
6. Translate literally—

Continuo invadit: "Tu nunc Carthaginiis altæ
Fundamenta locas, pulchramque uxori urbem
Exstruis? heu regni rerumque oblite tuarum!
Ipse deûm tibi me claro demittit Olympo
Regnator, cælum et terras qui numine torquet;
Ipse hæc ferre jubet celeres mandata per auras:
Quid struis? aut qua spe Libycis teris otia terris?
Si te nulla movet tantarum gloria rerum,
Nec super ipse tua moliris laude laborem,
Ascanium surgentem, et spes heredis Iuli
Respice; cui regnum Italiæ Romanaque tellus
Debentur."
7. In the foregoing in what cases and why are (a) regni, (b) Olympo, (c) numine, (d) terris, (e) cui? (f) For what is Deûm contracted, and what do you call this kind of contraction?
8. Parse these words—adipiscendi, affare, coalescentium, exanimis, expertes, illuserit, instructius, orasse, pelago, sequere.
9. Give the meaning and the full derivation of bigæ, cominus, exordium, exuviæ, fatiloqua, immolo, lpicida, multiplex, præceps, præmium, purgo, suovetaurilia.
10. Translate into Latin—
 - (1.) The arms ordered for these were helmet, shield, greaves, breastplate, all of brass.
 - (2.) He dared to propose to the people the question, "Did they desire and order that he should reign?"
 - (3.) It repents me of having built this city, round which I have put walls.
 - (4.) The general gave to the crews of the ships two sesterces a man daily.

11. Translate—

Sol, qui terrarum flammis opera omnia lustras,
 Tuque harum interpret curarum et conscia Juno,
 Nocturnisque Hecate triviis ululata per urbes,
 Et Diræ ultrices, et di morientis Elissæ,
 Accipite hæc, meritumque malis advertite numen,
 Et nostras audite preces. Si tangere portus
 Infandum caput ac terris adnare necesse est,
 Et sic fata Jovis poscunt, hic terminus hæret:
 At bello audacis populi vexatus et armis,
 Finibus extorris, complexu avulsus Iuli,
 Auxilium imploret, videatque indigna suorum
 Funera; nec, quum se sub leges pacis iniquæ
 Tradiderit, regno aut optata luce fruatur,
 Sed cadat ante diem mediaque inhumatus arena.
 Hæc precor; hanc vocem extremam cum sanguine fundo.
 Tum vos, o Tyrii, stirpem et genus omne futurum
 Exercete odiis; cinerique hæc mittite nostro
 Munera. Nullus amor populis, nec fœdera sunt.

12. Translate—

Suionum hinc civitates ipso in Oceano præter viros armaque classibus valent: forma navium eo differt, quod utrimque prora paratam semper appulsui frontem agit: nec velis ministrantur, nec remos in ordinem lateribus adjungunt. Solutum, ut in quibusdam fluminum, et mutabile, ut res poscit, hinc vel illinc remigium. Est apud illos et opibus honos: eoque unus imperitat, nullis jam exceptionibus, non precario jure parendi: nec arma, ut apud ceteros Germanos, in promiscuo, sed clausa sub custode et quidem servo: quia subitos hostium incursus prohibet Oceanus. Trans Suionas aliud mare pigrum ac prope immotum, quo cingi claudique terrarum orbem hinc fides: quod extremus cadentis jam Solis fulgor in ortus edurat, adeo clarus, ut sidera hebetet. Sonum insuper emergentis audiri, formasque deorum et radios capitis aspici persuasio adjicit.

Translate into Latin Hexameters—

O mother, hear me yet before I die.
 Hear me, O earth—I will not die alone,
 Lest their shrill happy laughter come to me
 Walking the cold and starless road of death
 Uncomforted, leaving my ancient love
 With the Greek woman. I will rise and go
 Down into Troy, and ere the stars come forth
 Talk with the wild Cassandra, for she says
 A fire dances before her, and a sound
 Rings ever in her ears of armed men.

Translate into Latin Prose—

Then the Romans went home to Rome in triumph, and Horatius went at the head of the army, bearing his triple spoils. But as they were drawing near to the Capenian gate, his sister came out to meet him. Now she had been betrothed in marriage to one of the Curiatii, and his cloak, which she had wrought with her own hands, was borne on the shoulders of her brother; and she knew it, and cried out, and wept for him whom she had loved. At the sight of her tears Horatius was so wroth, that he drew his sword, and stabbed his sister to the heart; and he said, "So perish the Roman maiden who shall weep for her country's enemy." But men said that it was a dreadful deed, and they dragged him before the two judges who judged when blood had been shed. For thus said the law: The two men shall give judgment on the shedder of blood.

THURSDAY, 10TH SEPTEMBER. 2 to 5.30 P.M.

Latin.—II.

HORACE.—Letters to Augustus and to the Pisones. GENERAL QUESTIONS.

1. Translate and explain clearly the following passages:—

- (1.) Dum cadat elusus ratione ruentis acervi.
- (2.) Nil intra est oleam, nil extra est in nuce duri.
- (3.) Securus cadat an recto stat fabula talo.
- (4.) Pythias emuncto lucrata Simone talentum.

