

CALENDAR

OF

DALHOUSIE COLLEGE AND UNIVERSITY,

HALIFAX, NOVA SCOTIA,

1880-81.



HALIFAX:

PRINTED FOR THE UNIVERSITY BY NOVA SCOTIA PRINTING CO.

1880.

THE MUNRO BURSARIES.

GEORGE MUNRO, Esq., the Founder of the Munro Professorship of Physics in this University, offers this year seven Bursaries for Competition at the Matriculation Examinations.

The value of each of these Bursaries is *Two Hundred Dollars* yearly with Free Class-Tickets for the first two years of the Undergraduate Course, taken consecutively; provided that the holder of Bursary gain a Certificate of Merit at the Sessional Examinations of the first year. After these two years, the Bursaries are again to be competed for, and will be held during the third and fourth years of the Course, on terms similar to those of the preceding years.

These seven Bursaries are allocated for competition to students from the following five districts of Nova Scotia and from New Brunswick and Prince Edward Island, one to each, viz. :—

1. The Island of Cape Breton.
2. Pictou, Antigonish and Guysborough.
2. Colchester, Cumberland and Hants.
4. Halifax, Lunenburg and King's.
5. Annapolis, Digby, Yarmouth, Shelburne and Queens.
6. New Brunswick.
7. Prince Edward Island.

Candidates must satisfy the Principal, before the week in which the Examinations are held, with respect to the districts to which they belong and as coming from which they are entitled to compete.

Students who have already matriculated at any College, are disqualified for competition. The subjects of Matriculation Examination will be found on page 12.

The Bursaries will be awarded to those Students from the several districts mentioned, who make the highest total of marks at the Matriculation Examinations; but no Bursary will be awarded unless a Standard of Merit, determined by the Senate, shall be reached by the Candidate.

Further information may be obtained on application to the Principal.

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*Resolution of the Governors of Dalhousie College in re
Proposed Endowment of Additional Chair by
GEORGE MUNRO, Esq., New York.*

"The Governors desire to place on permanent record their high sense of the munificence of Mr. GEORGE MUNRO in undertaking to provide the sum required to found an additional Chair in Dalhousie College, with an endowment of \$2000 per annum. MR. MUNRO's liberality is on a scale that is without parallel in the Educational History, not of Nova Scotia alone, but of the Dominion of Canada; and his action in giving the patronage of the Chair to the Governors, instead of availing himself of the privilege secured to him by Statute of nominating a Professor, enhances their sense of indebtedness, while it further illustrates his unselfishness and public spirit. Previously, the College enjoyed the advantage of only occasional and temporary Lectureships in Physics. The Governors therefore propose to found a Chair of Physics with the new Endowment, a Chair which, in view of the rapid advances of Modern Science, is indispensable to the equipment of any University, and the imperfect provision hitherto made for which has been a serious drawback to the efficiency of Dalhousie.—To connect the donor's name for all time with the benefits conferred by him, to keep his memory in grateful remembrance by the successive generations of Students who shall attend our Academic Halls, especially by those devoting themselves to the study of the Physical Sciences, the Governors propose that this new Chair shall be known as "*The George Munro Chair of Physics.*" They trust that his countrymen may be influenced by an example so grandly set; and that, although few may be able to compete with him as far as the magnitude of the gift is concerned, many may be animated by his spirit. They heartily thank him for coming to their help in the work of building up a great unsectarian Educational Centre in Nova Scotia; for seeking the good of his native land by so generously providing for the quickening of its intellectual life; and for the free, unsolicited, and unostentatious manner in which he has made his contribution to what must be regarded by all as an Institution essential to the true and permanent welfare of the Maritime Provinces, and especially of the City of Halifax."

DONATIONS.

ENDOWMENT FUND.

Hon. Sir William Young.....	\$1,000	Hon. Robert Boak.....	\$1,000
W. J. Stairs	1,000	Adam Burns	500
Hon. Stayley Brown.....	1,000	Peter Jack	500
John Gibson	1,000	Hon. Jeremiah Northup.....	500
John P. Mott.....	1,000	George Lawson	500
William P. West	1,000	Alex. McLeod	500
Thos. A. Ritchie	1,000	D. C. Fraser.....	100

FOR SCIENTIFIC APPARATUS.

Hon. Sir William Young.....	\$500 00	Edward Smith.....	\$25 00
Alumni Association Dal. Coll.	150 00	Roderick McDonald	25 00
W. J. Stairs.....	100 00	W. H. Pallister	20 00
Hon. Jeremiah Northup	100 00	W. C. Moir	20 00
Thos. Bayne.....	100 00	Wm. Robertson	20 00
Alex. McLeod.....	100 00	Rev. Robert Laing.....	20 00
John McNab	100 00	Geo. J. Troop	20 00
W. P. West.....	100 00	Pickford & Black.....	5 00
Jas. F. Avery.....	100 00	W. Ross	10 00
Hon. Robert Boak.....	100 00	Jas. McLean, New Glasgow...	10 00
Hon. J. W. Ritchie	50 00	Jas. McLean, Pictou	10 00
Doull & Miller.....	50 00	J. D. B. Fraser & Son	10 00
Robt. Morrow	50 00	John Silver & Co.....	10 00
Peter Jack	50 00	John Crerar.....	10 00
John S. McLean	50 00	Lawson & Harrington	10 00
A Friend	50 00	D. Pottinger.....	10 00
Thos. A. Brown	50 00	John Pugh	10 00
James Scott.....	25 00	Donald Keith	10 00
Dan. Cronan.....	25 00	Friend	10 00
J. & R. B. Seeton	25 00	John Logan, Pictou	10 00
M. Dwyer.....	25 00	M. S. Brown & Co.....	10 00
W. H. Webb.....	20 00	Hon. S. L. Shannon	10 00
Robert Taylor	20 00	Wm. Gossip.....	10 00
Rev. Geo. W. Hill, D. C. L....	20 00	L. Mackintosh.....	5 00
James W. Carmichael	20 00	J. Kaye.....	5 00
Esson & Co.....	50 00	W. H. Newman	5 00
H. H. Fuller.....	20 00	J. Cornelius.....	5 00
James Thomson	50 00	James Farquhar	5 00
Hon. A. G. Jones	25 00	Dr. S. Dodge	8 00
Adam Burns.....	25 00	C. A. Stayner	5 00
M. H. Richey	20 00	C. F. Vose.....	2 50
A. K. Mackinlay	20 00	G. Holliday	5 00
John Gibson.....	50 00	Mahon Bros.....	5 00
Prof. Lawson	50 00		

UNIVERSITY CALENDAR, 1880-81.

WINTER SESSION.

1879.			
Oct.	4.	Mo.	Meeting of Governors.
	27.	W.	Matriculation and Scholarship Examinations. 10 A. M., Mathematics. 3 P. M., Classics and Modern Languages.
	28.	Th.	Matriculation Examinations continued. English. Supplementary Examinations, 10 A. M.
	29.	Fr.	Meeting of Senate, 10 A. M.; Matriculation, Registration and Library Tickets issued, 11 A. M.
Nov	1.	Mo.	Classes opened and Class Tickets issued. Entrance Examinations in Classical History and Geography, 3 P. M.
	2.	Tu.	Meeting of Convocation, 3 P. M.; Opening Address by Professor MacGregor.
	10.	W.	Final Matriculation and Supplementary Examinations, 3 P. M.
	11.	Th.	Meeting of Senate and of Faculty of Science, 4 P. M.
	26.	Fr.	Meeting of Senate, 4 P. M.
Dec	20.	Mo.	Meeting of Senate, 4 P. M.
	22.	W.	Christmas Vacation begins.
1880.			
Jan.	3.	Mo.	Meeting of Governors.
	5.	W.	Lectures resumed. Supplementary Examinations in Classical History and Geography, 3½ P. M.
	6.	Th.	Meeting of Senate and of Faculty of Science, 4 P. M.
	23.	Fr.	Meeting of Senate, 4 P. M.
Feb.	25.	Fr.	Meeting of Senate, 4 P. M.
March	2.	W.	Ash Wednesday. No Lectures.
	25.	Fr.	Meeting of Senate, 4 P. M.
	31.	Th.	Last day for receiving M. A. Theses.
April	4.	Mo.	Meeting of Governors.
	8.	Fr.	Last day of Lectures. Last day for returning Library Books. Meeting of Senate and of Faculty of Science, 4 P. M.
	13.	W.	Sessional Examinations begin. 10 A. M., Latin; 3 P. M., Honour Classics, Extra Latin.
	14.	Th.	10 A. M., Logic, Metaphysics, Honour Mathematics, Ethics.
	15.	Fr.	Good Friday.
	16.	Mo.	10 A. M., Geology, Botany, Zoology.
	18.	Sat.	10 A. M., Mathematics and Mathematical Physics, Hon. Classics; 3 P. M., Experimental Physics, Honour Classics.
	19.	Tu.	10 A. M., Rhetoric, Honour Classics, Honour Mathematics.
	20.	W.	" Greek; 3 P. M., Honour Classics, Extra Greek.
	21.	Th.	" Chemistry, Honour Classics, Honour Mathematics.
	22.	Fr.	" French and German, Hebrew; 3 P. M., French and German, Extra Mathematics.
	23.	Sat.	10 A. M., Practical Chemistry, Honour Classics.
	25.	Mo.	" Sir W. Young Elocution Prizes Competition. Meeting of Senate, 10 A. M.
	26.	Tu.	Meeting of Senate, 10 A. M.; Results of Examinations declared.
	27.	W.	Meeting of Convocation, 3 P. M.; Meeting of Alumni Association, 10 A. M.

SUMMER SESSION.

May	2.	Mo.	Summer Session begins. Meeting of Senate, 11 A. M.; Class Tickets issued, 12 N.
	24.	Tu.	Queen's Birthday. No Lectures.
June	21.	Tu.	Halifax settled, 1749. No Lectures.
	23.	Tu.	Examinations.
	29.	W.	" Continued.
	30.	Th.	Results declared. Session closes.
July	4.	Mo.	Meeting of Governors.

UNIVERSITY CALENDAR 1900-01

Month	Day	Event
September	1	Commencement
September	10	First Day
September	15	Registration
September	20	Classes Begin
September	25	Midterm Examinations
October	1	Classes
October	10	Midterm Examinations
October	15	Classes
October	20	Midterm Examinations
October	25	Classes
October	30	Midterm Examinations
November	1	Classes
November	10	Midterm Examinations
November	15	Classes
November	20	Midterm Examinations
November	25	Classes
November	30	Midterm Examinations
December	1	Classes
December	10	Midterm Examinations
December	15	Classes
December	20	Midterm Examinations
December	25	Classes
December	30	Midterm Examinations
January	1	Classes
January	10	Midterm Examinations
January	15	Classes
January	20	Midterm Examinations
January	25	Classes
January	30	Midterm Examinations
February	1	Classes
February	10	Midterm Examinations
February	15	Classes
February	20	Midterm Examinations
February	25	Classes
February	30	Midterm Examinations
March	1	Classes
March	10	Midterm Examinations
March	15	Classes
March	20	Midterm Examinations
March	25	Classes
March	30	Midterm Examinations
April	1	Classes
April	10	Midterm Examinations
April	15	Classes
April	20	Midterm Examinations
April	25	Classes
April	30	Midterm Examinations
May	1	Classes
May	10	Midterm Examinations
May	15	Classes
May	20	Midterm Examinations
May	25	Classes
May	30	Midterm Examinations
June	1	Classes
June	10	Midterm Examinations
June	15	Classes
June	20	Midterm Examinations
June	25	Classes
June	30	Midterm Examinations
July	1	Classes
July	10	Midterm Examinations
July	15	Classes
July	20	Midterm Examinations
July	25	Classes
July	30	Midterm Examinations
August	1	Classes
August	10	Midterm Examinations
August	15	Classes
August	20	Midterm Examinations
August	25	Classes
August	30	Midterm Examinations

Dalhousie College and University.

BOARD OF GOVERNORS.

HON. SIR WILLIAM YOUNG, Knight, Chief Justice, *Chairman*.
HON. SIR CHARLES TUPPER, K. C. M. G., C. B., M. D., M. P.
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HON. S. L. SHANNON, Q. C.
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WILLIAM J. STAIRS, Esq., Vice-Chancellor of the University of Halifax.
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PETER JACK, Esq.
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Dalhousie College and University.

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- REV. WILLIAM LYALL, LL. D., *Professor of Logic and Metaphysics, and Interim Professor of Rhetoric.*
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- JOHN JOHNSON, M. A., *Professor of Classics.*
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- PROFESSOR LIECHTI, M. A., *Tutor in Modern Languages.*

FACULTY OF SCIENCE.

- THE PROFESSORS OF THE FACULTY OF ARTS, with
JAMES LIECHTI, M. A., *Professor of Modern Languages.*
- REV. DAVID HONEYMAN, D. C. L., *Professor of Geology, Palæontology and Mineralogy.*

JOHN WILSON, *Janitor.*

REGULATIONS.

§ I.—SESSIONS.

In the Academic year there are two Sessions, a Winter and a Summer Session.

The Winter Session of 1880-81 will commence on Wednesday, October 27th, 1880, and end on Wednesday, April 7th, 1881.

The Summer Session of 1881 will commence on Monday, May 2nd, and end on June 30th.

§ II.—ADMISSION OF STUDENTS.

Students may enter the College,

1. As Undergraduates, with the intention of applying for a University Degree in Arts or Science at the end of their course; or,

2. As General Students who do not look forward to a University Degree.

The ordinary course for Undergraduates in either Arts or Science extends either over four Winter Sessions, or over three Winter Sessions with the two intervening Summer Sessions. The latter alternative is, however, contingent on arrangements to be made by the Governors. Undergraduates taking either of these courses are required to pass the Matriculation Examination for the First Year, in Arts or Science, as the case may be, (see § III.) and take the classes prescribed for their respective courses.

Students may also complete their course in three Winter Sessions without the intervening Summer Sessions, by passing the Matriculation Examination for the Second Year in Arts or Science, as the case may be, (see § III.), and taking the usual undergraduate course for the Second, Third and Fourth Years.

The Matriculation Examinations this year will begin on Oct. 27th, at 10 o'clock, A. M. Candidates are expected to bring their own writing materials, except paper.

General Students are not required to pass a Matriculation Examination, and may attend such classes as they choose.

No person can be admitted as an Undergraduate after ten days from the opening of the classes, without the special permission of the Senate.

Undergraduates from other Universities will, on producing satisfactory certificates, be admitted to similar standing in this University, if, on examination, they be found qualified to enter the classes proper to their year.

Students that have passed the Matriculation Examination at the University of Halifax, are admitted as Undergraduates without further examination, and Students that have passed the first B. A. Examination of that University, will be admitted to the standing of Undergraduates in Arts who have completed two Winter Sessions.

§ III.—MATRICULATION EXAMINATIONS.

(A) IN ARTS.

FOR THE FIRST YEAR.

The Examinations are partly oral and partly written; the subjects for entrance into the First Year of the course are:

I. IN CLASSICS.—Latin Grammar, Greek Grammar, one Latin subject, one Greek subject. The following subjects are recommended:

In Latin.—For 1880: *Cæsar*, Gallic War, Book I.; or *Virgil*, *Æneid*, Book III.

For 1881: *Cæsar*, Gallic War, Book VI.; or *Virgil*, *Æneid*, Book VI.

For 1882: *Cæsar*, Gallic War, Book VI.; or, *Ovid* *Metamorphoses*, Book I.

In Greek.—For 1880: *Xenophon*, *Anabasis*, Book I.

For 1881: *Xenophon*, *Anabasis*, Book IV.

For 1882: *Xenophon*, *Anabasis*, Book III.

Instead of the above, equivalents may be offered, if they be not parts of the Undergraduate course, on giving a week's notice to the Secretary of the Senate.

II. IN MATHEMATICS.—Arithmetic; Euclid's Elements of Geometry, Books I. and II.; Algebra, Simple Rules, and Simple Equations of one unknown quantity, not involving Surds.

III. IN ENGLISH.—Grammar; History of England; Geography; Composition.

For regulations as to Professors' Scholarships see § X.

FOR THE SECOND YEAR.

I. IN CLASSICS.—The subjects of the Matriculation Examination for the First Year and the subject of the first year course as specified in § XIV. or their equivalents.

II. IN MATHEMATICS.—The subjects of the First Year course as specified in § XIV.

- III. IN ENGLISH.—The subjects of the Matriculation Examination for the First Year.
- IV. IN ROMAN HISTORY AND ANCIENT GEOGRAPHY.—As specified in § IV and XIV.

(B) IN SCIENCE.

FOR THE FIRST YEAR.

- I. IN MATHEMATICS.—The subjects of the Matriculation for the First Year in Arts.
- II. IN ENGLISH.—The subjects of the Matriculation Examination for the First Year in Arts.
- III. IN LATIN OR GERMAN OR FRENCH:—
Latin.—The subjects of the Matriculation Examination for the First Year in Arts.
German.—Grammar and Translation.
French.—Grammar and Translation.

For Regulations as to Professors' Scholarship, see § X.

FOR THE SECOND YEAR.

- I. IN MATHEMATICS.—The subject of the First Year course as specified in § XIV.
- II. IN ENGLISH.—The subjects of the Matriculation Examination for the First Year.
- III. IN LATIN OR GERMAN:—
Latin.—The subjects required for Matriculation in the Second Year of the Arts Course.
German.—The subjects of the First Winter's course, or their equivalents.
- IV. IN INORGANIC CHEMISTRY.—The subject of the First Year course.

§ IV.—COURSES FOR DEGREE OF B. A.

COURSE OF FOUR WINTER SESSIONS.

- First Year.*—(1) Latin. (2) Greek. (3) Mathematics.
 (4) English Language and Rhetoric.
Second Year.—(1) Latin. (2) Greek. (3) Mathematics.
 (4) Inorganic Chemistry. (5) Logic and Psychology.

Undergraduates of the Second Year are required to pass an Examination in Roman History and Ancient Geography, on the first Monday of the Winter Session. (See § XIV.)

Third Year.—(1) Latin. (2) Mathematical Physics. (3) Experimental Physics. (4) Metaphysics. (5) Any two of the following: French, German, Greek.

Undergraduates of the Third Year are required to pass an Examination in Grecian History and Ancient Geography on the first Monday of the Winter Session, (see § XIV.)

Fourth Year.—(1) Latin. (2) Ethics and Political Economy. (3) Any two of the following: French, German, Greek. (5) Optics and Astronomy.

An Undergraduate in Arts must take the same two of the following subjects: Greek, French, German, during both the Third and Fourth Years of his course.

COURSE OF THREE WINTER SESSIONS AND TWO SUMMER SESSIONS.

First Winter.—(1) Latin. (2) Greek. (3) Mathematics. (4) English Language and Rhetoric.

First Summer.—(1) Latin and Greek, or Mathematics.* (2) French or German.† (3) English Literature.

Second Winter.—(1) Latin. (2) Greek. (3) Mathematics. (4) Inorganic Chemistry. (5) Logic and Psychology.

Second Summer.—(1) Optics and Astronomy, or Latin and Greek.* (2) French or German.† (3) Ethics and Political Economy.

Third Winter.—(1) Latin. (2) Metaphysics. (3) Mathematical Physics. (4) Experimental Physics. (5) Any two of the following: French, German, Greek.

§ V.—B. A. HONOUR COURSES.

Honour Courses are intended for Undergraduates whose tastes and ability lead them to prosecute special subjects of the Curriculum, and remissions of classes are granted to those studying such courses.

Honour Courses are provided in the following‡ departments: (1) Classics. (2) Mathematics and Physics. (3) Mental and Moral Philosophy, and Political Economy. Instruction of an advanced kind is provided in these subjects during the third and fourth winters of the Curriculum.

Examinations in these courses are held at the final Examinations for the Degree of B. A.; and a Student passing First or Second Class in any of the above departments obtains the Degree of B. A., with First or Second Rank Honours in such department. But First Rank Honours shall not be awarded to any one who has not passed First Class in the corresponding subjects of the Ordinary Course of the Fourth Year; nor Second Rank Honours to one who has not passed Second Class in the Ordinary Course.

Students studying for Honours must attend the Honour Lectures of their respective courses, and their progress must be

* The Student must take that subject of these two on which lectures are being given.

† The Student may take whichever modern language he pleases, but he must take the same language during both Summers.

‡ For details of subjects see § XV.

satisfactory to their Professors. Students who intend to take the Honour Course in *Mental and Moral Philosophy* must give notice of their intention to the Secretary of Senate before the close of the Lectures of their Third Year.

No Student will be allowed to enter on an Honour Course who has not stood in the First or Second Class at the previous Examination in the corresponding part of the Ordinary Course.

A Student taking an Honour Course, but failing to obtain Honours, will receive the Ordinary Degree, if his Examination in the course be approved.

An Undergraduate of the Third Year, studying for Honours *In Classics*, may omit Mathematical Physics.

In Mathematics and Physics, may omit Latin.

In Mental and Moral Philosophy and Political Economy, may omit Mathematical Physics.

An Undergraduate of the Fourth Year, studying for Honours *In Classics*, may omit Optics and Astronomy.

In Mathematics and Physics, may omit Latin.

In Mental and Moral Philosophy and Political Economy, may omit Optics and Astronomy.

§ VI.—COURSES FOR DEGREE OF B. Sc.

COURSE OF FOUR WINTER SESSIONS.

First Year.—(1) Mathematics. (2) Inorganic Chemistry. (3) Rhetoric. (4) Latin or German.

Second Year.—(1) Mathematics. (2) Zoology. (3) Organic Chemistry. (4) Latin or German. (5) French. (6) Either (A) Extra Mathematics and Chemical Laboratory or (B) Chemical Laboratory (more extended course).

Third Year.—(1) Logic. (2) Latin. (3) French. (4) Geology. (5) Mathematical Physics. (6) Either (A) Mathematics or (B) Chemical Laboratory.

Fourth Year.—(1) Latin or German. (2) French. (3) Experimental Physics. (4) Geology. (5) Either (A) Mathematics and Optics and Astronomy or (B) Organic Chemistry and Chemical Laboratory.

Whichever group (A) or (B) a Student enter on, he must continue it to the end of his course.

If German be taken the first year, it must be taken throughout the course; but Latin may be taken the first two years, and German the last two, according to the option of the Student.

COURSE OF THREE WINTER SESSIONS AND TWO SUMMER SESSIONS.

First Winter.—(1) Mathematics. (2) Inorganic Chemistry. (3) Rhetoric. (4) Latin or German.†

† If German be taken the first winter session, it must be taken throughout the course; if Latin, German may be substituted for it the third winter session.

First Summer.—(1) Mathematics or Logic.* (2) Botany. (3) German. (4) Histological Laboratory.

Second Winter.—(1) Mathematics. (2) Zoology. (3) Organic Chemistry. (4) Latin or German.† (5) French. (6) Either ‡ (A) Extra Mathematics and Chemical Laboratory or (B) Chemical Laboratory (extended) or (C) Geology and Chemical Laboratory.

Second Summer.—(1) Logic or Ethics and Political Economy.* (2) German. (3) French. (4) Either (A) Optics and Astronomy or (B) Chemical Laboratory and Biology, (Field and Laboratory work) or (C) Geology and Biology, (Field, Museum and Laboratory work).

Third Winter.—(1) Latin or German.† (2) French. (3) Mathematical Physics. (4) Experimental Physics. (5) Either (A) Mathematics and Additional Mathematical Physics or (B) Organic Chemistry and Chemical Laboratory or (C) Geology and Biological Laboratory.

§ VII.—FEES.

The class fee to each Professor or Lecturer is *six dollars* for the Winter Session, and *three dollars* for the Summer Session.

An Undergraduate in Arts pays only one fee during the Winter Sessions of his course to the Professors of Logic and of Physics, and to the Tutor in Modern Languages.

An Undergraduate in Arts who has completed two years of his course may attend the Classics during the remaining Winter Sessions of his Undergraduate course without the payment of additional fees.

An Undergraduate in either Arts or Science who has completed two years of his course may attend the Mathematics during the remainder of his course without the payment of additional fees.

An Undergraduate in Science pays during the Winter Sessions of his course only one class fee to the Professor of Physics, and only two class fees to the Professors of Chemistry, Biological Science, Latin and Modern Languages. The Chemical Laboratory fee is not regarded as a class fee, but must be paid every quarter as long as a Student attends.

Practical Chemistry or Chemical Laboratory work, three months course, fee *six dollars*. Students taking this class are required to provide their own materials, which, if they wish, will be supplied to them at first cost. The use of the larger articles of apparatus will be given in the Laboratory free of expense, and Students will be charged with breakage.

* The Student must take that subject on which lectures are being given.

‡ The Student must choose groups of the same marking (either A or B or C) throughout his course.

General Students pay a fee for every class they attend, and Undergraduates taking classes in addition to the prescribed Curriculum pay additional fees.

In addition to the Class Fee, there is a Matriculation Fee of *two dollars*, payable by Undergraduates at their first entrance. General Students pay a Sessional Registration Fee of *one dollar*.

Both Undergraduates and General Students are also required, at the beginning of each Winter Session, to pay a Library Fee of *one dollar*, which entitles to the use of the Library for the Session.

Matriculation or Registration Tickets, and Class Tickets, must be taken out on the first day of Lectures, no Students being allowed to attend a class without them.

The total fees of Undergraduates, who take the course of four Winter Sessions in Arts, are as follows:—

Classes of First Winter, with Library and Matriculation Fees.....	\$21.00
“ Second “ with Library Fee.....	25.00
“ Third “ “ “ “	13.00
“ Fourth “ “ “ “	13.00

The total fees of Undergraduates in Arts, who take the course of three Winter Sessions, and the intervening Summer Sessions, are as follows.

Classes of First Winter, with Library and Matriculation Fees.....	\$21.00
“ “ Summer, with Library Fee	10.00
“ Second Winter, “ “ “	25.00
“ “ Summer, “ “ “	10.00
“ Third Winter, “ “ “	13.00

The total fees of Undergraduates in Science, who take the course of four Winter Sessions, are as follows:—

Classes of First Winter, with Matriculation and Library Fees.....	\$27.00
“ Second Winter, with Library Fee, according to selection of classes.....	\$31.00 or 25.00
“ Third Winter, with Library Fee, according to selection of classes.....	\$19.00 or 25.00
“ Fourth Winter, with Library Fee, according to selection of classes.....	\$13.00 or 7.00

The total fees of Undergraduates in Science, who take the course of three Winter and two Summer Sessions, are as follows:—

Classes of First Winter, with Library and Matriculation Fees.....	\$27.00
“ “ Summer, with Library Fee	13.00
“ Second Winter, “ “ “	\$37.00, \$31.00 or 25.00
“ “ Summer, “ “ “	\$13.00 or 10.00
“ Third Winter “ “ “	\$7.00, \$13.00 or 19.00

§ VIII.—GRADUATION.

DEGREE OF B. A.

The Degree of B. A. may be obtained by passing the proper Matriculation Examination, attending the prescribed courses of Lectures, and passing the Sessional Examinations of the several

years. Undergraduates have also to pass the Entrance Examination of the Second and Third Years, as mentioned in § IV.

The fee for Diploma, payable before the Final Sessional Examination, is *five dollars*. Fee returned in case of failure at the Examination.

DEGREE OF M. A.

A Bachelor of Arts, of at least three years standing, maintaining meanwhile a good reputation, shall be entitled to the Degree of M. A., on producing an approved Thesis on some literary, philosophical or scientific subject.

Fee for Diploma, which must accompany the Thesis, *twenty dollars*. Thesis to be handed in on or before the 31st March.

DEGREE OF B. SC.

The Degree of B. Sc. may be obtained by passing the proper Matriculation Examination, attending the prescribed courses of Lectures, and passing the Sessional Examinations of the several years.

The fee for the Diploma, payable before the final Sessional Examination, is *five dollars*. The fee is returned in case of failure at the Examination.

§ IX.—REGULATIONS FOR EXAMINATIONS.

1. If any Undergraduate absent himself from any University Examination, except from such cause as may be held good by the Senate, he will lose his Session.

2. If any Undergraduate fail to pass in any subject at the Sessional Examinations, he will be allowed a Supplementary Examination on the first Thursday of the following Winter Session, or of a subsequent Winter Session, on giving notice to the Secretary of the Senate at or before the opening of such Session; but failure in more than two subjects will involve the loss of the Session.

3. In the case of a Student having to take a Session over again, the Senate may remit attendance on classes the examinations of which he has already passed with credit.

4. An Undergraduate who, at the end of the first year of the Four Years course, fails in more than two subjects will not be disqualified by Rule 2 from presenting himself for Matriculation into the Three Winters Course, provided he give a week's notice to the Secretary of the Senate before the opening of the Winter Session.

5. In all cases, a Student who presents himself for Supplementary Examination on any day except that specified in the rule, will be required to pay an extra fee of *two dollars*.

6. Undergraduates in Arts of the Second and Third Years who fail to present themselves for the Entrance Examinations in Ancient History and Geography on the first Monday of the Winter Session, may, on payment of a fine of *two dollars*, and on giving notice to the Secretary of the Senate at or immediately after the opening of the Winter Session, have another day appointed them for such Examinations.

7. Students are forbidden to bring any book or manuscript into the Examination Hall, unless by direction of the Examiner, or to give or receive assistance, or to hold any communication at the Examinations. If a Student violate this rule he will lose his Sessional Examinations for the year; and it shall be at the discretion of the Senate whether he be allowed Supplementary Examinations.

8. Students who pass the Examinations in the several subjects of the respective years are arranged in three classes, First Class, Second Class and Passed, according to the merit of their answers in these subjects.

9. An Undergraduate who has completed the first Session of his course in either Arts or Science may change his course to Science or Arts respectively, and maintain his standing by taking such additional subjects as may be prescribed by the Senate.

§ X.—PROFESSORS' SCHOLARSHIPS.

Two Scholarships, entitling to free attendance on all the Classes of the Undergraduate Courses in Arts, as long as the holders obtain a Certificate of Merit at the Sessional Examination, are offered by the Professors for competition this year; the competition to take place at the Matriculation Examination.

The subjects of Examinations for these Scholarships are nearly the same as those for Matriculation in Arts at the University of Halifax, viz:—

Latin for 1880: *Cæsar*, Gallic War, Book I.; *Virgil*, *Æneid*, Book III.

1881: *Cæsar*, Gallic War, Book VI.; *Virgil*, *Æneid*, Book VI.

1882: *Cæsar*, Gallic War, Book VI.; *Ovid*, *Metamorphoses*, Book I.

Greek for 1880: *Xenophon*, *Anabasis*, Book I.

1881: *Xenophon*, *Anabasis*, Book IV.

1882: *Xenophon*, *Anabasis*, Book III.

Arithmetic: the ordinary rules of Arithmetic, Vulgar and Decimal Fractions, Proportion and Interest.

Algebra: as far as Simple Equations and Surds.

Geometry: First and Second Books of Euclid.

English: Grammar, Analysis, Outlines of English and Canadian History, and General Geography.

One Scholarship entitling to free attendance on all the classes of the Undergraduate courses in Science, so long as the holder obtains a certificate of merit at the Sessional Examinations, is offered by the Professors this year for competition at the Matriculation Examination.

The subjects of Examination for this Scholarship are the same as those of the Matriculation Examination in Science.

§ XI.—PRIZES AND CERTIFICATES OF MERIT.

(The Senate reserves to itself the right of withholding Prizes, Scholarships, &c., unless sufficient merit be shewn.)

THE UNIVERSITY PRIZES.

These Prizes will be awarded to those Students who stand first in the several subjects at the Sessional Examinations.

No Student will be allowed to hold a Prize more than once in the same class.

THE ST. ANDREW'S PRIZE.

This Prize will be awarded this year to the Undergraduate who shall stand first in Classics at the Sessional Examinations of the Second Year, the winner of Bursary being excluded.

SIR W. YOUNG PRIZES.

Two Elocution Prizes of \$20 and \$10 respectively, are this year offered by the HON. SIR WILLIAM YOUNG, Kt., Chief Justice of Nova Scotia, and are open for competition to all Students. These Prizes will be competed for at the close of the Winter Session. A Student to whom one of these Prizes has been awarded is disqualified for subsequent competition.

NORTH BRITISH SOCIETY BURSARY.

A Bursary, of the annual value of \$60, has been founded in connection with Dalhousie College by the North British Society of Halifax, to be competed for at the Sessional Examinations of the Second Year's Course in Arts, and held by the successful competitor for two years, namely, during the Third and Fourth Years of his Undergraduate Course in Arts. Candidates must be Undergraduates who have completed two years of the Curriculum, and must be eligible, at the proper age, to be Members of the North British Society. The next competition will take place in April, 1882, at the Sessional Examinations. In awarding this Bursary, Classics, Mathematics, and Chemistry will be reckoned each 150; Logic, 100.

THE WAVERLEY BURSARY.

This Bursary, of the value of \$60 annually for two years, has been founded by an unknown benefactor, whose object in so doing is to encourage the studies of the Arts Curriculum, especially Mathematics. It alternates with the North British Society Bursary. The next competition will be at the Sessional

Examinations of the Second Year in Arts in April, 1881 ; when the Bursary will be awarded to the Student who shall stand highest at the Examinations. The scale of reckoning will be Mathematics, 200 ; Classics, Chemistry, each 150 ; Logic, 100.

THE DR. AVERY PRIZE.

A Prize of the value of \$25 is offered by Dr. Avery for competition to the Students of the Fourth Year, who are not studying for Honours. It will be awarded to the Student who stands highest at the Sessional Examinations.

GOVERNOR-GENERAL'S MEDALS.

His Excellency the Marquis of Lorne, Governor-General of Canada, has been pleased to intimate his intention to throw open for competition, to all the Universities of the Dominion, the Gold and Silver Medals, which he has hitherto presented to individual Universities. These, it is understood, will be awarded for excellence in specified departments of study. The subjects and conditions of competition will be announced as soon as they shall be communicated to the Senate.

CERTIFICATES OF MERIT.

Certificates of Merit of the First or Second Rank will be given to Undergraduates who have respectively obtained a First or Second Class standing in the aggregate of the branches of study proper to their year.

§ XII.—ATTENDANCE AND CONDUCT.

1. All Undergraduates, and General Students attending more classes than one, are required to provide themselves with cap and gown, and wear them in going to and from College. Gowns are to be worn at Lectures, and at all meetings of the University.

2. Attendance upon all classes of the year, except those announced as optional, shall be imperative on all Undergraduates.

3. A Class Book will be kept by each Professor, in which the presence or absence of Students will be carefully noted.

4. Professors will mark the presence or absence of Students immediately before commencing the work of the class, and will note as absent those who enter thereafter, unless satisfactory reasons be assigned.

5. Absence without sufficient excuse, or lateness, or inattention, or disorder in the Class Room, if persisted in after due admonition by the Professor, will be reported to the Senate.

6. The amount of absence which shall disqualify for the keeping of a Session will be determined by the Senate.

7. Injuries to the building or furniture will be repaired at the expense of the person or persons by whom they have been caused, and such other penalty will be imposed as the Senate may think proper.

8. While in the College, or going to and from it, Students must conduct themselves in an orderly manner. Any Professor observing any improper conduct in a Student will admonish him, and, if necessary, report to the Principal.

9. When a Student is brought before the Senate and convicted of a violation of any of these rules, the Senate may reprimand privately, or in the presence of the Students, or report to the parents or guardians, or disqualify for competing for Prizes, or for holding Certificates of Merit, or report to the Governors for suspension or expulsion.

10. Students not residing with parents or guardians must report to the Principal their places of residence within one week after their entering College, and the Principal may disallow such residence if he see good cause. Any change of residence must also be reported.

11. It is expected that every Student will attend Divine Worship regularly, in one of the city churches or chapels.

§ XIII.—THE LIBRARY.

The Library consists of a careful selection of the most useful books in each department of study embraced in the University course. There are likewise a few works in general literature. The Library embraces in all upwards of 2000 volumes. All Students are entitled to the use of the Books, on payment of the sessional fee of *one dollar*.

§ XIV.—ORDINARY COURSES OF LECTURES.

CLASSICS.