- (5.) Tergeminamque Hecaten, tria virginis ora Dianæ.
- (6.) Nondum illi flavam Proserpina vertice crinem
Abstulerat.
- (7.) In variis voluntatibus regnari tamen omnes volebant, libertatis dulcedine nondum
experta.
- (8.) Quæ haud facile iis in quibus nata erat humiliora sineret ea quæ innupsisset.
- (9.) Convalles cloacis e fastigio in Tiberim ductis siccant.
- (10.) Duo consules comitiis centuriatis a præfecto urbis ex Servii commentariis creati
sunt.

2. Translate—

Ergo fungar vice cotis, acutum

Reddere quæ ferrum valet, exsors ipsa secandi;
Munus et officium nil scribens ipse docebo,
Unde parentur opes, quid alat formetque poetam;
Quid deceat, quid non; quo virtus, quo ferat error.
Scribendi recte sapere est et principium et fons:
Rem tibi Socraticæ poterunt ostendere chartæ,
Verbaque provisam rem non invita sequentur.
Qui didicit, patriæ quid debeat et quid amicis,
Quo sit amore parens, quo frater amandus et hospes,
Quod sit conscripti, quod iudicis officium, quæ
Partes in bellum missi ducis, ille profecto
Reddere personæ scit convenientia cuique.
Respicere exemplar vitæ morumque jubebo
Doctum imitatore et vivas hinc ducere voces.

3. Give the derivation of the following words, point out anything singular, and if you can give instances of words similarly formed:—auspex, eques, flamen, nuper, paullum, sodes, sustineo, tibicen.
4. Mention any pure Greek words that occur in your Virgil or Horace.
5. How do you form in Latin from nouns adjectives signifying (a) made of, (b) full of, (c) like or related to, and also (d) diminutive nouns. Give examples from your reading.
6. What is the force of the termination in each of the following? whence are they derived? and what is the meaning of each? Advena, alter, detrimentum, facundus, penso, solitudo, utinam, vinculum.

Illustrate if you can by words similarly derived.

7. Write brief notes on (a) Numerus Saturnius, (b) Sit Medea ferox, (c) Cum Cyclope Charybdin, (d) Legiferæ Cereri, (e) Graiûm bis vindicat armis, (f) Centuriæ seniorum.
8. Quote any words you may know illustrative of the following:—
 - (1.) In Latin an *s* between two vowels becomes *r*.
 - (2.) An initial *s* in Latin is frequently in Greek an aspirate.
 - (3.) A π in Greek is frequently represented by a *qu* in Latin.

HISTORY.

1. "Bina postea spolia opima sunt parta."
When, by whom, and in what wars was this distinction achieved?
2. "Exoriare aliquis nostris ex ossibus ultor.
— pugnent ipsique nepotesque."
A brief account with dates of the wars with Carthage.
3. "Græcia capta ferum victorem cepit."
What wars did the Romans wage against the Greeks, and at what dates? When did Greece finally become a Roman province?
4. "Claustaque custodem pacis cohibentia Janum."
Who introduced the worship of Janus? Explain the custom here alluded to, and state on what occasions it was put into practice.
5. "Lingua Catonis et Enni."
State what you know of these two persons.
6. "Si de quincunee remota est
Uncia quid superest?"
A brief account of the division of the As, and of the Roman money system generally.

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

Greek.—I.

XENOPHON—Anabasis, Book V. HERODOTUS, Book III., c. 1—86.

1. Decline these nouns,—*δίκη* πλοῖον πλός (contr.) ὕβρις ξίφος, the adjectives *πλείων* πᾶς, the participle *λέγων*, and the pronouns *αὐτός* and *τίς*.
2. Write down these tenses throughout.—Subj. Pres. of *εἰμί*, 2 Aor. Ind. Act. of *ἵστημι*, 1 Aor. Ind. Act. of *λέγω*, Pres. Ind. Mid. of *πλανάομαι* (contracted forms only), Pres. Opt. Mid. of *δύναμαι*, 1 Aor. Imper. Act. of *ἐννοέω*.
3. Write down the 1st person singular of each of these tenses,—2 Aor. Ind. Act. of *λείπω*, Perf. Ind. Act. of *πείθω*, Imperf. Ind. Mid. of *οἶχομαι*, Plup. Ind. Act. of *βαίνω*, 1 Aor. Opt. Pass. of *πέμπω*, Fut. Ind. Mid. of *πίπτω*, and the principal parts of *ἄγω* *ἀκούω* *γίγνομαι* *έρχομαι* *ἔχω* *καίω* *λαμβάνω* *τρέπω* *ὑπὸ* *ισχυοῦμαι* *φεύγω*.
4. Translate literally—

Οἱ μὲν δὴ Ἕλληνες ἀριστήσαντες ἐνταῦθα ἐπορεύοντο εἰς τὸ πρόσω, παραδόντες τὸ χωρίον τοῖς ξυμμαχήσασι τῶν Μοσσυνοίκων. Ὅποσα δὲ καὶ ἄλλα παρήεσαν χωρία τῶν ξὺν τοῖς πολεμίοις ὄντων, τὰ εὐπροσοδώτατα οἱ μὲν ἔλειπον, οἱ δὲ ἐκόντες προσεχώρουν. Τὰ δὲ πλείεστα τοιάδε ἦν τῶν χωρίων· ἀπέειχον αἱ πόλεις ἀπ' ἀλλήλων στάδια ὀγδοήκοντα, αἱ δὲ πλείον, αἱ δὲ μείον· ἀναβοώντων δὲ ἀλλήλων ξυνήκουον εἰς τὴν ἑτέραν ἐκ τῆς ἑτέρας πόλεως· οὕτως ὑψηλὴ τε καὶ κοίλῃ ἡ χώρα ἦν.
5. In the preceding why is (a) *ξυμμαχήσασι* dative, (b) *στάδια* accusative, (c) *ἀλλήλων* genitive? Parse *παραδόντες*, *προσεχώρουν*, *πόλεως*, *πολεμίοις*.
6. Translate literally—

Ἐπεὶ τε δὲ οἱ ἐξελασθέντες Σαμίων ὑπὸ Πολυκράτους ἀπίκοντο ἐς τὴν Σπάρτην, καταστάντες ἐπὶ τοὺς ἄρχοντας, ἔλεγον πολλὰ, οἷα κάρτα δεόμενοι. οἱ δὲ σφί τῇ πρώτῃ καταστάσει ὑπεκρίναντο, τὰ μὲν πρῶτα λεχθέντα ἐπιλεληθέναι, τὰ δὲ ὕστερα οὐ συνιέναι. μετὰ δὲ ταῦτα, δεύτερα καταστάντες, ἄλλο μὲν εἶπον οὐδὲν, θύλακον δὲ φέροντες, ἔφασαν “τὸν θύλακον ἀλφίτων δέεσθαι.” οἱ δὲ σφί ὑπεκρίναντο, τῷ θυλάκῳ περιεργάσθαι· βοηθεῖν δ' ὧν ἔδοξε αὐτοῖσι.
7. In the foregoing what is the word left out before *οἷα* and what verb would you supply to complete the dependent sentence? Parse *καταστάσει*, *ἐπιλεληθέναι*, *περιεργάσθαι*, *ἄρχοντας*.
8. Parse these words,—*ἀπολέσθαι*, *αὐχένas*, *διενενόητο*, *ἐπαινέσοντας*, *ἐπισπομένην*, *ῥήρηται*, *κεχωρισμένοισι*, *ξυνησθησομένους*, *παχεία*, *συγγενέες*.
9. Give the meaning and full derivation of—*ἄξιόμαχος*, *ἐνέδρα*, *εὐώδης*, *λευκοφρυς*, *μιληλιφής*, *ναυμαχία*, *προστατεύειν*, *σωτηρία*, *φιλοφρόνως*.
10. Translate—

Ὁ δὲ λέγεις βίᾳ παρελθόντας σκηνοῦν, ἡμεῖς ἡξιούμεν τοὺς κάμνοντας εἰς τὰς στέγας δέξασθαι· ἐπεὶ δὲ οὐκ ἀνέωγον τὰς πύλας, ἣ ἡμᾶς ἐδέχετο αὐτὸ τὸ χωρίον, ταύτῃ εἰσελθόντες ἄλλο μὲν οὐδὲν βίαιον ἐποιήσαμεν, σκηνοῦσι δ' ἐν ταῖς στέγαις οἱ κάμνοντες τὰ ἑαυτῶν δαπανῶντες· καὶ τὰς πύλας φρουροῦμεν, ὅπως μὴ ἐπὶ τῷ ὑμετέρῳ ἄρμωσθι ὣσιν οἱ κάμνοντες ἡμῶν, ἀλλ' ἐφ' ἡμῖν ἢ κομίσασθαι, ὅταν βουλώμεθα. Οἱ δ' ἄλλοι, ὡς ὄρατε, σκηνοῦμεν ὑπαίθριοι ἐν τῇ τάξει, παρεσκευασμένοι, ἂν μὲν τις εὖ ποιῇ, ἀντευποιεῖν, ἂν δὲ κακῶς, ἀλέξασθαι. “Α δὲ ἡπέλιψας, ὡς, ἣν ὑμῖν δοκῇ, Κορύλαν καὶ Παφλαγόνas ξυμμάχους ποιήσεσθε ἐφ' ἡμᾶς, ἡμεῖς δὲ, ἣν μὲν ἀνάγκη ἦ, πολεμήσομεν καὶ ἀμφοτέροις· ἥδη γὰρ καὶ ἄλλοις πολλαπλασίοις ὑμῶν ἐπολεμήσαμεν· ἂν δὲ δοκῇ, ἡμῖν καὶ φίλον ποιήσομεν τὸν Παφλαγόνα. Ἀκούομεν δὲ αὐτὸν καὶ ἐπιθυμεῖν τῆς ὑμετέρας πόλεως καὶ χωρίων τῶν ἐπιθαλαστίων. Πειρασόμεθα οὖν ξυμπράττοντες αὐτῷ ὧν ἐπιθυμεῖ φίλοι γίγνεσθαι.
11. Translate—