LATIN.

FIRST YEAR'S CLASS.

Cicero : First Philippic.

* Fourth Oration against Catiline.

Virgil : The Eclogues.

Composition : Principia Latina, Part IV, (First half.)

SECOND YEAR'S CLASS.

Cicero, Pro Milone.

Horace : Odes, Book I. ; * Book III.

Composition : Principia Latina, Part IV, (Second half.)

* Students seeking a First or Second Class at the Sessional Examinations, are examined in this additional work, which is not read in class. Such Students are also required to show special accuracy in Grammar.

THIRD AND FOURTH YEAR'S CLASS.

* Horace: Satires, Book I.; 1, 3, 4, 5, 6, 9; Book II., 4, 6, 7, 8.
 Tacitus: Annals: Book I.
 Composition: Principia Latina, Part V.
 Philology: Text Book, Peile's Primer.

GREEK.

FIRST YEAR'S CLASS.

Xenophon: Cyropædia, Book I.; † Book IV, Chaps, 1-4.
 Grammar: Hadley's.

SECOND YEAR'S CLASS.

Xenophon: Memorabilia, Book I, Chaps. 1-2.
 Homer: Iliad, Book IX.
 Herodotus: Book I, secs. 95-130.
 Composition: Initia Græca, Part III.

THIRD AND FOURTH YEAR'S CLASS.

Demosthenes: Olynthiacs.
 Sophocles: Antigone.
 Composition: Initia Græca, Part III.

CLASSICAL HISTORY AND GEOGRAPHY.

SECOND YEAR.—History of Rome, to B. C. 31, Geography of Italia, Sicilia, Gallia, Hispania.

THIRD YEAR.—History of Greece to the death of Alexander. Geography of Græcia, Africa, Asia.
 Books recommended: Liddell's Student's History of Rome; Smith's Student's or Cox's History of Greece; Pillans' Classical Geography, or Tozer's Primer.

MATHEMATICS.

FIRST YEAR.

ARITHMETIC.—Revision of the Theory of Proportion, Vulgar and Decimal Fractions.

ALGEBRA.—Common Measure, Involution, Evolution, the Arithmetical Extraction of Roots, Fractions, Equations of the First and Second Degree, Proportion, Inequalities, Variation, Progressions, Indeterminate Equations.

GEOMETRY.—First and Second Books of Euclid revised; Third and Fourth Books; Definitions of Fifth, and Sixth Book to the Twentieth Proposition, with Geometrical Exercises and Practical applications.

PLANE TRIGONOMETRY.—Solution of Plane Triangles.

SECOND YEAR.

GEOMETRY.—Sixth Book of Euclid finished. Geometrical Exercises continued; Geometrical Drawing.

PLANE TRIGONOMETRY.—Circular and Gradual Measure; Functions of sum and difference of Angles, &c.; Relations of the sides and angles of

* A passage taken from a work not previously named, will be set for translation to Students seeking a First or Second Class in these years.

† The Examinations in these subjects will be held at the beginning of the Winter Session. (See § IV.)

triangles; Mensuration of Heights and Distances; Elementary Problems in Navigation; Use of Logarithms.

SPHERICAL TRIGONOMETRY.—As far as the solution of Right Angled Triangles.

ALGEBRA.—Propositions in Theory of Equations; Binomial Theorem; Properties of Logarithms; Compound Interest; Annuities.

EXTRA.

GEOMETRY.—21 Propositions of the Eleventh Book of Euclid; Geometrical Exercises.

TRIGONOMETRY.—Extension of Ordinary Course.

ALGEBRA.—Permutations, Combinations, Probabilities, Life Assurance, Investigation of Binomial Theorem and Theory of Logarithms; Indeterminate Co-efficients, with application to Expansions and Series.

Books recommended: For First Year: Hamblin Smith's (Miller & Co.) Elements of Geometry, or Colenso's or Todhunter's; Colenso's or H. Smith's Algebra. For Second Year: Colenso's Algebra, 2nd part; Colenso's Trigonometry, 1st part; Todhunter's Spherical Trigonometry; or Hann's Trigonometry, (Weale's Series); Chambers' Logarithmic, &c., Tables.

PHYSICS.

MATHEMATICAL PHYSICS.

Velocity, Acceleration, Projectiles, Harmonics, Motion, Rotation, Force, Momentum, Impulse, Energy, Composition of Forces, Centrifugal Force, Pendulum, Centre of Mass, D'Alembert's Principle, Moments of Force, Moments of Inertia, Parallel Forces, Centers of Inertia and Gravity, Couples Degrees of Freedom, Conditions of Equilibrium, Simple Machines, Friction, Impact.

Text Book: Wormell's Principles of Dynamics. For First class a special examination will be held in Maxwell's Matter and Motion.

EXPERIMENTAL PHYSICS.

Properties of Solids, Liquids and Gases, The Law of the Conservation of Energy, Heat, Electricity and Magnetism, Light and Radiant Heat, Sound.

Text book: Balfour Stewart's Lessons in Elementary Physics. For First class a special examination will be held in parts of Maxwell's Theory of Heat, and Jenkin's Electricity and Magnetism.

GEOMETRICAL OPTICS AND ASTRONOMY.

(FOR FOURTH YEAR STUDENTS.)

Text books: Osmund Airy's Geometrical Optics and Galbraith and Haughton's Manual of Astronomy.

ETHICS.

(*Fourth Year.*)—Text Books: Stewart's Active and Moral Powers of Man. Whewell's Elements of Morality.

POLITICAL ECONOMY.

(*Fourth Year.*)—Text Books: Mill's Political Economy. Senior's Political Economy.

LOGIC AND PSYCHOLOGY.

(*Second Year.*)—Text Books: Sir William Hamilton's Lectures on Logic. Prof. Lyall's "Intellect, the Emotions, and the Moral Nature."

METAPHYSICS AND ÆSTHETICS.

(*Third Year.*)—Text Books: Sir William Hamilton's Lectures on Metaphysics. Mansel's Metaphysics. Lewes' Biographical History of Philosophy. Cousin on The Beautiful. Allison's Essays on the Nature and Principles of Taste.

CHEMISTRY.

INORGANIC.—(*Second Year of Arts Course.*)

General Principles: Chemical Affinity; Combination; Mixture; Solution; Suspension; Laws of Combination, by weight, by volume; Equivalent Numbers; Atomic Numbers; Atomic Theory; Nomenclature; Notation; Formulæ; Equations; Elements and their modes of occurrence in nature, their preparation, their compounds, important Chemical Processes, natural and artificial, and manufactures, to which they are related; the Metals, their general characters, classification, occurrence in nature; metallurgical processes, Alloys; description of all the important Metals, their Salts and other compounds, and of chemical processes and manufactures connected with them, modes of testing, etc.

Class Book: Greene's Edition of Wurtz's Elements of Chemistry, or Fowne's Manual of Chemistry, or Roscoe.

ORGANIC CHEMISTRY—Principles of Classification. Organic Series. Comparison of the principal series of the Fatty Group, viz: Paraffines and Olefines; Monatomic, Diatomic, Triatomic and Hexatomic Alcohols and Ethers; Monatomic, Diatomic and Tetraatomic Acids; Aldehydes, Cyanogen. Comparison of Amines, Diamines, Triamines, Artificial Bases, Alkaloids, Phosphines, Stibines, Arsines, Amides (including Urea and its derivatives), Uric Acid, Colouring Matters. Outline of Animal Chemistry—Tissues, Blood, Milk, Urine; Respiration, Digestion, Nutrition.

LABORATORY PRACTICE.

Preparation and Examination of Gases, Liquids, and Solids, chiefly the Metalloids and their combinations with each other. Collection of Gases. Use of Pneumatic Trough. Fitting up of Glass Apparatus. Analysis and Synthesis of Water and Air. Illustration of meaning of Terms: *Base, Acid, Salt, Neutralization, Combustion, Solubility, Affinity, &c.* Illustrations of processes of *Crystallization, Distillation, Oxidation, &c.* Systematic Analysis (commenced).

Flame Reactions. Use of Spectroscope.

Text-Books: Laboratory Practice and Qualitative Analysis, by Thorpe and Muir.

The Class meets three times a week.

QUALITATIVE CHEMICAL ANALYSIS.

Systematic Qualitative Analysis. Detection of Bases and Acids, separate and in mixtures.

Will's Tables of Chemical Analysis.

Thorpe's Qualitative Analysis.

QUANTITATIVE CHEMICAL ANALYSIS.

The Laboratory will be open daily (except Saturday) from 9 A. M. to 1 P. M., for work in this Department. There is a Reference Library in the Balance Room for the use of Students.

Undergraduates in Science are required to attend three days a week, for at least two hours each day.

Laboratory Book: Thorpe, Quantitative Analysis.

RHETORIC.

FIRST YEAR.

The Course includes Style, Invention, Method, the General Departments of Literature, Narration, Description, Exposition, Oratory, Debate. Exercises in English Composition, daily.

Essays on Stated Subjects, weekly.

Text Book: DeMill's Elements of Rhetoric.

Books recommended: Quintilian's Institutes of Oratory, Whately's Elements of Rhetoric, Campbell's Philosophy of Rhetoric.

ELOCUTION.

FIRST YEAR.

Exercises every week, after Christmas Holidays.

Books recommended: Porter's Analysis of the Principles of Rhetorical Delivery. Russell's Elocution. Sargent's Standard Speaker. Lewis, How to Read. Nova Scotia Readers, No. 6 and No. 7.

ENGLISH LANGUAGE.

FIRST YEAR.

ANGLO-SAXON.—Text Books: Comparative Grammar of the Anglo-Saxon Languages, F. A. Marsh, LL.D. Anglo-Saxon Reader, F. A. Marsh, LL.D.

EARLY ENGLISH.—Text Book: Specimens of Early English, by R. A. Morris, LL.D., and W. W. Skeat, M. A., Part Second.

Books recommended: Earle's Philology of the English Tongue. Smith's Student's English Language.

ENGLISH LITERATURE.

FIRST YEAR.

Text Books: Shakespeare, Hamlet, Macaulay, Essay on Sir Wm Temple.

ENGLISH GRAMMAR.

FIRST YEAR.

Text Books: Mætzner's English Grammar. Angus's Handbook.

MODERN LANGUAGES.

FRENCH.—(*Third Year.*)—Pujol's Grammar, (first part).—Scribe's Diplome, and Moliere's Bourgeois Gentilhomme.

Translation; Charles Lamb's "Tales from Shakespeare." Dictation and Parsing.

GERMAN.—(*Third Year.*)—Otto's German Conversation Grammar.—Adler's Reader (4th and 6th parts).—Lessing's Nathan der Weise," "Hermann und Dorothea "

Translations from English writers. A written Composition every fortnight.

BIOLOGICAL SCIENCE (Botany, Zoology, Histology.)

Botany.—Morphology of the Cell, of the Tissues, and of the External Conformation of Plants. Special Morphology of Thallophytes, Characæ,

Muscinæ, Muscular forces in the Plant, Aggregation of Organized Structures, Movements of Water and Gases. Chemical Processes, Constituents of Plant Food, Assimilation, Respiration. Influence of Temperature, Light, Electricity, Gravitation. Mechanical Laws of Growth, Tension, Pressure, Friction. Periodicity of Growth, Periodic Movements, Reproduction. Hybridization. Origin of Species. Origin of Varieties. The Theory of Descent. Classification, including a Description of the Principal Natural Orders of American Plants. Geographical Botany. Outline of Vegetable Palæontology.

Zoology.—Difference between Animals and Plants, in general structure, functions, and chemical constitution. Minute Structure of Animal Tissues. Characters by which the following groups of animals are distinguished from each other: Brachyopoda, Polyzoa, Tunicata. Mammalia, Aves, Reptilia, Amphibia, Pisces, Cephalopoda, Gasteropoda, Pteropoda, Lamellibranchiata. Insecta, Myriapoda, Arachnida, Crustacea, Annelida. Vermes, Rotifera. Echinodermata, Anthozoa, Hydrozoa, Infusoria. Embryology of the five groups of Vertebrata. Movements of the more common Food Fishes, in relation to Depth, Temperature, Food, Reproduction.

Histology.—Instruction will be given in the general use of the Microscope, the preparation and mounting of Vegetable and Animal Tissues, and the Microscopical Observation of Vital phenomena in living plants and the lower forms of animals.

On Saturdays during favorable weather there will be Field Excursions for collecting Botanical and Zoological Specimens, and Demonstrations will likewise be given in the Public Gardens and the Provincial Museum.

GEOLOGY.

FIRST WINTER TERM: (*Historical Geology.*)—Text Book: Dana's Text Book (*last edition*).

SUMMER TERM: (*Practical Geology and Mineralogy.*)—In the Field and Museum.

SECOND WINTER TERM: (*Petrography, Stratigraphy, Dynamics, Physiography, Paleontology.*)—Lecture Notes.

§ XV.—HONOUR COURSES.

I.—CLASSICS.

LATIN.—Plautus: Trinummus.

Terence: Heautontimorumenos.

Virgil: Georgics, Books I, IV.

Horace: Epistles, Books I, II., Ars Poetica.

Juvenal: Satires, VII., VIII., XIV.

Cicero: De Oratore, Books I, II.

Tacitus: Germania, Agricola.

GREEK.—Æschylus: Agamemnon.

Sophocles: Œdipus Coloneus.

Homer: Odyssey, Books V.—VIII.

Thucydides: Book VII.

Plato: Phædo.

Demosthenes: De Corona.

COMPOSITION.—Latin Prose.

PHILOLOGY.—Müller's Science of Language, Vol. I., Chaps. 1—7.

Peile's Introduction to Greek and Latin Etymology.
Class Lectures.

LITERATURE.—Müller and Donaldson's History of Ancient Greek Literature (the portions bearing on the authors and subjects of the course); Roman Classical Literature (Brown's), Selected chapters; Theatres of the Greeks (Donaldson), Selected portions.

II.—MATHEMATICS AND PHYSICS.

MATHEMATICS.

TRIGONOMETRY.—DeMoivre's Theorem and Angular Analysis. Theory of Equations, with Horner's Method of Solution, and Sturm's Theorem.

ANALYTICAL GEOMETRY.—The Straight Line, the Circle, Parabola, Ellipse, Hyperbola. The Locus of the General Equation of the Second Degree between two Variables.

DIFFERENTIAL CALCULUS.—Differentiation: Theorems of Leibnitz, Maclaurin, and Taylor; Maxima and Minima of functions of one Variable; Expansion of function of two Variables; Maxima and Minima of such Functions; Radius of Curvature, Osculating Circle; Envelopes; the tracing of Curves by means of their Equations.

INTEGRAL CALCULUS.—Integration of Simple Forms; Integration by Parts, and Formulæ or Reduction. Integration by Substitution, &c. Applications to determine Lengths of Curves, Surfaces, Volumes, &c.; Differential Equations, (selected course,) Application to Physical Investigation: *e. g.*, Centre of Gravity, Attraction, Central Forces, &c.

BOOKS RECOMMENDED—(In order of preference).

Todhunter's Spherical Trigonometry.

Todhunter's Plane Trigonometry, or Colenso's (2nd part).

Todhunter's, Puckle's, or Salmon's Conic Sections.

Hall's, Hind's, or Todhunter's Differential and Integral Calculus.

Todhunter's or Young's Theory of Equations.

Boole's Differential Equations.

PHYSICS.

Selected chapters in Kinematics, Dynamics of a Particle and a Rigid Body (including Statics and Kinetics), Hydrodynamics, Thermodynamics, Electrodynamics and Optics.

No one text book can be recommended; but advice will be given by the Professor during the course of lectures as to the books which should be consulted.

III.—MENTAL AND MORAL PHILOSOPHY.

LOGIC.

Sir William Hamilton's Lectures on Logic. Whateley's Logic, Books II., III., IV. Mills' Logic, I., II. Bacon's Novum Organum.

METAPHYSICS AND ÆSTHETICS.

Descartes's Principles of Philosophy. Reid's Essays, VI. Sir William Hamilton's Lectures on Metaphysics. Sir William Hamilton's Philosophy of Perception and Philosophy of the Unconditioned. Leves' Biographical History of Philosophy. Cousin's Philosophy of the Beautiful. Allison's Essays on the Principles of Taste. Burke on the Sublime and Beautiful.

ETHICS.

Mackintosh's Dissertation on the Progress of Ethical Philosophy.

Butler's Sermons on Human Nature, with the Preface and the Dissertation on the Nature of Virtue.

Smith's Theory of Moral Sentiments.

Thomson's Christian Theism.

Aristotle's Ethics, Book I., III., VI., X. (in English).

TIME TABLE - WINTER SESSION, 1880-81.

HOURS.	FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
9-10 A. M.	Inorganic Chemistry daily till February.	Inorganic Chemistry daily till February.	Hon. Classics () French (Science) (Tu. Th.) German (Science) (M. W. F.)	Hon. Classics () French (Arts) (Tu. Th.) German (Sci) (M. W. F.)
10-11 A. M.	Latin (M. W. F.) Greek (Tu. Th.)	Mathematics (daily). Organic Chemistry (Science).		Optics & Astr'nmy (M. W. F.) Hon. Physics (Tu. & Th.) Organic Chemistry (Tu. Th.)
11-12 N.	Mathematics (daily)	Latin (M. W. F.) Greek (Tu. Th.)	Math. Physics (Tu. Th.) Exp. Physics, (M. W. F.)	Ethics (daily). Exp. Physics (M. W. F.)
12-1 P. M.	Rhetoric (daily.)	Extra Mathematics () Zoology	Latin (M. W. F.) Greek (Tu. Th.)	Latin (M. W. F.) Greek (Tu. Th.)
1-2 P. M.			Hon. Mathematics.	Hon. Mathematics.
2-4 P. M.		Logic (M. W. F.) German (Science) (M. W. F.)	Metaphysics (Tu. Th.) Logic (M. W. F.)	German (Arts) (M. W. F.) French (Science) (Tu. Th.)
3-4 P. M.	German (Science) (M. W. F.)	French (Science) (Tu. Th.)	German (Arts) (M. W. F.) French (Arts) (Tu. Th.)	
4-5 P. M.			Geology	Geology

Degrees, April, 1880.