Καμβύσης δὲ ἐκ Μέρμπος ἀπῆκετο ἐς Σάϊν πόλιν, βουλόμενος ποιῆσαι τὰ δὴ καὶ ἐποίησε. ἐπεὶ τε γὰρ ἐσῆλθε ἐς τὰ τοῦ Ἀμάσιος οἰκία, ἀντίκα ἐκέλευε ἐκ τῆς ταφῆς τὸν Ἀμάσιος νέκυν ἐκφέρειν ἔξω. ὡς δὲ ταῦτά οἱ ἐπιτελεῖα ἐγένετο, μαστιγοῦν ἐκέλευε, καὶ τὰς τρίχας ἀποτίλλειν, καὶ κεντοῦν τε, καὶ τᾶλλα πάντα λυμαίνεσθαι. ἐπεὶ τε δὲ καὶ ταῦτα ἔκαμον ποιεῦντες, (ὁ γὰρ δὴ νεκρὸς, ἅτε τεταριχευμένος, ἀντεῖχε τε καὶ οὐδὲν διεχέετο,) ἐκέλευσέ μιν ὁ Καμβύσης κατακαῦσαι, ἐντελλόμενος οὐκ ὅσια. Πέρσαι γὰρ θεὸν νομίζουσι εἶναι πῦρ. τὸ ὧν κατακαλεῖν γε τοὺς νεκροὺς οὐδαμῶς ἐν νόμῳ οὐδετέροις ἐστὶ· Πέρσῃσι μὲν, δι' ὅπερ εἴρηται, θεῷ οὐ δίκαιον εἶναι λέγοντες

νέμειν νεκρὸν ἀνθρώπου· Αἰγυπτίοισι δὲ νενόμισται πῦρ θηρίου εἶναι ἐμφυχον, πάντα δὲ αὐτὸ κατεσθίειν τὰ περ ἂν λάβῃ, πλησθέν δὲ αὐτὸ τῆς βορῆς συναποθνήσκειν τῷ κατεσθιομένῳ. οὕκων θηρίοισι νόμος οὐδαμῶς σφί ἐστι τὸν νέκυν διδόναι· καὶ διὰ ταῦτα ταριχεύουσι, ἵνα μὴ κείμενος ὑπὸ εὐλέων καταβρωθῇ. οὕτω δὴ οὐδετέροις νομιζόμενα ἐνετέλλετο ποιεῖν ὁ Καμβύσης. Ὡς μέντοι Αἰγύπτιοι λέγουσι, οὐκ Ἀμασις ἦν ὁ ταῦτα πάθων, ἀλλὰ ἄλλος τῶν τις Αἰγυπτίων, ἔχων τὴν αὐτὴν ἡλικίην Ἀμάσι· ᾧ λυμαινόμενοι Πέρσαι, ἐδόκεον Ἀμασιν λυμαίνεσθαι. λέγουσι γάρ, ὡς πυθόμενος ἐκ μαντηίου ὁ Ἀμασις τὰ περὶ ἐωυτὸν μέλλοι ἀποθανόντα γίνεσθαι, οὕτω δὴ ἀκεόμενος τὰ ἐπιφερόμενα, τὸν μὲν ἀνθρώπον τοῦτον, τὸν μαστιγωθέντα, ἀποθανόντα ἔθαψε ἐπὶ τῇσι θύρῃσι ἐντὸς τῆς ἐωυτοῦ θήκης, ἐωυτὸν δὲ ἐνετείλατο τῷ παιδί ἐν μυχῷ τῆς θήκης ὡς μάλιστα θειναι.

12. Put into Greek, like that of Xenophon, the following :—

- (1.) Had he not been distrusted (ἀπιστεῖν), he might have got back Egypt.
- (2.) This man used to desire whatever beautiful things he might see anywhere.
- (3.) The things which you say are pleasing to us who hear you.
- (4.) Cyrus sent a herald into Egypt to ask Amasis for his daughter.
- (5.) Such was the number of the javelins and of the arrows that the enemy left their camp and palisades.
- (6.) On the next day the hoplites, having sacrificed, went forward.

13. Translate—

Μιλήσιοι δὲ ἐξελθόντες αὐτοὶ τε, ὀκτακόσιοι ὀπλῖται, καὶ οἱ μετὰ Χαλκιδέως ἐλθόντες Πελοποννήσιοι καὶ Τισσαφέρνους τι ξενικὸν ἐπικουρικόν, καὶ αὐτὸς Τισσαφέρνης παρὼν καὶ ἡ ἵππος αὐτοῦ, ξυνέβαλον τοῖς Ἀθηναίοις καὶ ξυμμάχοις. καὶ οἱ μὲν Ἀργεῖοι τῷ σφετέρῳ αὐτῶν κέρα προεξάζαντες καὶ καταφρονήσαντες, ὡς ἐπὶ Ἰωνάς τε καὶ οὐ δεξιότους ἀτακτότερον χωροῦντες, νικῶνται ὑπὸ τῶν Μιλησίων, καὶ διαφθείρονται αὐτῶν ὀλίγῳ ἐλάσσους τριακοσίων ἀνδρῶν. Ἀθηναῖοι δὲ τοὺς τε Πελοποννησίους πρώτους νικήσαντες, καὶ τοὺς βαρβάρους καὶ τὸν ἄλλον ὄχλον ὡσάμενοι, τοῖς Μιλησίοις οὐ ξυμμίξυντες, ἀλλ' ὑπόχωρησάντων αὐτῶν ἀπὸ τῆς τῶν Ἀργείων τροπῆς ἐξ τὴν πόλιν, ὡς ἑώρων τὸ ἄλλο σφῶν ἡσώμενον, πρὸς αὐτὴν τὴν πόλιν τῶν Μιλησίων κρατοῦντες ἤδη τὰ ὅπλα τίθενται. καὶ ξυνέβη ἐν τῇ μάχῃ ταύτῃ τοὺς Ἰωνας ἀμφοτέρων τῶν Δωριέων κρατῆσαι· τοὺς τε γὰρ κατὰ σφῶν Πελοποννησίους οἱ Ἀθηναῖοι ἐνίκων, καὶ τοὺς Ἀργεῖους οἱ Μιλήσιοι. στήσαντες δὲ τροπαῖον, τὸν περιτειχισμὸν ἰσθμώδους ὄντος τοῦ χωρίου οἱ Ἀθηναῖοι παρεσκευάζοντο, νομίζοντες, εἰ προσαγάγοιντο Μίλητον, ῥαδίως ἂν σφίσι καὶ τὰλλα προσχωρήσειν.

FRIDAY, 11TH SEPTEMBER. 2 to 5 P.M.

Greek.—II.

1. Translate—

Ἄλλ' ὅτε δὴ δεκάτῃ ἐφάνη ῥοδοδάκτυλος ἠώς,
 Καὶ τότε μιν ἐρέεινε καὶ ἦτεε σῆμα ἰδέσθαι,
 "Ὅ ττί ρά οἱ γαμβροῖο πάρα Προίτιο φέροιτο.
 Αὐτὰρ ἐπεὶ δὴ σῆμα κακὸν παρεδέξατο γαμβροῦ,
 Πρῶτον μὲν ρά Χίμαιραν ἀμαιμακέτην ἐκέλευσεν
 Πεφνέμεν. ἡ δ' ἄρ' ἔην θεῖον γένος, οὐδ' ἀνθρώπων,
 Πρόσθε λέων, ὅπιθεν δὲ δράκων, μέσση δὲ χίμαιρα,
 Δεινὸν ἀποπνέουσα πυρὸς μένος αἰθομένοιο.
 Καὶ τὴν μὲν κατέπεφνε θεῶν τεράεσσι πιθήσας,
 Δεύτερον αὖ Σολύμοισι μαχίσσατο κυδαλίμοισιν·
 Καρτίστην δὲ τὴν γε μάχην φάτο δύνειν ἀνδρῶν.
 Τὸ τρίτον αὖ κατέπεφνε Ἀμαζόνας ἀντιανείρας.
 Τῷ δ' ἄρ' ἀνερχομένῳ πυκινὸν δόλον ἄλλον ὕφαινε·
 Κρίνας ἐκ Λυκίης εὐρείης φῶτας ἀρίστους
 Εἶσε λόχον· τοὶ δ' οὐ τι πάλιν οἰκόνδε νέοντο·
 Πάντας γὰρ κατέπεφνε ἀμύμων Βελλεροφόντης.
 Ἄλλ' ὅτε δὴ γίγνωσκε θεοῦ γόνον ἦν ἐόντα,
 Αὐτοῦ μιν κατέρυκε, δίδου δ' ὅ γε θυγατέρα ἦν,
 Δῶκε δὲ οἱ τιμῆς βασιληίδος ἡμισυ πάσης·
 Καὶ μὲν οἱ Λύκιοι τέμενος τάμον ἔσοχον ἄλλων,
 Καλὸν φυταλῆς καὶ ἀρούρης, ὕφρα νέμοιτο.

2. Write down the first six lines of the preceding. Mark the scansion and write notes on all peculiarities, including the use of the Digamma.
3. Translate and explain fully these passages,—
 - (1.) ἦνις ἡκέστας ἱερεύσεμεν εἰ κ' ἐλεήσῃ.
 - (2.) κέραμος ἐσάγεται πλήρης οἴνου δις τοῦ ἔτεος ἐκάστου. καὶ ἐν κεράμιον δινηρὸν ἀριθμῶ κείμενον οὐκ ἔστι ἰδέσθαι.
 - (3.) ἐπανείρεσθαι τὸν ἄνδρα κότερον περιτετιλμένη ἢ δασεῖα ἢ θρίδαξ ἐοῦσα εἴη καλλίων;
 - (4.) δυνώδεκα ἐπ' οὐδεμίᾳ αἰτίᾳ ἀξιόχρεω ἐλὼν ζῶοντας ἐπὶ κεφαλὴν κατώρυξε.
 - (5.) ἐμοὶ δὲ αἱ σαὶ μεγάλαι εὐτυχίαι οὐκ ἀρέσκουσι τὸ θεῖον ἐπισταμένῳ ὥς ἔστι φθονερόν.
 - (6.) ἔαν τις τῶν ἀπειροτέρων ἐγχειρῇ πῃ συμβουλευόμεν ἐφ' οὗς ἂν ἴωσιν.
 - (7.) Ξενοφῶν, λαβὼν τὴν παρακαταθήκην, χάριον ὠνεῖται τῇ θεῷ, ὅπου ἀνείλεν ὁ θεός.
 - (8.) Ποῶ δ' ὑμᾶς ἐξαπατηθέντας ἢ γοητευθέντας ὑπ' ἐμοῦ ἤκειν ἐς Φᾶσιν.
4. Derive fully and give the meaning of these words,—αἰχμάλωτος, ἡλέκτωρ, καλλιπάρης, ληΐζεσθαι, ὀρεστιάδες, πολύκητος, πεντηκόντορος, σφαιροειδής, ὑφηνίοχος, ὠμοβοέων.
5. Parse these verbs, noting anything irregular in their form—ἀναβεβήκει, ἀρεσσόμεθα, ἐπιπλῶς, ἔμμεναι, εὐχετάσθαι, ἔστεῳτος, ἴκηαι, κεκρύφθαι, τεθῆναι, ὠδοπεποιημένη.
6. What is meant by the Attic reduplication? Give instances of its use.
7. Explain what is meant by attraction, both direct and inverse. Construct or quote instances of each.
8. State with examples the general rules for forming Conditional Sentences in Greek.
9. What are the names given to Greek words according to their accent? Select an example of each class from this paper.
10. In the formation of what parts of speech, from what other parts of speech, and with what meaning, are the following terminations employed in Greek: -τής, -μα, -συνη, -ως, -τος, -όω?
11. What peculiar forms of words do you find in Herodotus as compared with Xenophon? Give examples.
12. Ἴωνας τε καὶ Αἰόλεας τῶν ἤρχε Καμβύσης. Where were these Greek Colonies? and where were those of a third tribe situated? What was the name of these last? Name three towns belonging to each of the three divisions.
13. Where are Troy, Tyre, Kadytis, Carthage, Trapezus, Thurii, Chalybes, Babylon?
14. What is meant by Asyndeton? and by Crasis? Quote or construct an example of each.