MASTER OF ARTS.

RICHMOND LOGAN, B. A.
JOHN W. MCLEOD, B. A.

BACHELOR OF ARTS WITH HONORS.

EDWIN CROWELL Barrington.

ORDINARY DEGREE OF BACHELOR OF ARTS.

FREDERICK KINSMAN... .. Centreville.
ALBERT E. THOMSON Halifax.

BACHELOR OF SCIENCE.

WILLIAM M. FRASER... .. Dartmouth.

Examinations, 1879--80.

Undergraduates and General Students who obtained Medals, Honours,
Certificates of Merit, Prizes, &c.

UNDERGRADUATES IN ARTS.

FOURTH YEAR.

EDWIN CROWELL: The Governor-General's Gold Medal; B. A. Honors
in History and English Language and Literature; Class Certificate
of Merit; Prize in History; Second Class in Ethics and
German.
ALBERT E. THOMSON: The Dr Avery Special Prize; Prize in Clas-
sics; First Class in Latin.
FRED. S. KINSMAN: Second Class in Ethics and German.

THIRD YEAR.

HOWARD MURRAY: First Class Certificate of Merit; Prizes in Classics,
Metaphysics and French; First Class in Latin, Greek, Experimen-
tal Physics, Metaphysics, French and Grecian History.
GRAHAM CREELMAN: First Class Certificate of Merit; Prizes in
Mathematical and Experimental Physics and in German; First
Class in Mathematics and Experimental Physics and German;
Second Class in Latin, Greek, and Metaphysics.

- CHARLES W. BLANCHARD: First Class Certificate of Merit; First Class in Mathematics and Experimental Physics; Metaphysics, Chemistry and Grecian History; Second Class in French.
- JAMES A. SEDGWICK: Second Class Certificate of Merit; First Class in Metaphysics; Second Class in Greek, French and Grecian History.
- ALFRED COSTLEY: Second Class in Latin, Mathematics and Experimental Physics and French.
- HENRY S. CREIGHTON: Second Class in Mathematics and Experimental Physics, Metaphysics and French.
- WALLACE MACDONALD: Second Class in French.

SECOND YEAR.

- HUMPHREY MELLISH: First Class Certificate of Merit; Prize in Classics; St. Andrew's Prize for Mathematics; Second Prize for Elocution; First Class in Latin, Greek, Mathematics, Chemistry; Second Class in Psychology.
- GEORGE M. CAMPBELL: North British Bursary; First Class Certificate of Merit; Prizes in Mathematics and Chemistry; First Class in Latin, Greek, Mathematics, Chemistry and Roman History.
- GEORGE S. CARSON: Second Class in Mathematics and Psychology, and First Class in Roman History.
- GEORGE PATTERSON: First Class in Psychology.
- ROBERT LANDELLS: First Class in Botany.
- JOHNSON DAVIDSON: Second Class in Chemistry.
- JOHN MCKENZIE: Second Class in Chemistry.
- JAMES H. KNOWLES: Second Class in Roman History.

FIRST YEAR.

- JOHN C. BELL (*Halifax High School*): Professor's Scholarship; First Class Certificate of Merit; Prizes in Classics and English; First Class in Latin, Greek, Mathematics, English.
- DANIEL A. MURRAY (*Truro High School*): First Class Certificate of Merit; First Prize in Mathematics; First Prize for Elocution; First Class in Greek, Mathematics, English; Second Class in Latin.
- JAMES A. MOREN (*Halifax High School*): Professors' Scholarship; First Class Certificate of Merit; First Class in Greek, Mathematics, English; Second Class in Latin.
- JAMES A. McDONALD (*Halifax High School*): Professors' Scholarship; First Class Certificate of Merit; Second Prize in Classics; First Class in Greek and Mathematics; Second Class in Latin and English.
- JOHN McLEOD: Second Class Certificate of Merit; First Class in Mathematics; Second Class in Latin, Greek and English.
- ENOCH THOMPSON (*Private Study*): Second Class Certificate of Merit; First Class in English; Second Class in Latin and Mathematics.
- HECTOR McINNES (*Pictou Academy*): Second Class Certificate of Merit; Second Class in Latin, Mathematics and English.
- ARTHUR W. CAMPBELL (*Truro High School*): First Class in Mathematics; Second Class in English.
- THOMAS S. MCGREGOR (*Sydney Academy*): First Class in Mathematics; Second Class in English.
- JAMES W. MCKENZIE (*Private Study*): First Class in English; Second Class in Mathematics.
- ALLAN P. DOUGLASS (*New Glasgow Academy*): Second Class in Latin and Greek.
- HENRY DICKIE (*Upper Steviacke School*): Second Class in Latin and Greek.

UNDERGRADUATES IN SCIENCE.

THIRD YEAR.

WILLIAM M. FRASER: The Governor-General's Silver Medal; First Class in Chemical Analysis; Second Class in Psychology.

SECOND YEAR.

ALEXANDER G. CAMERON: Second Class Certificate of Merit; First Class in Biology; Second Class in Chemistry and German.

FIRST YEAR.

ARTHUR G. REID (*Halifax High School*): Professors' Scholarship; First Class Certificate of Merit; Second Prize in Mathematics; Prize in Chemistry; First Class in Latin, Mathematics and Chemistry; Second Class in English and Chemical Physics.

ARCHIBALD MCCOLL (*New Glasgow Academy*): Second Class in Mathematics and Chemical Physics.

GENERAL STUDENTS.

JOHN F. DUSTAN: Prize in Ethics; Second Class in Ethics.

STANFIELD LORD: First Class in Metaphysics; Second Class in French.

ALEXANDER W. MAHON: Prizes in Psychology and French; First Class in Psychology and French.

JOHN M. McLEAN: Second Class in Mathematics.

WILLIAM McNALLY: Second Class in English.

JOHN ROSS: First Class in English.

ROBERT D. ROSS: Second Class in Ethics.

HARRY M. SMITH: Second Class in French.

THOMAS STEWART: First Class in Metaphysics; Second Class in Mathematics, Experimental Physics and French.

*Honours, Prizes, Certificates of Merit, Bursary,
Scholarships.*

B. A. HONOURS.

HISTORY AND ENGLISH LANGUAGE AND LITERATURE:—Second Rank—
Edwin Crowell.

UNIVERSITY PRIZES.

FOURTH YEAR—*Classics*, Albert E. Thomson. *Ethics*, George S. Dustan. *History*, Edwin Crowell. *French*, Alex. W. Mahon.

THIRD YEAR—*Classics*, Howard Murray. *Mathematics and Experimental Physics*, Graham Creelman. *Metaphysics*, Howard Murray. *French*, Howard Murray. *German*, Graham Creelman.

SECOND YEAR—*Classics*, Humphrey Mellish. *Mathematics*, George M. Campbell. *Chemistry*, George M. Campbell. *Psychology*, Alex. W. Mahon.

FIRST YEAR—*Classics*, 1. John A. Bell; 2. James A. McDonald. *Mathematics*, 1. Daniel A. Murray; 2. Arthur G. Reid. *Rhetoric*, John A. Bell.

CERTIFICATES OF MERIT.

(The names in the several years are arranged alphabetically.)

FIRST CLASS: *Third Year*—Chas. W. Blanchard, Graham Creelman, Howard Murray. *Second Year*—Geo. M. Campbell, Humphrey Mellish, (Prince of Wales' College, Charlottetown, P. E. I.) *First Year*, John A. Bell, (Halifax High School), James A. McDonald, do., Jas. A. Moren, do., Daniel A. Murray, (Truro High School), Arthur G. Reid, (Halifax High School).

SECOND CLASS: *Fourth Year*, Edwin Crowell. *Second Year*, Alex. G. Cameron. *First Year*, Hector McInnes, (Pictou Academy), John McLeod, Enoch Thomson, private study.

NORTH BRITISH BURSARY.

GEORGE M. CAMPBELL.

SPECIAL PRIZES.

The SIR WILLIAM YOUNG PRIZES for Elocution: 1. D. A. Murray;
2. Humphrey Mellish.

The ST. ANDREW'S PRIZE: Humphrey Mellish.

The DR. AVERY PRIZE: Albert E. Thomson.

PROFESSORS' SCHOLARSHIPS.

IN ARTS: 1. J. A. Bell, Halifax High School,

2. J. A. Moren, do.

3. J. A. McDonald, do.

IN SCIENCE: A. G. Reid, do.

PASS LISTS.

SESSIONAL EXAMINATIONS, APRIL, 1880.

(The names are arranged alphabetically.)

ARTS.

FOURTH YEAR—Edwin Crowell, Frederick S. Kinsman, Albert E. Thomson.

THIRD YEAR—Chas. W. Blanchard, Alfred Costley, Graham Creelman, Henry S. Creighton, Wallace M. Macdonald, Howard Murray, James A. Sedgwick.

SECOND YEAR—George M. Campbell, George S. Carson, Johnson Davidson, George A. Downey, Hugh R. Grant, Robert Landells, Humphrey Mellish, George Patterson.

FIRST YEAR—John A. Bell, Arthur Campbell, Henry Dickie, Allan P. Douglas, James A. McDonald, Thomas S. McGregor, Hector McInnes, James W. McKenzie, John Macleod, William L. MacRae, Donald Murray, James A. Moren, Enoch Thompson.

SCIENCE.

THIRD YEAR—William M. Fraser.

SECOND YEAR—Alex. G. Cameron.

FIRST YEAR—Allan P. Bremner, Arch. McColl, Arthur G. Reid.

SUPPLEMENTARY EXAMINATIONS, OCT., 1879.

SECOND YEAR—*Geometry*: Costley; *Trigonometry*, W. M. McDonald.
 FIRST YEAR—*Greek*: J. McKenzie; *Mathematics*: Knowles.

MATRICULATION EXAMINATIONS, 1879.

ARTS.

FIRST YEAR—J. A. Bell, G. H. Blair, Arch. Campbell, H. Dickie, Allan P. Douglas, J. A. McDonald, T. S. McGregor, Hect. McInnes, J. W. McKenzie, J. K. McLeod, W. L. McRae, J. A. Moren, D. A. Murray, R. H. Skimmings, En. Thomson, H. P. Veale.
 SECOND YEAR—Humphrey Mellish.

SCIENCE.

FIRST YEAR—J. A. Bremner, A. P. Bremner, Arch. McColl, Arth. G. Reid.

ENTRANCE EXAMINATIONS IN CLASSICAL HISTORY, &c.

(The names are in order of merit.)

THIRD YEAR—Class I.: Murray, Blanchard. Class II.: None. *Passed*: Sedgwick, Creelman, Creighton, Costley.
 SECOND YEAR—Class I.: Carson, G. Campbell. Class II.: Knowles. *Passed*: Patterson, J. McKenzie, Davidson, Downey, Grant.

SUPPLEMENTARY EXAMINATIONS IN CLASSICAL HISTORY, &c.

THIRD YEAR—W. M. McDonald.
 SECOND YEAR—Humphrey Mellish.

CLASS LISTS.

(The names are in order of merit.)

LATIN.

FOURTH YEAR—Class I.: Alb. E. Thomson. Class II.: Crowell. *Passed*: Kinsman.
 THIRD YEAR—Class I.: How. Murray. Class II.: Creelman, Costley. *Passed*: Sedgwick, W. M. McDonald, Spencer, Creighton, Blanchard.
 SECOND YEAR—Class I.: Mellish, J. Campbell. Class II.: None. *Passed*: Patterson, Davidson, Grant, Downey, Knowles, Landells, Carson.
 FIRST YEAR—Class I.: Bell, Reid. Class II.: J. A. McDonald, Douglas, D. Murray, Moren, McInnes, Dickie, E. Thomson, J. McLeod. *Passed*: Ross, Arch. C. Campbell, McGregor, McColl, Blair, J. A. McLean, J. W. McKenzie, Skimmings, A. Bremner, Smith, Alex. Campbell, McRae.

GREEK.

FOURTH YEAR—Class I.: None. Class II.: None. *Passed*: D. D. Ross, A. E. Thomson, Kinsman.

THIRD YEAR—Class I.: How. Murray. Class II.: Creelman, Sedgwick.
Passed: Creighton, Costley, W. M. McDonald, Spencer.

SECOND YEAR—Class I.: Mellish, G. Campbell. Class II.: None.
Passed: (Carson, Patterson,) equal, Landells, Davidson, Grant, Knowles, Downey.

FIRST YEAR—Class I.: Bell, J. A. McDonald, D. Murray, Moren.
Class II.: Douglas, J. McLeod, Dickie. *Passed*: Arth. Campbell, E. Thomson, J. W. McKenzie, (McGregor, McInnes,) equal, Skimmings, McRae, Alex. Campbell, Blair.

MATHEMATICS AND EXPERIMENTAL PHYSICS.

THIRD YEAR—Class I.: Creelman, Blanchard. Class II.: Creighton, Stewart, Costley. *Passed*: Spencer, Sedgwick, Wm. McDonald.

EXPERIMENTAL PHYSICS.

THIRD YEAR—Class I.—Howard Murray.

MATHEMATICS.

SECOND YEAR—Class I.: G. Campbell, Mellish. Class II.: Carson.
Passed: J. M. McKenzie, Davidson, Patterson, Landells, Cameron, Knowles, Downey, Grant.

FIRST YEAR—Class I.: D. Murray, Reid, Bell, J. A. McDonald, Moren,
(Arth. Campbell, J. McLeod,) equal, McGregor. Class II.: McInnes, J. McLean, E. Thomson, McColl, J. W. McKenzie.
Passed: Alex. Campbell, Dickie, McRae, Smith, Douglas, A. Bremner, Forsyth.

ETHICS.

FOURTH YEAR—Class I.: None. Class II.: Dustan, Crowell, Kinsman,
R. D. Ross. *Passed*: A. E. Thomson.

METAPHYSICS AND ÆSTHETICS.

THIRD YEAR—Class I.: How. Murray, Lord, Blanchard, (Sedgwick,
Stewart,) equal. Class II.: Creighton, Creelman. *Passed*,
(Costley, W. M. McDonald), equal.

LOGIC AND PSYCHOLOGY.

SECOND YEAR—Class I.: Mahon, Patterson. Class II.: Carson, Mellish.
Passed: Grant, Davidson, Downey, G. Campbell.

RHETORIC.

FIRST YEAR—Class I.: Bell, D. Murray, E. Thomson, Moren, (J. W.
McKenzie, J. Ross,) equal. Class II.: (J. A. McDonald, J.
McLeod,) equal, McGregor, Reid. (McInnes, McNally,) equal,
Arth. Campbell. *Passed*, (Blair, Douglas) equal, (Dickie, Skim-
mings,) equal, Forsyth, McColl, McRae, A. Bremner.

ORGANIC CHEMISTRY.

Class I.: Blanchard.

INORGANIC CHEMISTRY.

Class I.: G. Campbell, Reid, Mellish. Class II.: J. M. McKenzie, Cameron, Davidson. *Passed*: (Carson, Grant,) equal, Patterson, Downey, J. A. Bremner, McColl, A. Bremner, Knowles.

CHEMICAL ANALYSIS.

Class I.: Fraser.

CHEMICAL PHYSICS.

Class I.: None. Class II.: Reid, McColl. *Passed*: A. Bremner.

BIOLOGY.

Class I.: Cameron, Landells.

FRENCH.

FOURTH YEAR—Class I.: Mahon. Class II.: Crowell. *Passed*: A. E. Thomson.

THIRD YEAR—Class I.: H. Murray. Class II.: Stewart, Creighton, Smith, (Blanchard, Costley,) equal, W. M. McDonald, Sedgwick, Lord. *Passed*, Spencer.

GERMAN.

FOURTH YEAR—Class I.: None. Class II.: Kinsman.

THIRD YEAR—Class I.: Creelman.

*General List of Honours, Medals, Scholarships,
Special Prizes, &c., 1866--80.*

B. A. HONOURS.

1873—MATHEMATICS AND PHYSICS: *Second Rank*, Alex. H. McKay.

1874—CLASSICS: *Second Rank*, James Chalmers Herdman.

MENTAL AND MORAL PHILOSOPHY: *Second Rank*, James McD. Oxley.

1876—MATHEMATICS AND PHYSICS: *Second Rank*, James McG. Stewart.

CLASSICS: *Second Rank*, Francis H. Bell.

1877—MATHEMATICS: *Second Rank*, John Waddell.

1879—CLASSICS: *Second Rank*, Isaac M. McLean.

HISTORY AND ENGLISH LITERATURE: *Second Rank*, Charles S. Cameron.

1880—HISTORY AND ENGLISH LITERATURE: *Second Rank*, Edwin Crowell.

GOVERNOR GENERAL'S MEDALS.

1875—*Gold Medal*: Louis H. Jordan. *Silver Medal*: George McMillan.

1876—*Gold Medal*: Francis H. Bell. *Silver Medal*: Jas. McG. Stewart.

1877—*Gold Medal*: John Waddell. *Silver Medal*: Burgess McKittrick.

1878—*Gold Medal*: J. L. George. *Silver Medal*: J. H. Cameron.

1880—*Gold Medal*: Edwin Crowell. *Silver Medal*: W. M. Fraser.

PROFESSORS' SCHOLARSHIPS.

- 1866—1. A. P. Silver, Halifax Grammar School; 2. A. W. H. Lindsay, Pictou Academy.
- 1867—1. James G. Macgregor, private study; 2. James M. Inglis, Prince of Wales College, Charlottetown, P. E. I.
- 1868—1. Alex. W. Pollok; 2. W. P. Archibald, Halifax Schools.
- 1869—1. Charles D. McDonald, Pictou Academy; 2. Bruce A. Lawson; 3. Henry Macdonald, Halifax Schools.
- 1870—1. Andrew C. Herdman, Pictou Academy; 2. Alex. C. Patterson, Fort Massey Academy.
- 1871—1. William Brownrigg, Pictou Academy; 2. George McMillan, private study.
- 1872—1. Francis H. Bell, private study; 2. Fred. W. O'Brien, Pictou Academy.
- 1873—1. Jas. McLean, private study; 2. John Waddell, Pictou Academy.
- 1874—1. J. L. George, Pictou Academy; 2. John Stewart.
- 1875—1. George W. McQueen, New Glasgow Academy; 2. Isaac M. McLean, private study.
- 1876—1. Howard Murray, New Glasgow Academy; 2. W. R. Fraser.
- 1877—1. Graham Creelman, Pictou Academy; 2. James S. Trueman, St. John Grammar School.
- 1878—1. G. M. Campbell, Pictou Academy; 2. James T. Wyllie, Pictou Academy and Halifax High School.
- 1879—In Arts—1. J. Albert Bell, Halifax High School; 2. James A. Moren, do.; 3. James A. McDonald, do. In Science—Arthur G. Reid, Halifax High School.

GRANT PRIZE.

For Essays—1866: Joseph H. Chase. 1867: Aubrey Lippincott. 1868: Arthur P. Silver. 1869: Herbert A. Bayne. 1870: Hugh M. Scott. 1871: Duncan C. Fraser. 1872: Alexander H. McKay.

THE YOUNG PRIZES.

General Prize, voted by Students. 1867: 1. John Gow, 3rd and 4th years; 2. Alexander C. McKenzie, 1st and 2nd years. 1868: 1. George Murray, 3rd and 4th years; 2. Wentworth Roscoe, 1st and 2nd years. 1869: 1. John J. McKenzie, 3rd and 4th years; 2. Hiram Logan, 1st and 2nd years. 1870: *For Essay*, Walter M. Thorburn; *For Elocution*, Duncan C. Fraser. 1871: *For Essay*, James G. McGregor; *For Elocution*, Robert G. Sinclair. 1872: *For Essay*, Ephraim Scott; *For Elocution*, Fred. W. Archibald. 1874: Richmond A. Logan. 1875: S. J. MacKnight. 1876: 1. Francis H. Bell; 2. Colin Pitblado. 1877: H. H. Whittier; 2. G. E. Lowden. 1878: 1. J. A. Sedgwick; 2. Duncan Cameron. 1879: 1. Charles D. McLaren; 2. Edwin Crowell; 3. William F. Fraser. 1880: 1. D. A. Murray; 2. Humphrey Mellish.

ROY PRIZES.

For Elocution, 1868: 1. Alexander G. Russell; 2. James G. Macgregor. 1869: 1. Albert R. Quinn; 2. William M. Doull.

NORTH BRITISH SOCIETY BURSARY.

1868: Hugh M. Scott. 1870: Ephraim Scott. 1872: Jas. C. Herdman. 1874: James McG. Stewart. 1876: John H. Cameron. 1878: Albert E. Thomson. 1880: George M. Campbell.

THE DR. AVERY PRIZE.

1880: Not awarded.

DR. AVERY'S SPECIAL PRIZE.

For the best Student of the 4th year not taking Honours. 1880: Albert E. Thomson,

WAVERLEY BURSARY.

1873: William Bearisto, Wm. B. Ross, equal. 1874: James Fitzpatrick.
1875: James McLean. 1876: John Waddell. 1877: Rod. McKay.
1879: Howard Murray.

LAURIE PRIZE.

1871: Hugh M. Scott, B. A. 1872: Duncan C. Fraser. 1873: David F. Creelman. 1874: Archibald Gunn. 1875: Alex. McLeod.
1875: No competition. 1877: Richmond Logan.

ST. ANDREW'S PRIZE.

1873—*For Classics: First Year*, John W. McLeod.
1874—*For Mathematics: Second Year*, John W. McLeod.
1875—*For Classics: Second Year*, James McLean.
1876—*For Mathematics: Second Year*, T. A. LePage.
1877—*For Classics: Second Year*, G. W. McQueen.
1878—*For Mathematics: Second Year*, Albert E. Thomson.
1879—*For Classics: Second Year*, Howard Murray.
1880—*For Mathematics: Second Year*, Humphrey Mellish.

ALUMNI PRIZES.

1873: James McG. Stewart. 1874: 1. James McLean; 2. John H. Sinclair. 1875: 1. J. H. Cameron, private study; 2. R. H. Humphrey, Halifax Grammar School. 1876: *Third Year*, John Waddell, (who resigned in order to hold the Waverley Prize), J. H. Sinclair. *First Year*, 1. Roderick McKay, private study. 1877: *Third Year*, 1. J. H. Cameron; 2. Edmurd L. Newcombe. *First Year*, 1. Howard Murray; 2. W. R. Fraser. 1878: *Third Year*, 1. Roderick McKay; 2. J. M. McLean. *First Year*, 1. James S. Trueman; 2. Graham Creelman. 1879: *First Year*, 1. G. M. Campbell; 2. G. S. Carson.

"UNKNOWN" PRIZE.

1873: James M. McLean.

GRADUATES PRIZE.

1876: John Wilson McLeod. 1877: Burgess McKittrick.

MELBOURNE PRIZES.

1875: 1. John W. McLeod; 2. James McG. Stewart. 1875: George W. McQueen.

Graduates and Undergraduates of the University, and General Students.

GRADUATES.

MASTERS OF ARTS.

<p style="text-align: center;">1869.</p> <p>Chase, Jos. Henry, Onslow.</p>	<p style="text-align: center;">1874.</p> <p>Macgregor, J. G., D. Sc., Halifax.</p>
<p style="text-align: center;">1870.</p> <p>McNaughton, Samuel, Preston, G.B. McDonald, John H., Shelburne.</p>	<p style="text-align: center;">1875.</p> <p>McKenzie, Hugh, Truro. Scott, Ephraim, New Glasgow.</p>
<p style="text-align: center;">1871.</p> <p>Cameron, J. J., Shakspeare, Ont. Carr, Arthur F., Alberton, P. E. I. Smith, David H., Truro.</p>	<p style="text-align: center;">1876.</p> <p>Allan, John M., Edinburgh.</p>
<p style="text-align: center;">1872.</p> <p>Annand, Joseph, New Hebrides. Bayne, Herbert A, Ph. D., Kingston. Forrest, James, Halifax. McKenzie, John J., Ph. D., (obit.)</p>	<p style="text-align: center;">1878.</p> <p>Archibald, W. P., Cavendish, P.E. I. Herdman, James C., B. D., Edin., Cambelton, N. B. Jordan, Louis H., Univ. Edinburgh. McLeod, Alexander, Onslow. Trueman, Arthur I., St. John, N.B.</p>

DOCTORS OF MEDICINE AND MASTERS OF SURGERY.

<p style="text-align: center;">1872.</p> <p>De Wolfe, Geo. H., Sheffield, Eng. Hiltz, Charles W., Mahone Bay. McMillan, Finlay, (obit.) McRae, William, Richmond, C. B. Sutherland, Robert, (obit.)</p>	<p style="text-align: center;">1875.</p> <p>Chisholm, Donald, Antigonish. Moore, Edmund, Chatham.</p>
<p style="text-align: center;">1874.</p> <p>Campbell, Don. A., Halifax.</p>	<p style="text-align: center;">1875.</p> <p>Cox, Robinson, Stewiacke. Bethune, J. L., Baddeck, C. B. Lindsay, A. W. H., Halifax. Muir, W. H., Truro. Casimir, Robert, Arichat, C. B.</p>

BACHELORS OF ARTS.

<p style="text-align: center;">1866.</p> <p>Chase, J. Henry, Onslow. Shaw, Robert, Charlottetown.</p>	<p style="text-align: center;">1867.</p> <p>Burgess, Joshua C., Carleton, N. B. Cameron, J. J., Shakspeare, Ont.</p>
<p style="text-align: center;">1866.</p> <p>Lippincott, Aubrey, Pittsburg, Pa. McDonald, John H., Shelburne McNaughton, Samuel, Preston, G. B. Ross, Alexander, Dalhousie, N. B. Sedgwick, Robert, Halifax. Smith, David H., Truro. Smith, Edwin, Stewiacke.</p>	<p style="text-align: center;">1867.</p> <p>Burgess, Joshua C., Carleton, N. B. Cameron, J. J., Shakspeare, Ont.</p>

1868.

Carr, Arthur F., Alberton, P. E. I.
 Christie, Thomas M., Trinidad.
 Creighton, James G. A., Montreal.
 Forrest, James, Halifax.
 McKay, Kenneth, Richmond, N. B.
 Simpson, Isaac, Musquodoboit.

1869.

Annand, Joseph, New Hebrides.
 Bayne, Herbert A., Kingston.
 Millar, Eben D., Lunenburg.
 Mackenzie, J. J., (obit.)
 Sutherland, John M., Pugwash.

1870.

Lindsay, Andrew W. H., Halifax.
 Scott, Hugh McD., Leipsic.
 Thorburn, Walter M., Madras.
 Wallace, John.

1871.

Bayne, Earnest S., Murray Harbor,
 P. E. I.
 Macgregor, James G., Halifax.
 Russell, Alexander G., Oyster Bay,
 L. I., N. Y.

1872.

Archibald, W. P., Cavendish, P.E.I.
 Bruce, William T., Vale Colliery.
 Carmichael, Jas. M., New Glasgow.
 Fraser, Duncan C., New Glasgow.
 Gunn, Adam, Five Islands.
 McKenzie, Hugh, Truro.
 Pollok, Alex. W., (obit.)
 Scott, Ephraim, New Glasgow.
 Trueman, Arthur I., St. John, N.B.

1873.

Allan, John M., Edinburgh.
 Bryden, Charles W., Antigonish.
 Cameron, William, Pictou Co.
 Creelman, D. F., Bay of Islands.
 Duff, Kenneth, Manitoba.
 Hunter, John, California.
 Logan, Melville, Halifax.
 McDonald, Charles D., Pictou.
 McKay, Alex H., B. Sc., Pictou.
 McKeen, James A., Bermuda.
 Robinson, J Millen, Halifax.
 Ross, Wm., New Brunswick.

1874.

Doull, Walter S., Halifax.
 Fraser, D. Stiles, Mahone Bay.
 Herdman, James C., Campbellton.
 Herdman, Wm. C., Stellarton.

McGregor, Daniel, New Dublin.
 McLeod, Don., Strathalbyn, P. E. I.
 Oxley, Jas. McD., Ll. B., Halifax.

1875.

Fitzpatrick, Jas. Salt Springs, Pictou.
 Jordan, Louis H., Univ. Edinburgh.
 McLeod, Alexander, Onslow.
 McMillan, George, Pictou Co.
 Stramberg, Hector H., Cape John,
 Pictou.

1876.

Bell, Francis H., Halifax.
 Fulton, Geo. H., Guysborough.
 McDowall, Isaac, St. John, N. B.
 McLean, James A., Pictou Co.
 McLeod, John W., Princeton, N. J.
 Morton, Joseph, Shelburne.
 Munro, John, Montreal.
 Stewart, J. McG., Pictou.

1877.

Archibald, F. W., Truro.
 Chambers, Robert E., Halifax.
 Grant, W. R., Pictou Co.
 Hamilton, Howard H., Pictou.
 Herdman, A. W., Pictou.
 Laird, George A., Manitoba.
 Logan, Richmond, Pine Hill, Hfx.
 Mason, Wm. A., Pine Hill, Halifax.
 McCurdy, Stanley T., New Glasgow.
 McKittrick, Burgess, Sydney, C. B.
 Murray, J. S., Cavendish, P. E. I.
 Pitblado, Colin, Manitoba.
 Scott, John McD., Halifax.
 Waddell, John, Dartmouth.

1878.

Cairns, John A., Princeton, N. J.
 Cameron, John H., Pine Hill, Hfx.
 George, John L., Princeton, N. J.
 McKenzie, Jas., Pictou Co.
 Munro, George W., New York.
 Newcombe, Edmund L., Kentville.
 Rogers, Anderson, Pine Hill, Hfx.
 Whitman, Alfred, Bridgetown.

1879.

Cameron, Chas. S., Baddeck, C. B.
 Chambers, Fred. B., Truro.
 Dickie, Alfred, Stewiacke.
 Emmerson, R. R. J., Halifax.
 McLean, Isaac M., E. R., Pictou.

1880.

Crowell, Edwin, Barrington.
 Kinsman, Frederick S., Centreville
 Thomson, Albert E., Halifax.

BACHELOR OF SCIENCE.

1880.

William M. Fraser, Dartmouth.

Graduates are particularly requested to notify the Principal or Secretary of Senate of any change of address.

UNDERGRADUATES IN ARTS, 1879-80.

FOURTH YEAR.

Crowell, Edwin, Barrington.
Kinsman, Frederick S., Centreville.
Thomson, Albert E., Halifax.

THIRD YEAR.

Blanchard, Chas. W., Truro.
Costley, Alfred, Halifax.
Creelman, Graham, Up. Stewiacke.
Creighton, H. S., Dartmouth.
McDonald, Wallace M., Halifax.
Murray, Howard, New Glasgow.
Sedgwick, Jas. A., Musquodoboit.
Spencer, William H., Great Village.

SECOND YEAR.

Campbell, G. M., Truro.
Carson, G. S., Sussex, N. B.
Davidson, Johnson F., Halifax.
Downey, G. Alfred, Barrington.
Grant, H. R., Stellarton.
Knowles, James H., Milton.
Landells, Robt., Halifax.

McKenzie, John, Stellarton.
Patterson, G. G., New Glasgow.

FIRST YEAR.

Bell, John A., Halifax.
Blair, George H., Truro.
Campbell, Arth., "
Dickie, Henry, Upper Stewiacke.
Douglas, A. P., Green Hill, Pictou.
Macdonald, Jas. A., Halifax.
McGregor, Th. S., Little Bras d'Or,
C. B.
McInnes, Hector, Pictou.
McKenzie, James W., Strathalbyn,
P. E. I.
McLeod, John, Halifax.
McLeod, Jas. K., Sydney.
McRae, W. L., Granton, Pictou.
Moren, Jas. A., Halifax.
Murray, Dan. A., Truro.
Skimmings, R. H., Halifax.
Thomson, Enoch, St. John, N. B.
Veale, Herb. P., Halifax.

UNDERGRADUATES IN SCIENCE, 1879-80.

THIRD YEAR.

Fraser, W. M., Dartmouth.

SECOND YEAR.

Cameron, A. G., Newtown, Guysbo.

FIRST YEAR.

Bremner, Jas. A., Halifax.
Bremner, A. P., "
McColl, Arch., New Glasgow.
Reid, Arthur G., Halifax.

GENERAL STUDENTS IN ARTS, 1879-80.

Calder, W. C., Halifax.
Cameron, D. E. River, St. Mary's.
Campbell, Alex., Pictou.
Crawford, Rup. D., Halifax.
Dustan, John F., Dartmouth.
Fisher, George, Mid. Stewiacke.
Forsyth, Jas. E., Bridgetown.
Furneaux, A. H. G., St. John's, Nfld.
Lord, Stanfield, Tryon, P. E. I.
Mahon, Alex. W., Onslow.
McDonald, John, Sydney.
McFarlane, J. D., Mid. River, C. B.
McKay, Jas. A., Ainslie, C. B.
McKay, Neil, "

McLean, John M., Londonderry.
McMillan, Dun., Ainslie, C. B.
McMillan, John, "
McNally, Wm., Co. Down, Ireland.
Mellish, J. M., Halifax.
Ross, John, Halifax.
Ross, Robt. D., East River, Pictou.
Smith, H. M., Halifax.
Stayner, E. G., Halifax.
Stewart, Thos., Whycomah.
Story, J. D., Halifax.
Thomson, Arth., Halifax.
Waddell, W. H., "

GENERAL STUDENTS IN SCIENCE, 1879-80.

Aiken, Ch. C., Lunenburg.	McLaren, C. D., Georgetown.
Anderson, Fitz. W., Halifax.	Mitchell, James, Halifax.
Atkinson, M. C., Bay de Verte, N. B.	Morrison, Don. N., Loch Lomond.
Blois, Marsden, Gore, Hants Co.	Morton, Jos., B. A., Shelburne.
Cameron, Allan, Antigonish.	Rogers, Anderson, B. A., Halifax.
Casswell, Jas. A., Digby.	Rutherford, Thos., Halifax.
Crosskill, J., Halifax.	Smith, Gilb. A., Caledonia, Queens.
DeMill, Wm. B., Halifax.	Spicer, H. H., Parrsboro'.
Forbes, J. A., N. Dalhousie, Pictou.	Sponagle, Jos. A., Halifax.
Fullerton, Wm. S., Annapolis.	Stevens, Wm., Halifax.
Fulton, G. H., B. A., Guysboro.	Starr, Jos. C., Halifax.
Jennings, Ed. J., Halifax.	Wier, John, Halifax.
Kendall, Arth. S., Sydney.	Woodill, Wm. N., Halifax.
Marshall, C. S., Lawrencetown.	Waddell, John, B. A., "

Students in Arts	66
Students in Science.....	34
	<hr/>
Total.....	100

ALUMNI ASSOCIATION.

This Association, incorporated by Act of the Legislature, has now entered upon the ninth year of its existence, and gives satisfactory promise of future prosperity. The ends it has in view are, to strengthen the bonds of fellowship among the Alumni, to unite them in the endeavour to promote Higher Education in these Provinces, and specially to extend the influence and usefulness of their *Alma Mater*.

The Association has already been able to lend assistance to the College by offering Prizes to its Students, and by contributing to the sum raised during the past year for the purchase of Scientific Apparatus; and it is hoped that it may be able to lend still greater aid, and ultimately develop into an important adjunct to the University.

Since the recent enlargement of the Board of Governors, the Association is represented on the Board by their President, and thus has some direct share in the University management. The Executive Committee is meantime empowered to take such steps as shall seem fitted to promote the purposes of the Association.

Undergraduates of more than two years standing, and General Students who have attended Lectures during one Session, are qualified for admission to the Association; and it is hoped that before long every graduate at least will have been enrolled in the list of Members.

The Annual Meeting of the Association takes place on the morning of Convocation day, at the close of the Winter Session.

Alumni Association of Dalhousie College, (Incorporated.)

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 GEORGE LAWSON, Ph. D., *Professor of Chemistry, Dalhousie College.*
 JAMES LIECHTI, M. A., *Professor of Modern Languages, Dalhousie College.*
 DAVID HONEYMAN, D. C. L., *Professor of Geology, Dalhousie College.*

MEMBERS.