SATURDAY, 12TH SEPTEMBER 9 A.M. to NOON.

Natural Philosophy.

1. State and prove the Triangle of Forces.
2. There are two cords of length 14 and 48 inches respectively. One end of each is fastened to a peg, and the two pegs are in the same horizontal line; the other end of each is fast to a weight of 100 lbs. The cords are at right angles: find the tension on each.
3. Calculate a formula for the distance of the resultant of two concurrent parallel forces from either force. Calculate a similar formula for two non-concurrent parallel forces.
4. Two forces act upon the ends of a rod 10 feet long. The forces are as 3 and 4, and act at angles of 30° and 60° to the rod. Find the magnitude, position, and direction of a third force which will keep the rod still.
5. Define the centre of gravity. Prove that the centre of gravity of a circle is its centre.
6. Weights of 1, 2, 3, and 4 pounds respectively are placed at the angles of a square taken in order. The length of the diagonal being 24 inches; find the centre of gravity of the whole system.

7. What are the three kinds of levers? Taking into account the weight of the lever, calculate expressions for the pressure on the fulcrum in each.
8. Find in the inclined plane the ratio of P to W , when the power acts (1) horizontally, and (2) parallel to the plane.
If the angle of a plane be 45° , what power will be in each case required to keep a weight of 20 lbs. at rest?
9. The total length of the arms of a false balance is 12 inches. A pound is weighed in each scale, and the sum of the weights is $2\frac{2}{3}$ pounds: find the position of the fulcrum.
10. During what time must a body fall from rest to acquire a velocity of thirty miles an hour?
11. State the Third Law of Motion. Deduce that special form of it which is easily verified experimentally; and explain the machine whereby this is done.
12. State clearly the property of fluids on which Bramah's press depends for its action; and explain fully its construction.
13. What do you mean by specific gravity?
Show how the specific gravity of a fluid may be determined by weighing a solid body in it.
14. Compare the amount of pressure on the base and on any side of a cubical vessel filled with water, and standing with its base horizontal.
15. Determine the amount of transmitted pressure, when the atmosphere presses upon any point of a fluid mass. Hence explain the action of the barometer.
16. A cylinder of oak (sp. g. 75) floats upright in water. What fraction of its height will be out of the water?
Suppose the cylinder to be 8 inches high and 4 inches radius, and a cylindrical portion 7 inches high and 3 inches radius to be taken out of it, how much of it would then be above water?

SATURDAY, 12TH SEPTEMBER. 2 to 5 P.M.

French.

VOLTAIRE—Charles XII., Books 3 and 4. RACINE—Athalie.

[Questions 1—6 must be answered satisfactorily.]

1. Give the rule for the formation of adjectives ending in -et and -eur. Give two examples of each rule, and two exceptions to each.
2. Write down the 1st person singular present indicative, preterite definite indicative, 3rd person singular imperative, and past participle of these verbs,—Craindre, devoir, dire, faire, poursuivre, rompre, se souvenir, sortir.
3. Write down throughout the past subjunctive of avoir, the present indicative of appeler, the future indicative of voir, the present of servir, the preterite definite of prolonger, the subjunctive present of concevoir, the past subjunctive of venir, the imperative of savoir.
4. Translate into French—
 - (1.) I have just arrived in this country.
 - (2.) One wants few things in this mortal life, though one desires many.
 - (3.) He was told that the young prince was nearly of his age.
 - (4.) If you have too many books to carry, give me some of them.
 - (5.) This event took place on the twenty-first of June, seventeen hundred and ninety-two.
5. Give the French for—the weight, her friendship, gratitude, the half, the boat, the following day, the haste, copper, a trifle, to exhaust, a fair, to surround.

6. Translate literally—

A peine Charles eut-il donné audience à l'ambassadeur de la Porte ottomane, qu'il courut chercher les Moscovites. Les troupes du czar étaient sorties de Pologne, et y étaient rentrées plus de vingt fois pendant le cours de la guerre : ce pays, ouvert de toutes parts, n'ayant point de places fortes qui coupent la retraite d'une armée, laissait aux Russes la liberté de reparaitre souvent au même endroit où ils avaient été battus, et même de pénétrer dans le pays aussi avant que le vainqueur. Pendant le séjour de Charles en Saxe, le czar s'était avancé jusqu'à Léopold, à l'extrémité méridionale de la Pologne : il était alors vers le nord, à Grodno en Lithuanie, à cent lieues de Léopold.

7. From what Latin words are derived *vic*, *fête*, *construit*, *lieu* ? Give a word or two similarly formed to each of these.8. Give the English of the following words :—*Amas*, *debout*, *emprunter*, *frémir*, *rosée* ; and of *brigue*, *dégât*, *échouer*, *nage*, *talon*.

9. Translate—

Grand Dieu, si tu prévois qu'indigne de sa race
Il doive de David abandonner la trace,
Qu'il soit comme le fruit en naissant arraché,
Ou qu'un souffle ennemi dans sa fleur a séché !
Mais si ce même enfant, à tes ordres docile,
Doit être à tes desseins un instrument utile,
Fais qu'au juste héritier le sceptre soit remis ;
Livre en mes faibles mains ses puissants ennemis ;
Confonds dans ses conseils une reine cruelle !
Daigne, daigne, mon Dieu, sur Mathan et sur elle
Répandre cet esprit d'imprudence et d'erreur,
De la chute des rois funeste avant-coureur !

10. Translate—

SALOMITH.

Que de craintes, mes sœurs, que de troubles mortels !
Dieu tout-puissant, sont-ce là les prémices,
Les parfums et les sacrifices
Qu'on devait en ce jour offrir sur tes autels ?

UNE DES FILLES DU CHŒUR.

Quel spectacle à nos yeux timides !
Qui l'eût cru qu'on dût voir jamais.
Les glaives meurtriers, les lances homicides
Briller dans la maison de paix ?

UNE AUTRE.

D'où vient que, pour son Dieu pleine d'indifférence,
Jérusalem se tait en ce pressant danger ?
D'où vient, mes sœurs, que, pour nous protéger,
Le brave Abner au moins ne rompt pas le silence ?

SALOMITH.

Hélas ! dans une cour où l'on n'a d'autres lois
Que la force et la violence,
Où les honneurs et les emplois
Sont le prix d'une aveugle et basse obéissance,
Ma sœur, pour la triste innocence
Qui voudrait élever sa voix ?

11. Translate—

Je ne vous quitterai pas, ajouta-t-il en souriant, sans vous laisser un faible gage de ma reconnaissance pour les soins dont vous m'avez comblé. Puisque l'ennui seul a jusqu'ici troublé le bonheur que la nature vous dispensait d'une manière si libérale, recevez de moi ces deux anneaux, qui sont de puissants talismans. En poussant le ressort qui en ouvre le chaton, vous trouverez toujours dans l'enseignement qui y est caché un remède infailible contre cette triste maladie du cœur et de l'esprit. Si cependant l'art divin qui les a fabriqués rompt une fois mes espérances, nous nous reverrons dans un an, et nous aviserons alors à d'autres moyens. En attendant, les petits cadeaux entretiennent l'amitié, et je n'attache à celui-ci que deux conditions faciles à remplir la première, c'est de ne pas consulter l'oracle de l'anneau sans nécessité, c'est à dire avant que l'ennui vous gagne. La seconde, c'est d'exécuter ponctuellement tout ce qu'il vous prescrira.

12. Translate into French—

If Babylon could have believed that she was perishable like all human things, and had not a foolish confidence blinded her, she might not only have foreseen what Cyrus did, for the recollection of a like work was fresh, but more, by guarding all the approaches, she might have overwhelmed the Persians in the bed of the river while they were passing. But they thought only of pleasure and of feasting; there was no appointed order or command. Thus perish not only the strongest towns; but also the greatest empires. Panic spread everywhere; and the impious king was slain.

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

Arithmetic.

1. A population of thirty millions nine hundred and seventeen thousand eight hundred and thirteen pays £2 6s. 9½d. a head in taxes: find the total revenue.
2. Extract the square root of 789·345 to three places of decimals.
3. Seventeen-eightieths of a property is worth £289 15s. 7d. more than seven-eighths of the same: find the value of the property.
4. Find the fraction represented by ·2345.
5. Two persons start to meet one another, one from London, the other from Exeter. When the one has walked $\frac{4}{5}$ and the other $\frac{1}{4}$ of the whole distance, what fractional part of it remains between them? And if this distance be 38 miles and 3520 feet, how far is it from London to Exeter?

Trigonometry.

1. Define the supplement and the complement of an angle. Prove that the sine of an angle is equal to the cosine of its complement and also to the sine of its supplement.
2. Find $\sin(A + B)$ and $\cos(A - B)$ in terms of the sines and cosines of A & B .
3. Assuming the foregoing and also the corresponding values of $\sin(A - B)$ and $\cos(A + B)$, deduce the following:—

$$(1.) \tan^2 A = \frac{1 - \cos 2A}{1 + \cos 2A}$$

$$(2.) \cos A - \cos B = 2 \sin \frac{A + B}{2} \cdot \sin \frac{A - B}{2}$$

$$(3.) \cos A + \cos 3A + \cos 5A = \cos 3A (3 - 4 \sin^2 A).$$

4. Prove that $\sin A = \cos(30^\circ - A) - \cos(30^\circ + A)$.

$$\text{and that } \cos A = 2 \sin \left(45^\circ + \frac{A}{2}\right) \sin \left(45^\circ - \frac{A}{2}\right)$$