NAME.	OCCUPATION.	RESIDENCE.
Allan, John M.	Clergyman	Edinburgh, G. B.
Archibald, William P.	"	Cavendish, P. E. I.
Bayne, Herbert A., Ph. D.	Professor	R. M. Coll. Kingston
Bayne, Ernest S.	Clergyman	Murray Harbor, P. E. I.
Bell, Francis H.	Barrister	Halifax
Bruce, William T., M. D.	Clergyman	Vale Colliery
Cameron, John H.	Theo. Student	Pine Hill, Halifax
Cameron, Charles S.	Merchant	Baddeck, C. B.
Chambers, Robt. E.	Naval Architect	Halifax
Chase, Joseph H.	Clergyman	Onslow
Carmichael, James	Merchant	New Glasgow
Crowell, Edwin	"	Barrington
Cruikshank, William	Clergyman	Montreal
Dickie, Alfred	Merchant	Stewiacke
Doull, Walter S.	Barrister	Halifax
Doull, W. M.	Merchant	Halifax
Emmerson, Robt. R. J.	Engineering Student	Halifax
Forrest, James	Broker	Halifax
Fraser, Duncan C.	Barrister	New Glasgow
Fraser, W. M.	"	Dartmouth
Fitzpatrick, James	Clergyman	Salt Springs, Pictou
Fraser, D. Stiles	"	Mahone Bay
George, John L.	Theo. Student	Princeton, N. J.
Hamilton, Howard H.	Manufacturer	Pictou

NAME.	OCCUPATION.	RESIDENCE.
Herdman, James C., B. D.	Clergyman	Cambellton, N. B.
Jordan, Louis H.	"	Edinburgh
Lindsay, A. W. H., M. D.	Physician	Halifax
Logan, Richmond	Theo. Student	Pine Hill, Halifax
Miller, Eben D.	Clergyman	Shelburne
Morton, Joseph H.	Principal of Academy	Shelburne
Munro, John	Theo. Student	Montreal
McDonald, Charles D.	Barrister	Pictou
DeDowell, Isaac M.	Teacher	Saint John, N. B.
McKay, Alex. H.	Principal of Academy	Pictou
McKenzie, Hugh	Barrister	Truro
MacGregor, Jas. G., D. Sc.	Professor	Halifax
McLean, Jas. A.	Clergyman.	
McKittrick, Burgess	Principal of Academy	Sydney, C. B.
McMillan, George W.	Clergyman	
McNaughton, Samuel	"	Preston, G. B.
Oxley, James McD.	Barrister	Halifax
Robinson, J. M.	"	Halifax
Russell, Alexander G.	Clergyman	Oyster Bay, L.I., N. Y.
Robarts, Casimir, M. D.	Physician	Arichat
Scott, Hugh McD., B. D.	Clergyman	Leipsic, Germany
Sedgwick, Robert	Barrister	Halifax
Stramberg, Hector		Montreal
Stewart, James McG.	Barrister	Pictou
Thomson, A. E.		Halifax
Thorburn, W. M.	India Civil Service	Madras Presidency
Trueman, Arthur I.	School Inspector	Portland, N. B.
Wallace, John	Clergyman	Bermuda
Whitman, Alfred W.	Law Student	Bridgetown
Waddell, John		Dartmouth

* * * The above contains the names of all who have at any time contributed any sum to the funds of the Association. In future the names of members who are in arrears for two years subscriptions will be dropped from the list of membership.

In Memoriam

JACOBI DEMILL, A. M.,

QUI,

QUINDECIM ANNOS PROFESSOR RHETORICES ATQUE

HISTORIÆ IN HAC UNIVERSITATE,

SUBITO, FLORENTE ÆTATE, E VITA EXCESSIT,

V. KAL. FEB., ANNO MDCCCLXXX.

ILLUM,

UTPOTE QUI DECUS ET ORNAMENTUM LITERARUM ET PRÆCEPTOR

EXCULTUS BENEVOLUSQUE FUIT,

REGENTES HUIUS COLLEGII, PROFESSORES EJUS COLLEGÆ, ET

ALUMNI, ÆQUO MÆRORE, LUGENT.

de l'Empire

JACOBI DRELL, A. M.

et

de l'Université de Bonn

de l'Université de Bonn

de l'Université de Bonn

de l'Université de Bonn

et

de l'Université de Bonn

de l'Université de Bonn

de l'Université de Bonn

de l'Université de Bonn

EXAMINATION PAPERS, 1880.

GREEK.

Examiner, J. JOHNSON, M.A.

FIRST YEAR.

XENOPHON : CYRO-PÆDIA, Book IV.

TIME : THREE HOURS.

I.

A. Translate Cyropædia, Bk. IV., chap. ii., secs. 38, 39, beginning :
Ἄνδρες φίλοι, γυγνώσκω μὲν ὅτι νῦν ἐξεστί.

1. Account for the cases of: *προτένοις τῶν ἂ συμμάχων ἀρίστον; εὐνοχία.*
Supply the ellipsis before *ὅπως μὴ*. Explain construction of *ἤριστοῦκότες*
φαινέσθαι; ἐπιμεληθῆναι.

B. Translate: Bk. IV., ch. iii., secs. 13, 14, beginning: *Ἄλλὰ μὲν*
οὐχ ὥσπερ ἄλλα πολλὰ τῶν πολεμικῶν χρεπὰ μὲν, χρήσιμα δέ.

1. Account for *τὸ ἐν τῷ ὅ, τι ἂν δέη κ.τ.λ.* Explain *οἴκων τάντῳ γ'*
ἔστιν ἔχειν τε καὶ φέρειν. Translate and explain according to a different
reading.

2. Point out the irregular construction of the sentence:—
ὃ γὰρ μὲν μάλιστα ἂν τις φοβηθεῖη κ.τ.λ.

3. What do you know of Xenophon's life ?

II.

1. What terminations result from the following combinations ?

a. In nouns:—*εα;—οεις;—αιν;—εε;—αα.*

b. In verbs:—*οι;—οεις;—εε;—αιν;—κ.σθαι;—θ.σαι;—π.μαι.*

2. (*a*) Name the gender and write the nom. and gen. sing. of:
βελῶν; νυκτός; ἡττους; ἐρύμασιν; φυλακάς.

(*b*) Write gen. and acc. sing. and dat. pl. of:
ἄγγελος; πόλις; μέγας; ὄδω; οἶς.

3. What parts in other degrees of comparison correspond to:
ἥδιον (adverb): *καλῶ; δικαίως; ἀληθοῦς; ἐλαχίστους?*

4. Form the imperfect indicative (showing contractions) with a
different personal termination in each word:

(*a*) In the active voice: *δηλόω; περιποιέω; συγγράφω; ἐστίαω.*

(*b*) In the passive voice:—*ἐθίζομαι; συνοικέω; καθοράω; ἴσθημι.*

5. Write (*a*) the perfect infinitives of:

λείπω; πείθω; τρέφω; στέλλω; δίδωμι;

(*b*) the aorist infinitives of:

ὀράω; αἰρέω; ἔχω; τίθημι; ἵημι.

6. Parse these verbs (found in the extracts) and give their chief
parts: *τυχεῖν; ἐσπουδασμένους; δόξομεν; φανῆναι; εἰσιόντες; δέοι; συμφε-*
ρουν; φοβηθεῖη; ἀκριβοῦν.

7. Translate into English and Latin:

(*a*) *οἱ εἰ ἐπισχρῶντο ταῦτα ποιήσειν.* (*b*) *οὓς δ' ἂν ἀμελῶντας (ὀρώσῃ)*
κολαζόντων ἀπειδέστερον ἢ ὡς δεσπόται.

III.

(For Candidates seeking a First or Second Class.)

TIME: TWO HOURS.

A. Translate: Bk. IV., ch. v., secs. 21, 22, beginning: 'Αλλὰ μὴν μέμφεός γε πῶς ἔσμεν ἄξιοι.

1. Point out a very unusual construction in this passage. Show the connection of the words of the last clause.

2. Κῦρος Κναζάρη χαίρειν: What governs χαίρειν? Can you give the corresponding Latin form of address?

B. Translate: chap. vi., sec. 3, beginning: 'Ο δὲ νῦν βασιλεὺς εἰς θήραν αὐτὸν παρακαλέσας.

1. Parse ὠφελεν: οὐδὲν δέον.

C. 1. What is *Hiatus*? How may it be avoided? Give one example of each method.

2. Accentuate all the cases in the singular and the gen. and dat. pl. of: χρήμα: πόλις: παῖς: οὐς.

3. What peculiarities are there in the declension of:
ἀναξ: Ἀπόλλων: σίτος: ὄρνις.

4. Give two examples of each: (a) Attic reduplication; (b) Attic pres. opt. act; (c) Attic imperative act. 3 pl.

5. What verbs take a double augment? What participles have the accent on the last syllable? What are the *Atonics*?

6. Distinguish according to accent: κρατος: αλλα: ταυτα: αναπανσαι: φανω: ή: ειμι.

SECOND YEAR

XENOPHON: MEMORABILIA, BK. III. HOMER: ODYSSEY, BK. VI.

TIME: THREE HOURS.

I

A. Translate Mem. Bk. III., ch. v., secs. 13, 14, 15, beginning Ἐγὼ μὲν, ἔφη, οἶμαι, ὁ Σωκράτης, κ. τ. λ.

2. Account for the mood of γενέσθαι. Supply the ellipsis in the clauses εἰ δὲ ἐπιμελέστερον, καὶ βελτίους, and compare the form of the first with the one corresponding to it.

3. Briefly account for the cases of ἀντιπάλων: μηδὲν χεῖρον ἐκείνων: τούτοις: γεραιτέρων.

4: Ἄφ' οὗ ἡ τε σὺν Τολμίδῃ τῶν χιλίων ἐν Λεβαδείᾳ συμφορὰ ἐγένετο καὶ ἡ μεθ' Ἴπποκράτους ἐπὶ Δηλίῳ, ἐκ τούτων τεταπείνεται μὲν ἡ τῶν Ἀθηναίων δόξα: write an historical and geographical note on this passage.

B. Translate Od. VI., 153-169.

1. Explain some violations of the usual rules of "Concord" in this passage.

2. Comment on, (a) ἐέδνοισι βρ'σας: ἀνήλυνθεν ἐκ δόρν γαίης. (b) νῆες δ' ὄδον ἀμφιέλισσαι εἰρῶνται πᾶσιν γὰρ ἐπίστιόν ἐστιν ἐκάστῳ.

II.

3. What words in Attic correspond to σφίσι : κέ : ικάει : ἡοῖ φαινομένην : ἴσαν : τέων.

4. Parse, giving chief parts : ἐφοπλίσεως : ἔλονται : ἔσπετο : ἄγῃσιν : ἀραρυῖαν : ἔτεθήπεα.

5. (a) Decline in the Singular : Περικλῆς, ἐνδεᾶ. (b) Write the Epic forms of the singular of : Ὀδυσσεύς : οἶς : ναῦς.

6. Scan the four lines beginning ἦλθον γὰρ καὶ κῆριε κ. τ. λ. and write notes on the quantity of final syllables where necessary.

7. Why is it supposed that the Odyssey was not composed by the same poet as the Iliad ?

8. What classes of verbs govern the genitive ? By what cases are relations of time and place denoted ? Distinguish their use ?

9. Give examples of "adverbial" accusatives.

10. Translate into Greek :

The Greeks, mindful of this danger, remained within their walls. O basest of men, what height of shamelessness hast thou attained. On what account do you think that Homer styles Agamemnon a shepherd of peoples ? It is not easy to find another thing either more noble than this, or more disgraceful than the opposite. Let us not despise such men, for the care of private property differs only in extent (πλήθος) from that of public affairs.

III.

TIME : TWO HOURS.

(For Candidates seeking a First or Second Class)

A. Translate, Mem. III, chap. x., secs. 9, 10.

1. Under what rules of syntax do the cases come in the sentence τὸ εὖρημα τῶ τὰ μὲν δεόμενα σκέπης κ. τ. λ.

B. Translate : Mem. III., chap. xiii., secs. 1, 2, 3, ending at ἐν Ἀσκληπιοῦ.

1. (a) Comment on the construction of the clause, Γελοῖον, ἐφη τὸ εἰ λυπεῖ. (b) πάσασθαι ἐσθιοντα : explain the syntax. Give the equivalent Latin.

C. 1. Write with accents the Epic forms of the cases in the singular of κλείς : ἔως : σύ.

2. Give examples with accents of (a) Epic aorists ; (b) Epic gen. sing. of 2nd decl. (c) Epic dat. pl. in the three declensions.

3. How is the Ionic 3 pl. perf. pass. formed ? Give examples.

4. Show by several instances how words of the same origin have been modified, (a) in form, (b) in meaning, in Latin and in English as compared with Greek.

5. Name the *enclitics*. Give the rules for accentuating them.

6. When is ἐστι thus accentuated ?

THIRD AND FOURTH YEARS.

{ DEMOSTHENES : FIRST AND THIRD PHILIPPICS.
{ PLATO : APOLOGIA SOCRATIS.

TIME : THREE HOURS.

I.

A. Translate Phil. III. 61-63, beginning, 'Ἐπειδὴν δ' ἐπὶ τούτοις (sc. ξενίοις) πρὸς νοσοῦντας ἐν αὐτοῖς προσέειπεν.

1. Explain clearly the construction of the clause : ἀλλ' ὡς ἐκ πλείστον φυλάττεσθαι τοῖς πράγμασι καὶ ταῖς παρασκευαῖς, ὅπως οἰκοθεν μὴ κινήσεται σκοποῦντας, οὐχὶ συμπλακέντας διαγωνίζεσθαι.

2. Ὡς περ εἰς Εὐβοίαν καὶ προτερόν ποτέ φασιν εἰς Ἀλιάρτων καὶ τὰ τελευταία πρῶν εἰς Πύλας, ἴσως ἂν ὀρμήσατε. Describe the events referred to.

3. Write notes on (a) εἰν τριάκοντα δραχμὰς ἕκαστος λαμβάνη τοῦ μῆδος, δώδεκα τάλαντα. (b) τοιγαροῦν ἅμα ἀκηκάμεν τι καὶ τριηράρχους καθίσταμεν καὶ τοῦτοις ἀντιδόσεις ποιούμεθα.

4. When were the First and Third Philippics delivered? What happened in the interval?

B. Translate Apol., ch. xxvii. τοῦτον τιμησάμενος.

1. Two different constructions are combined in the last clause.

2. Parse, giving chief parts : προσεσθαι : ἐκπέπραται : ἀντεισῆκται : ἐθίζεται : ὠφλήκοτες : ἀποπεφεύγη.

3. (a) Comment on εἰ τρεῖς μόναι μετέπεσον τῶν ψήφων, ἀποπεφεύγη ἂν. (b) ὧ ἄνδρες δικασταί : give some account of these.

4. (a) The Apology consists of three parts : describe the contents of each : or,

5. (b) Write a short sketch of Socrates' life.

II.

1. Show by simple examples the uses of Moods in dependent interrogative clauses.

2. In what various ways may a "purpose" be expressed? Illustrate by example.

3. Explain the phrases : συνελόντι ἀπλῶς : ἐκδὼν εἶναι : μὴ οὐ τοῦτ' ἢ χαλεπὸν : οὐ μέντοι ἄλλα.

4. Translate into Greek : He bid the messenger say that if the King wished to fight, he would fight. Then indeed you will be prosperous when you have done what you ought. I will not cease before I capture and burn Athens. I am not conscious to myself of having done any wrong to any man (express in two ways). He narrowly escaped being stoned.

III.

(For Candidates seeking a First or Second Class.)

C. Translate this passage taken from a work not previously named : Ἐπιρρίκει γὰρ (sc. ὁ Φίλιππος), οἶμαι καὶ ἀκούει τοὺς μὲν ὑμετέροους προγόνους, ἔξδν αὐτοῖς τῶν λοιπῶν ἄρχειν Ἑλλήνων ὧστ' αὐτοὺς ὑπακούειν βασιλεῖ, οὐ μόνον οὐκ ἀνασχόμενος τὸν λόγον τοῦτον, ἦνικ' ἦλθεν Ἀλέξανδρος ὁ τούτων πρόγονος περὶ τούτων κήρυξ, ἀλλὰ καὶ τὴν χώραν ἐκλιπεῖν προελομένους καὶ παθεῖν ὅτιοῦν ὑπομειναντας, καὶ μετὰ ταῦτα πράξαντας ταῦθ' ἅ πάντες μὲν ἀεὶ γλίχονται λέγειν, ἀξίως δ' οὐδέεις εἰπεῖν δεδόνηται, διόπερ καὶ γὰρ παραλείψω δικαίως (ἔστι γὰρ μείζω τάκειναι ἔργα ἢ ὡς τῷ λόγῳ τις ἂν εἴποι), τοὺς δὲ Ἐθβαίον καὶ Ἀργείων προγόνους τοὺς μὲν συστρατεύσαντας τῷ βαρβάρῳ, τοῖς δ' οὐκ ἐναντιωθέντας.

LATIN.

Examiner.....JOHN JOHNSON, M. A.

FIRST YEAR.

CICERO: FOURTH ORATION AGAINST CATILINE. VIRGIL: AENEID, BK. VI.

TIME: THREE HOURS.

I.

A. Translate Orat. IV, Chap. VI, beginning: Etenim quaero, si quis paterfamilias; ending: Summae nobis crudelitatis in patriae civiumque pernicie fama subeunda est.

1. Analyse the last sentence, so as to show the connection of the clauses.

2. Write notes on (a) meo nomine supplicionem decrevistis: (b) equites Romanos: ingenuos: hominum libertinorum: liberti.

3. Give the date of this speech in English and in Ciceronian Latin and describe the circumstances of its delivery.

B. Translate Aen. VI, 199-209.

1. Explain "quod non sua seminat arbos."

2. When and where was Virgil born? Write his name in full. What do you know about his death?

C. Translate Aen. VI, 640-647.

1. Write a critical note on: Obloquitur numeris septem discrimina vocum.

2. What legends are connected with: His Phaedram, Procrimque locis, moestamque Eriphylen.

II.