5. If $\sin \theta = \frac{1}{\sqrt{3}}$ and $\cos \phi = \frac{1}{\sqrt{2}} + \frac{1}{2\sqrt{3}}$, prove that $\theta - \phi = 30^\circ$.
6. Taking the first approximation for π , find the length of an arc of $35^\circ 35' 35''$ to a radius of 1000 feet.
7. Find the value of $\cot(A + B + C)$. Hence prove that in any triangle $\cot A \cot B + \cot A \cot C + \cot B \cot C = 1$.
8. Prove that in any triangle $\cos A = \frac{b^2 + c^2 - a^2}{2bc}$.
9. Hence deduce $\sin \frac{a}{2}$, $\cos \frac{a}{2}$, $\sin A$, and prove by symmetry that

$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}.$$

10. Explain the meaning of a logarithm; the two kinds of logarithms employed; and shew how calculations are simplified by the use of Logarithmic tables.

11. Find by logarithms $(1869)^{\frac{3}{4}}$, $\frac{1459}{3687}$, each to four places of decimals.
12. Find the area, and the vertical and base angles of an isosceles triangle base 40 and equal sides 50 yards long.
13. Given $a = 135$, $c = 249$, $A = 46^{\circ} 15' 30''$. Solve the Triangle.
14. Find the radius of the inscribed and the escribed circle in terms of the sides and angles of the triangle.

SATURDAY, 12TH SEPTEMBER.

[One hour and a half.]

Drawing.

No. 1.—FROM THE FLAT.

Copy the hand and arm given, as nearly as you can the size of the original. No means of measurement can be permitted.

No. 2.—PERSPECTIVE.

[Two hours and a half.]

Work out the Problems given, numbered 1, 2, 3, and 4.

- No. 1.—To be a row of four square pillars, 4 feet high and 2 feet sides, placed 2 feet apart. The face of the first pillar, 1, 2, 3, 4, and touches the 'transparent plane' B B. The line A A. is the level of the eye, on which O indicates the 'perspective centre' and D the 'point of distance.'
- No. 2.—The given circle to be placed horizontally, the circumference touching the 'transparent plane' B B. On the 'horizontal line' A A are given, the 'perspective centre' O and the 'distance' D. Between the parallels 2 - O and 1 - O when drawn, represent another circle same size as the first, the nearest part of the circumference being marked on the 'ground line' at X.
- No. 3.—A skeleton cube of five feet, plan given. B B indicates the 'transparent plane,' O the 'centre,' and S the 'station point.' A A the horizontal line.
- No. 4.—An elevation of a rectangular vertical plane, with panels, to be put into perspective, the nearest edge being placed 3 feet within the 'transparent plane' B B. A A is the 'horizontal line,' O the position of the eye, and D the 'point of distance.'

All lines showing the methods of working the Problems are to be left in.

Scale—half an inch to one foot.

MONDAY, 14TH SEPTEMBER.

[Two hours.]

No. 3.—FROM MODELS.

Sketch the looking-glass and other objects, as arranged on the table before you. The drawing should not be less than six inches in width.

TASMANIAN COUNCIL OF EDUCATION.

Hobart Town, 11th April, 1867.

EXAMINATION FOR THE DEGREE OF ASSOCIATE OF ARTS, 1868.

THE Council of Education have directed the publication of the following Scheme of Examination for the Degree of Associate of Arts for the year 1868.

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 1868.

ENGLISH.—The Candidate will be examined in Section 6 of *Morell's Poetical Class Book*, with Questions on the Etymology and Grammatical construction of the Language; in History of England, *Student's Hume, Reign of George III.*; 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: *Poetical Reading Book with Aids for Grammatical Analysis, &c.*, by Morell and Ihne, (2s. 6d., Gordon); *Morell's Grammar and Analysis with the Exercises*, (3s. 6d., Constable); *Smith's Student's Hume*, (7s. 6d., Murray); *Cornwell's School Geography*, (3s. 6d., Simpkin & Co.)

LATIN.—Virgil, *Æneid, Book IV.*, Horace, *Epistola ad Augustum (Ep. Book II. I.)* and *Epistola ad Pisones*; Livy, *Book I.* 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.

GREEK.—Xenophon, *Anabasis, Book V.*; Homer, *Iliad, Book VI.*; Herodotus, *Book III.*, Chapters 1 to 60 inclusive. Questions on the Language, and the historical and geographical allusions. A passage for translation from some other Greek author.

FRENCH.—Voltaire, *Charles XII.*, *Books III. and IV.*; Racine, *Athalie*. 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.

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.

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.

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, and the use of Logarithms.

NATURAL PHILOSOPHY.—Newth's First Book of Natural Philosophy.

CHEMISTRY.—Inorganic Chemistry. 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.—Page's Advanced Text Book of Geology, 5s., (Blackwood).

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.

SCALE OF MARKS.

	<i>Full Marks obtainable.</i>
English	1000
Latin	800
Greek	800
French, German, or Italian	600
Pure Mathematics	800
Elementary Principles of Hydrostatics and Mechanics	300
Chemistry	300
Zoology and Botany	300
Geology	300
Drawing	300

	<i>Marks.</i>
Standard for First Class	2150
Standard for Second Class	1750
Standard for Third Class	1350

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 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. Drawing and Architecture. |
| 5. Pure Mathematics. | 10. Geology. |

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 Five Pounds 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.