1. Write in combination all cases in the singular and the gen. pl.: aliquis paterfamilias, inani munere, largior aether.

2. What forms in the other degrees of comparison correspond to: longo, celere, imas, veterum, brevius (adverb), optumē.

3. Parse, giving chief parts: norunt, miserate, intexunt, poscet, refert, ambit.

4. (a) *Te tua fata docebo.* (b) *Proxima sorte tenent lucis loca.* (c) *Quique sui memores alios fecere.* (d) *Hac (via) iter Elysium nobis.* Under what rules of Syntax do the italicized words come?

5. Scan the first three lines of extract B.

6. Distinguish: ōs, ōs; ěs, ěs; lĕgĕre, lĕgĕre, lĕgĕre; lĕgis, lĕgis; lepōrem, lepōrem; decōro, decōro.

7. How is the place "where" generally expressed? State exceptions.

8. What does the "ablative absolute" express? Why is it so much used in Latin? Give examples of the omission therein of (a) the verb, (b) the noun or pronoun.

9. Translate into Latin: Of what city were the walls two hundred feet high? A few years afterwards he went to America. The name of Julia was given to the girl. His friends promised to come to the help of the consul. It is said that the city having been taken by the Germans was burnt in the year A. D. 1388.

III.

(For Candidates seeking a First or Second Class.)

CICERO: FIRST ORATION AGAINST CATILINE.

TIME: TWO HOURS.

A. Translate Chap IX to—*vix molem istius invidiae, si in exsilium jussu consulis ieris, sustinebo.*

1. *Dixi ego idem in senatu, caedem te optimatum contulisse in ante diem V. Kalendas Novembres, tum quum multi principes civitatis Roma non tam sui conservandi quam tuorum consiliorum reprimendorum causa profugerunt.* Translate and write notes on the syntax of italicized words, and on the method of calculating the corresponding date in English.

2. (a) Note any peculiarities of declension of: *ös, jussu, sitis, artus, vulgus, vir, aura.* (b) Mention a dozen nouns that have different meanings in sing. and in pl.

3. Write in full: *IÖÖ CIÖ IÖXLIX.* What is the Latin of: $\frac{1}{7}, \frac{5}{8}, \frac{2}{9}$.

4. What fut. participles active do not take the form of the supine.

5. Quote from the Sixth Book of the Aeneid (a) imitations of Greek syntax, or (b) poetical constructions.

6. When is "that" translated by (a) acc. and infin., (b) *ut* and subj., (c) *quin* and subj.?

SECOND YEAR.

CICERO: ORATIO PRO MILONE. HORACE: ODES, BOOK III.

TIME: THREE HOURS.

I.

A. Translate Pro Mil., Chap. XXVI., to—*qui vi judicia ipsa tolleret.*

1. Account for the moods of: *sit, accidat, credat, videret, caperet, tolleret.*

2. Explain the syntax of italicized words: (a) *Cave sis mentiaris.* (b) *Profectus id temporis.* (c) *Quem sciret Clodius... iter solenne... ante diem XIII. Kalendas Feb. Miloni esse Lanuvium ad flaminem prodendum.* Describe also the method of finding the (nominally) corresponding day in our Calendar.

3. What caused this oration to be written?

B. Translate Ode IV., vss. 9-28.

1. Describe the situation and give the modern names of: *Vultur, Praeneste, Tibur, Palinurus, Bosporus.*

2. *Non me Philippis versa acies retro:* give as full an account as you can. Horace refers to the same circumstance elsewhere.

3. How does Horace imitate Greek syntax?

II.

1. Mark gender and note peculiarities of declension of: *fidibus, anciliorum, Tempe, tigres, Praeneste.*

2. Parse, giving chief parts: *cuperent, conniventibus, revixerit, regnanto, blandientis, debacchatus.*

3. Scan the third stanza of extract C. Give rules for quantity of final syllables of second line of the stanza.

4. (a) Distinguish: is, ille, iste, hic: quis, aliquis, quisnam, quidam.
(b) Show by simple examples in what various ways "that" may be translated.

5. Translate into Latin: When Caesar had been slain, Antonius showing his blood-stained garment, excited the people against the conspirators. Therefore Brutus retired from Rome and afterwards fought his enemies in Macedonia. Being defeated, he said to one of his companions, "slay me with your sword, lest I fall into the hands of the enemy." (Translate this sentence also in the indirect form.) Antonius seeing the body of Brutus, threw over it his purple cloak.

III.

(For Candidates seeking a First or Second Class.)

HORACE: ODES, BOOK IV.

TIME: TWO HOURS.

A. Translate Ode VIII., vss. 9-24.

1. What difficulty has been found in verses 15-20? What suggestions have been made to remove the difficulty? What seems to be the real explanation.

B. Translate Ode XV., vss. 1-16.

1. Explain: (a) Et signa nostro restituit Jovi,
Derepta Parthorum superbis
Postibus.

(b) Janum Quirini clausit.

2. Quote imitations of Greek syntax in Horace.

3. Scan these lines and name the metrical systems they belong to:

(a) Neu desint epulis rosae.

(b) Angulus ridet ubi non Hymetto.

(c) Victis minores volvere vertices.

(d) Crinibus ambiguoque vultu.

C. Translate into Latin: I do not know whether there is anything more agreeable than to hear one's praises uttered by some one who is free from flattery. The following remark of Cicero illustrates this better than a thousand treatises on flattery: "The most subtle flattery," says that author, "is to tell your friend that he is above flattery, and to say that you do not know how to flatter him."

THIRD AND FOURTH YEARS.

PLAUTUS: CAPTIVI. TERENCE: ADELPHI. JUVENAL: SATIRES,
III., X., XIII.

TIME: THREE HOURS.

A. Translate: Capt., Act III, Sc. 1, vss. 3-17.

1. Parse: "edit," "ecfertum," "arti," "terunci," "ilicet." What was the value and the other name of "terunci"?

2. Explain: Nil morantur iam Lacones imi supseli viros.

3. Either (a) account for the forms: dixis, reconciliassere, creduis, votuin, donicum; or (b) give meaning and derivation of: sesquipus, latomias, horaeum, libella, plagipatidas.

B. Translate: Adel, Act IV., Sc. 4, vss. 15-25.

1. Explain syntax of: "ut ne qua exeat," "indicasse." What does "ipsum id" refer to? What is the opposite of "pultare fores?"

2. When and where was the Adelphi first acted? What was the accompaniment? Name Terence's other plays.

3. Scan first three lines of Extract B.

C. Translate: Juv., Sat. III., 232-242.

1. Write a critical note on: "ingenti curret super ora Liburno."

2. Comment on: Et qui nec Cynicos nec Stoica dogmata legit
A Cynicis tunica distantia.

3. Which syllables are retained and which dropped in French as compared with Latin? Illustrate by examples. An initial syllable is sometimes added? Give examples. Show how *chevaux* came to be a plural form. Illustrate the changes by other words.

D. Translate into Latin: Hannibal, the commander of the Carthaginian fleet, leaped into a boat and escaped from the hands of the Romans. Fearing, however, lest he should suffer punishment for the loss of the fleet, he sent one of his friends to Carthage before the news of the disaster had reached home. He, entering the Senate-house, said "Hannibal asks you, should he fight with the Romans?" The whole Senate shouted "there is no doubt but that he should fight!" Then said he "He did so and was conquered." So they were unable to condemn him for fighting without orders.

(For Candidates seeking a First or Second Class.)

E. Translate this passage taken from a work not previously named:

Egomet quoque ejus causa in funus prodeo,
Nihil suspicans etiam mali. (So.) Hem, quid est? (Simo.) Scies.
Effertur; imus. Interea inter mulieres,
Quae ibi aderant, forte unam adspicio adolescentulam,
Forma—Sosia. Bona fortasse.—Si. et vultu, Sosia,
Adeo modesto, adeo venusto, ut nihil supra.
Quia tum mihi lamentari praeter caeteras
Visa est, et quia erat forma praeter caeteras
Honestam et liberali, accedo ad pedisequas:
Quae sit rogo. Sororem esse aiunt Chrysidis.
Percussit illico animum: at at! hoc illud est,
Hinc illae lacrumae: haec illa est misericordia.

MATHEMATICS.

Examiner.....C. MACDONALD, M. A.

FIRST YEAR.—GEOMETRY.

TIME: THREE HOURS.

1. In a circle the greater chord is nearer the centre than the less. Prove this, and deduce that the diameter is the greatest chord.

2. If from a point in the circumference of a circle a tangent and a secant be drawn, the angle between them is equal to the angles in the alternate segments of the circle.

3. About a given circle describe a triangle equiangular to a given triangle.

4. Take a line BD, bisected in F, and divided either internally or externally in any other point G. Prove one of Euclid's propositions respecting the parts of this line.

5. Describe the steps by which a square is found equal to a given polygon, whose sides are straight lines.

6. If two triangles have an angle in the one equal to an angle in the other and the sides about these angles proportional, they are similar triangles.

7. If a point be taken within a par-gram and lines be drawn to the angles, and also a diagonal: the triangle standing on the diagonal, vertex the assumed point, is equal to the difference of those standing on the adjacent sides.

8. To what proposition in Euclid does the following identity correspond? viz.: $(a-b)^2 + 4ab = (a+b)^2$. Why do you not call this a proof?

9. If from the ends of a diameter of a circle tangents be drawn meeting a third tangent, the latter is equal to the sum of the former and subtends at the centre a constant angle.

10. Find the angles of regular polygons of 15 and 20 sides, and shew that the greater the number of sides, the greater is the angle of the polygon.

11. The base of a triangle is given and the vertical angle is constant and from the ends of the base perpendiculars are drawn to the sides: Prove the locus of their intersection to be the arc of a circle, and determine the relation it bears to the triangle.

FIRST YEAR.—ALGEBRA.

TIME: THREE HOURS.

1. In the division of Decimals, what is your rule for placing the point (·) in the Quotient? Illustrate.

2. Shew the arithmetical advantage of rationalizing the denominators of surd expressions. Treat also the following example, $\frac{6}{\sqrt{3}-\sqrt{2}}$.

3. Reduce to lowest terms $\frac{3x^3 + x^2 - 5x + 21}{5x^3 + 29x^2 + 26x - 21}$ also
 prove $m^4 - n^4 + 2n(n^3 + n^3) - (m+n)^2(m-n)^2 = 2m^2n(m+n)$.

4. $ax + by + cz = m$; $a_1x + b_1y + c_1z = m_1$; $a_1x + b_1y = n$. Shew how to solve these simultaneous equations.

5. Given $x + 2y = 14$ and $x^2 - 3y^2 = 37$; to find x and y .

6. Define a root of an equation: and if $x^2 + px = q$, shew the sum of the roots $= -p$, and their difference $= -q$.

7. Form the equation whose roots are 0, 1, 2, -2. Also, if $x^2 + px + q = 0$, a and b being the roots, $\frac{a}{b} + \frac{b}{a} = \frac{p^2}{q} - 2$.

8. The ages of a father and his son are together 80 years, and if the age of the son be double it will exceed the father's by 10 years. Find their ages.

9. Shew that in a Geom. Series, the product of terms equidistant from the extremes is constant. Also, if the first term of such a Series is 18 and the 3rd is 2, find the limit of the sum of the Series.

10. The 1st term of an Arith. Series is 2: the last is 42: and the sum is 198. Find the Series. Sum also n terms of the Series,

$$\frac{n-1}{n} + \frac{n-2}{n} + \dots$$

11. Find general solutions of the equations $8x - 5y = 37$. Prove by one illustration that you are correct.

12. Find the n th term of the Harm. Series whose first terms are a and b . And shew that, in all cases, $x^3 + y^3 > x^2y + xy^2$, unless $x = y$.

SECOND YEAR.—GEOMETRY.

TIME: THREE HOURS.

1. Find a mean proportional between two given lines. Shew also, from your construction, with the aid of a proposition in Book II, that the square of the mean is equal to the rectangle of the lines.

2. On a given line construct a figure similar to a given rectilinear figure.

4. Given reason for the attaching of great importance to the 20th proposition of Book VI.

5. Shew how to represent the ratio of two equiangular par-grams by means of two lines. Give also Euclid's enunciation, and prove the proposition.

6. Prove that the rectangle of two sides of a triangle is equal to the rectangle of the perpendicular on the base and the diameter of the circumscribing circle.

Deduce hence the formula, $R = \frac{abc}{4S}$.

7. A point P is taken in the radius CB of a circle, the centre being C, and CB is produced to Q so that CP:CB::CB:CQ. Prove that PB and BQ subtend equal angles at any point in the circumference.

8. Cut off an n th part from a given par-gram by a straight line parallel to a diagonal.

9. From a given point, P, straight lines are drawn to meet a given line, and parts measured from P are cut off so that the rectangles contained by the lines and their several parts are all equal. Prove that the points of section lie in a circle.

10. The height of a cone is 15 ft. and the diameter of the base is 4 ft. Find the conical surface and the cubic contents.

SECOND YEAR.—TRIGONOMETRY AND ALGEBRA.

TIME: THREE HOURS.

1. A mill wheel makes $3\frac{1}{2}$ revolutions a minute; find the circular measure of the angle described by a point in its circumference in half an hour.

2. Enumerate the six commonly employed trigonometrical functions of an angle, and shew that they are not independent.

Given $\sec A = \frac{a+b}{2\sqrt{ab}}$ to find the other five functions.

3. What is the reason that an ambiguity arises when an angle has to be determined from its sine? Illustrate by a case.

4. Write the analytical expressions for $\sin \frac{A}{2}$, $\cos \frac{A}{2}$: and go on to shew that the area of a triangle is $\sqrt{s(s-a)(s-b)(s-c)}$.

5. Write the formulæ for $\sin(A+B) \pm \sin(A-B)$: and shew $\sin(n+1)A = 2 \sin nA \cos A - \sin(n-1)A$, and $\sin(A+B) \sin(A-B) = \sin^2 A - \sin^2 B$. The former has one very useful application in finding a Table of circular functions.

6. What must be the data for the solution of right-angled triangles? Illustrate by two cases and write the logarithmic equations in each case.

7. Shew that the radius of the escribed circle that touches side a is $= \frac{S}{s-a}$.

8. Given a Table of the logarithms of numbers; to prepare Tables of the logs. of circular functions.

9. Illustrate the use of Napier's rules of "the five circular parts" in two cases.

10. Write the r^{th} term of the expansion of $(a^2 + x^2)^n$, and the middle term of $\left(x - \frac{1}{x}\right)^{2n+1}$.

11. The arithmetical processes of involution and evolution are avoidable by the use of logarithms. State how, and prove. Prove also, $\log_e a \log_a b = 1$.

SECOND YEAR.—EXTRA.

TIME: THREE HOURS.

1. If two planes be perpendicular to a third, their common section is perpendicular to the same.

2. Draw a plane cutting a given plane at a given angle, the line of common section being given.

3. The area of a spherical triangle, radius of sphere being r , is $\frac{A^\circ + B^\circ + C^\circ - 180^\circ}{180} \pi r^2$.

4. Do you calculate a Table of Napierian logarithms before finding common logarithms? If not, shew the necessary steps. From the expansion of e^x prove that $e = \frac{-1}{1.2.3} + \frac{2}{1.2.3.4.5} + \frac{4}{1.2...6.7} + \&c$.

5. Find values of x , besides those contained in $\cos x = 0$, in the equation, $\sin x + \sin 3x = \sin 2x + \sin 4x$.

6. Wishing to know the height of an inaccessible object, situated in a plane, the observer measured the angle α of elevation at a station A. He then measured a distance, d feet, in a direction making 120° with the direction from A to the base of the object. Here the elevation was β° . Shew how to find the height of the object.

7. a, b, c , are the sides of a triangle: r, r', r'', r''' are the radii of the four circles touching them. Prove

$$ab + ac + bc = r r' + r r'' + r' r'' + r' r''' + r'' r''''.$$

8. A bag contains 5 white balls and one black. A person offers to bet that in 3 trials, drawing 2 at a time and replacing if unsuccessful, he will draw the black ball. Shew that if he can get any one to lay 5 to 2 against him, he will have a slight advantage.

9. A person invested £A at the beginning of the 1st year, £2A at the beginning of the 2nd, £3A at the beginning of the 3rd, and so on. With the usual notation, the amount of the investments at the end of the

n^{th} year, is found to be = $AR \frac{R^{n+1} - 1}{(R-1)^2} - \frac{nA}{R-1}$.

THIRD YEAR IN ARTS.

Examiner J. G. MACGREGOR, D. Sc.

MATHEMATICAL PHYSICS.

MONDAY, APRIL 12TH. 9 A. M. TO NOON.

N. B.—Answer only three questions from group A, three from B, and five from C. Those marked with an asterisk have the higher values.

(A.) 1. Define acceleration. Prove $s = vt + \frac{1}{2}at^2$ if s is the space passed over by a point moving with a uniform acceleration a during t seconds, the initial velocity being v .

*2. A particle is projected in vacuo with an initial velocity whose magnitude is 1 ft. per sec., and whose direction has an inclination of 45° to the horizontal. Find its horizontal range. (If you use a formula deduce it.)

*3. Apply the properties of the hodograph to determine the direction and magnitude of the acceleration of a point moving uniformly in a circular path.

4. Shew that the parallelogram law applies to the composition of accelerations, assuming its application to velocities.

*5. Shew that the parallelogram law applies to the composition of rotations.

(B.) 1. Give the "Second Law of Motion." Hence shew how to determine the "absolute unit of force," and define it in terms of British and French Units. What effect is produced on the magnitude of the absolute unit of force, by doubling the unit of time involved in it?

*2. A particle of mass m is h ft. above the earth's surface. Shew that its potential energy in this position is greater than it would be at the earth's surface, by the amount of work done in lifting it from the one position to the other.

*3. Shew that if a simple pendulum of length l vibrate through very small angles, the time of a single oscillation is $\pi \sqrt{\frac{l}{g}}$.

4. To keep a particle of weight W in equilibrium on a smooth inclined plane of inclination α a force F is exerted making an angle β with the horizontal. Determine F in the case in which $\alpha < \beta$.

5. If the unit of momentum be the momentum possessed by a mass of 10 lb. after falling freely from rest during 1 sec., and the unit of kinetic energy, the kinetic energy of 1 lb. after falling freely from rest during 2 sec. Find the units of mass and velocity.

(C.) 1. Define centre of Mass, centre of parallel forces, centre of gravity. Shew that the centres of Mass and of parallel forces are coincident. Under certain conditions the centre of Mass of a body of any form may without much error be regarded as a centre of gravity.

2. Find the centre of mass of a triangular plate, or of a thin wire bent into the form of a triangle.

*3. Find the Kinetic energy of a rotating body.

*4. Find the time of oscillation of an ordinary pendulum whose moment of inertia is I , the distance between its centre of mass and the fixed axis of rotation being d .

*5. How many degrees of freedom may a particle have? How many a rigid body? How many has (a) a sphere which must maintain contact with a plane (b) a cube one of whose edges must keep a fixed direction?

*6. A rod AB rests with one end A on a rough horizontal plane. A cord fastened to B passes over a smooth peg above the plane and carries a body whose weight is W : determine the position of equilibrium and the pressure on the plane when A is just about to slip along the plane towards the peg.

7. Determine by any method the mechanical advantage of any one of the simple machines.

8. Two spheres, impinge directly and do not recoil. Find their velocities after impact in terms of the velocities before impact and the masses.

*9. In the general case of the direct impact of spheres, determine the velocities after impact. In what circumstances may the coefficient of restitution be zero? Find in this case the loss of molar kinetic energy.

EXPERIMENTAL PHYSICS.

TUESDAY, APRIL 13TH, 9 A. M. TO NOON.

N. B.—Answer only two questions from group A, four from B, one from C, and four from D. These marked with an asterisk have the higher values.

(A.) 1. To determine the density of a given liquid, what apparatus would you use? What measurements would you make? And how would you use your measurements?

*2. Describe and explain two experiments illustrative of surface tension. Shew that the height to which a liquid will rise in a capillary tube must be inversely proportional to the radius of the bore.

3. State Boyle's Law. Shew how it may be determined experimentally and represented graphically.

(B.) 1. The coefficient of expansion of no other liquid being known, how would you determine that of mercury?

*2. Shew from a consideration of the isothermal and adiabatic diagrams of a substance which contracts as its temperature rises, that if its volume be suddenly (and therefore diabatically) increased, its temperature must rise.

3. Define the specific heat of substance and the capacity for heat of a body. 1 lb. of mercury at 100° C was mixed with 1 lb. of water at 7° C, and the temperature of the mixture was found to be 10° C. Find the specific heat of merc $\frac{c}{y}$.

*4. 42 oz. of a liquid whose temperature is 24°C , and specific heat .6, are contained in a copper vessel whose mass is 4 oz.; a half ounce of ice -4°C is added. Find the temperature of the mixture when it has become uniform throughout. The specific heat of copper is .09, that of ice is .5. The Latent heat of water is 80.

5. Show what effect increase of pressure must have (a) on the freezing point of a substance which expands on freezing, (b) on the boiling point of a liquid. Describe experiments to shew the accuracy of your conclusions.

*6. Bring evidence to prove that heat is not a form of matter but is a form of energy. State the Laws of the Conservation, Transformation, and Dissipation or Degradation of Energy.

*7. Given the following data, determine the mechanical equivalent of heat:

1 cu. metre of air at 0°C and 760 mm. pressure weight 1.2932 kilograms.

The coefficient of expansion of air = $\frac{1}{273}$.

The specific heat of air at constant pressure = .237.

“ “ at constant volume = .167.

The density of mercury = 13.596.

Mayer made an unwarranted assumption in using these data. What? Joule rendered the method trustworthy. How?

(C.) 1. Describe the different inductive effects produced in different substances when brought into a magnetic field. Account for the different positions relative to the lines of force assumed in an intense field by suspended bars of iron and bismuth respectively.

*2. How would you determine the intensity of field at any point on the earth's surface in absolute measure?

(D.) 1. Describe any one electrical machine, indicating the mode in which energy is expended in doing the work of electrical separation.

*2. Describe some common form of condenser. What is its function? How does it work? Determine the capacity of a condenser of the simplest form, in terms of its linear dimensions.

3. What are the two conditions of the flow of a permanent current in any circuit? Describe any arrangement by which such a current may be produced, shewing how these conditions are fulfilled.

*4. Describe the galvanometer or any other instrument by which electric currents may be measured. Justify the use of the instrument you describe for this purpose.

*5. Indicate the transformations of energy which occur in an ordinary galvanic circuit. How are they affected (a) if a magnet hangs in the neighborhood, (b) if the current flows through an electrolyte, (c) if a coil of wire with its ends joined is moved in the neighborhood.

*6. Deduce Joule's Law of the development of heat in a circuit through which a current is flowing.

FIRST YEAR IN SCIENCE.

ELEMENTARY CHEMICAL PHYSICS.

FRIDAY, APRIL 16TH, 9 A. M. TO NOON.

1. Define specific gravity and density. Find in British units the density of a body whose specific gravity is 8, (the mass of one cu. ft. of water being taken to be 1000 oz.) Express it also in French units.

2. Describe experiments by which you would determine the specific gravity of (a) a liquid, (b) a solid whose density is less than that of water.
3. How would you proceed to obtain crystals (say Copper Sulphate) from a solution of that salt?
4. How would you apply the known laws of the absorption of gases by liquids to shew that air is merely a mixture of gases, not a chemical compound?
5. I wish to be able to read off at any moment the pressure of the gas in a certain vessel. What arrangement of apparatus will enable me to do so?
6. State Boyle's Law and Charles' Law. How would you test their accuracy by experiment?
7. A certain mass of gas has at 45° C and 89 mm. pressure, a volume of 4 litres. Find its volume at 340° C and 224 mm. pressure.
8. Describe the mercurial thermometer.
9. Reduce 24° C to the Fahrenheit Scale, and -22° F to the Centigrade Scale.

BOTANY.

Examiner..... .PROFESSOR LAWSON.

APRIL 10, 1880.—9 A. M. TO 12 A. M.

1. Explain these three modes or processes of Cell Origin:—(1) Rejuvenescence. (2) Cell Division. (3) Free Cell Formation. Give examples.
2. Give a minute account of the Anatomy of a Leaf, describing its parenchyma, epidermis, stomata, hairs, glands, stings, &c., enumerate the various parts of the leaf, and its appendages, and notice the different kinds of Venation characteristic of certain natural groups of plants.
3. Give an account of the mode of arrangement of Leaves (proper) on the axis, and of modified leaves constituting the floral envelope, androecium and gynoecium.
4. Enumerate the Coniferous Trees that grow in Point Pleasant Park, and note the botanical characters by which they may be distinguished from each other.
5. Give a life history of a Mould Fungus, such as *Aspergillus* (*Penicillium*) or *Mucor*, noticing particularly the mode of production of reproductive bodies, and their germination and subsequent development.
6. Describe the Prothallium of a Fern, its Antheridia and Pistillidia, the Phytozoa, the Process of Impregnation, and the mode of development of the fern-froid from the Prothallium.
7. Describe the process of reproduction in true mosses (*Musci*).
8. Give a general outline of classification of Sea Weeds.

CHEMISTRY.

APRIL 15.—9. A. M. TO 12 A. M.

1. The relative weights according to which bodies combine are invariable for each combination. Explain and illustrate this statement.
2. What is the relation, (1) between the volumes of gases which combine, and (2) between the sum of the volumes of the combining gases and the volume of the gas resulting from the combination.
3. Give a concise statement of the history and chemical characters of the two principal gases composing the Atmosphere.
4. Explain the chemical nature of the process of combustion as exemplified in the burning of a candle, show what conditions are necessary, also what the products of combustion are, and how they may be collected and weighed.
5. Give an account of the Oxides of Iron, noticing the principal salts, and give tests for (1) ferrous, and (2) ferric salts. Explain the occurrence of Iron in solution in natural waters, and the production of a precipitate of iron rust in streams and wells.
6. Explain the action of Lime on cultivated soils, and specially the various changes on Silicates which it induces or promotes.
7. Describe the mode of occurrence of Gold in the rocks and alluvium of Nova Scotia, and explain, with special regard to the chemical character of Gold, and of its associated metals, the probable conditions under which it was deposited.

EXTRA FOR UNDERGRADUATES IN ARTS.

8. Carbon is a tetrad element. Explain precisely what is meant by this. Give examples of Saturated Hydrocarbons. Explain what is meant by Saturation, and by the terms Residue, Radical. Show that common Alcohol is a saturated compound.
9. Show the relation to each other of Ethers, Alcohols, Aldehydes and the Volatile Fatty Acids.

EXTRA FOR STUDENTS IN MEDICINE.

10. Explain the chemical character of Glycerine as a constituent of natural fat.
11. Estimate the per centage of H Cy in solution.
12. Describe Chloroform with respect to its chemical constitution, mode of preparation, properties, and tests for its presence in minute quantity.
13. Describe fully the process for testing for Arsenic, and for estimating the amount present.

EXTRA FOR UNDERGRADUATES IN SCIENCE.

FIRST YEAR AND SECOND YEAR.

14. Give a brief account of the work done by you in the Chemical Laboratory during the session.

ETHICS.

VERY REV. PRINCIPAL ROSS, D.D.....*Examiner.*

APRIL 8, 1880.

1. Write out a Syllabus of the principal subjects discussed in the Class during the Session.
2. Explain the relation which exists between the Intellect and the Will; and the mental state or states thro' which the former reaches the latter.
3. Point out the difference between Desires and Volitions.
4. Define, as sharply as you can, the Moral Faculty. Is it original; or is it merely the result of education? Assign reasons for your answer.
5. Point out the connexion between Reasoning and Conscience.
6. How do we obtain our conceptions of Right and Wrong?
7. Specify the duties which a man owes to himself.
8. In what sense is an ambiguous promise to be interpreted?
9. In the case of conflicting duties, what is the best mode of deciding?
10. State the objection to the "Argument from Design" based on the Correlation of Forces.
11. Produce proofs against the Correlation of Mental and Physical Forces.
12. What is the grand defect necessarily inherent in every system of Natural Religion?

POLITICAL ECONOMY.

1. Shew that Political Economy is both an Inductive and Deductive Science.
2. Point out the connection between Political Economy, and Mental and Physical Science.
3. Define sharply the terms *Produce, Value, Price, and Currency.*
4. Point out the methods by which the productiveness of human industry may be increased.
5. What inducements should be held out to stimulate industry?
6. Describe the condition of a community in which there are no merchants, and no circulating medium.
7. What persons and what countries exchange least with each other? What most?
8. Why cannot a paper currency be based on landed property as well as upon specie?
9. Enumerate the classes of laborers among whom the price of a pound of tea is to be distributed.
10. Shew that a tax upon rent falls wholly upon the owner of the land.
11. In what circumstances will a reduction of taxes increase the revenue? In what circumstances will it produce an opposite result?

METAPHYSICS AND AESTHETICS.

PROFESSOR WILLIAM LYALL, LL.D. *Examiner.*

1. Under what phase does the Ontological question, or the problem of being, present itself to the Physicists of the present day? At what point do they find themselves arrested by the question as to the nature of being?

2. What form does the question assume under the Schoolmen? How did it emerge in Descartes' philosophy? How is his philosophy essentially ontological while it starts from a purely psychological basis?

3. What modification does the controversy as between Realism and Nominalism, or Conceptualism, undergo from the time of Locke?

4. How do the theories of perception hold as in a precipitate the question of being? Show how Sir W. Hamilton's doctrine of Immediate Perception is, by his own admission, at least in the proportion of 6 to 12, as much cosmothetic and representational as the theories which he denounces?

5. What is Aristotle's division of mind? What solecism in philosophy is involved in this? What is Kant's trichotomy of mind, and how may it be shown that the Emotions are an integral part of the mental furniture?

6. How have the emotions been classified? How do these modes of regarding the emotions afford no philosophic ground or principle of classification? What alone seems to be the proper principle of classification, and what accordingly is the classification we have proposed?

7. What are the Happy Emotions? Distinguish between Happiness and Pleasure. What is Aristotle's definition of Pleasure? Wherein may Descartes' definition—that it is "the consciousness of any of our perfections"—be vindicated?

8. What are the specific emotions under the generic idea, elevation? Analyse the state, Wonder, and show how it blends in all the specific emotions of the same class.

9. State briefly the theories of the Beautiful and Sublime. How does Art range under this state? Cousin says "Beauty is Expression." What is Art? How may the Arts be classified?

10. Classify the Desires according to the Emotions. Identify the Desire of Worth or Value. How may it be regarded as the sort of balance-wheel among the desires? What views have been held on the subject of Conscience? How does Sir James Mackintosh propose to supplement Butler's view? What is the view given in the class? Is the Will nothing more than the prevailing Desire, or the highest energy of the Optative state?

LOGIC AND PSYCHOLOGY.

1. On what ground may we vindicate the independence and integrity of Mind against the materialist?

2. Can we draw the dividing line between Sensation and Intellection. How may they be distinguished?

3. Under what different forms does Intellection manifest itself, and how may the Mental phenomena be classified accordingly?

4. Distinguish between Abstractive Generalization and Inductive—in other words between Classification and Generalization proper.

5. Is there such a thing as *Inductive Reasoning*, or is not reasoning essentially deductive? Indicate the deductive element in the so called inductive process. What is the general premiss in every case of Induction?

6. "Mercury, Venus, Mars, are all the planets," or "The motion of Mercury, Venus, Mars, is the motion of all the planets." How is that proposition obtained? Supply a minor premiss, and draw the conclusion: "All the planets revolve in an elliptical orbit round the sun."

7. The extensive syllogism is synthetic and progressive, the Intensive analytic and regressive: Show this, and characterize the Intensive syllogism accordingly. What is Mill's quarrel with Sir W. Hamilton for still retaining the Extensive syllogism, or reasoning in the Extensive quantity?

8. Is reasoning a matter of quantity. If not, what account can you give of it?

9. State the rules of the Extensive Syllogism, and those of the Intensive, respectively, and show the reason in each case. Give a scheme of the Fallacies in so far as they are a violation of the rules (limiting the consideration to the Extensive Syllogism), and distinguish between Formal and Material Fallacies—"in dictione" and "extra dictionem."

10. What is the doctrine of Method? Give the rules of Division and Definition. What are Probations in respect of their Matter, Form and Cogency? What fallacies are more liable to be fallen into in extended argument, and what accordingly are the rules of Probation?

B. A. HONOUR EXAMINATIONS IN ENGLISH AND HISTORY.

Examiner.....*CHAS. E. MOYSE, B. A.

I.

ANGLO-SAXON.

TIME: THREE HOURS.

Translate the following extracts into modern English.

A. (The end of the struggle between Beowulf and Grendel.)
 Beginning at: *Dhá that onfunde se the fela æror.*
 Ending at: *Sécean wynleás wíc.*

1. Make a note or two, either grammatical or philological, on the words and portions of words italicized: (*the fela, cynne, widh, lichoma, nolde, gehwother, æglæca, onsprungon, scolde, thonan, wynleás, wíc.*)

2. Give the principal parts of the *strong* verbs in Extract A. [(inf.)—(past tense, 1st pers. sing. and pl.)—(past part.)]

B. (The visit of Grendel's mother to Heorot.)
 Beginning at: *Com thá tó Heorote, dher Hring-Dene.*
 Ending at: *byrnan síde, thá hine se broga angeát.*

1. The poem Beowulf: (a) its approximate date? (b) the locality of its events? (c) why are the interpolations found in it noteworthy?

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2. Explain the system of Anglo-Saxon alliteration.

C. (Pope Gregory sees the English slaves on sale at Rome.)

Beginning at: Dha gelámp hit, æt sumum sæle, swa swa gýft
for oft dedh.

Ending at: and swilcum gedafenadh thæt hí ou heofenum
engla geferan beon.

Questions on Extract C.

1. *Sæle*, exact meaning? can you cite derivatives? *byrig*, etymology? *code*, parse; *stræt*, etymology? *gesette*, parse; *ædhellice*, resolve into elements; *innweadre*, decline in singular (all genders); *walawá*, can you give the subsequent history of this word? *arode*, quote other examples of kindred metathesis; *heofonum*, etymology? from what is the word *hell* derived? *swilcum*, can you name other words that, before they assumed their present form, underwent the same changes as *swile*?

2. Decline any three nouns, of different declensions, in the above Extract.

3. What are the tense sources of our verb *be*?

D. (S. Guthlac goes to Croyland.)

Beginning at: Thá was Tátwine geháten sum man.

Ending at: to thære stowe the man hátedh Cruwland.

Questions on Extract D.

1. *edland*, whence the 's' of the modern word? *man hátedh*, what part of speech is *man* and what form does it assume in Early English?

2. Tell the difference in meaning between *ac* and *ác*; *bær* and *bær*; *bed* and *béd*; *geat* and *geát*; *man* and *mán*.

II.

SEMI-SAXON AND EARLY ENGLISH.

TIME: THREE HOURS.

Render into modern English.

A. (Ormin tells his brother why the Ormulum was written.)

Beginning at: Icc hafe don swa summ thu badd.

Ending at: thatt itt iss broiht till ende.

1. Into what periods may the history of our language be divided? Into which does the Ormulum fall?

2. Name the three great Early English dialects and say to which Brother Ormin's work belongs. Can you give any inflections by which these dialects may be readily distinguished?

3. Account for the seemingly strange orthography of the Ormulum. Make a few critical notes on the words and parts of words italicized in Extract A: (*inuntil*, *mikell*, *yerne*, *forrthi*, *unn*.)

B. (The King of Scots and the Duke of Cornwall take counsel touching King Lear.)

Beginning at: Tha ilomp hit seodhdhe, sone tharæfter.

Ending at: and libben on lisse, the while the he leouede.

1. Cite a few facts of Layamon's life. From what source did he chiefly derive the materials of his "Brut"?

2. By reference to the inflections of Extract B show that the older forms of the language are being weakened.

C. (Holy Church makes herself known to the author of *Piers the Plowman*.)

Beginning at: *Thenne hedde I wonder in my wit what wommon hit weore.*

Ending at: *"Hou I may save my soule that seint art i-holde."*

1. Explain the full title of the poem from which Extract C is taken. What was the aim of the writer, and why is his style worthy of note?

D. (Chaucer's description of the wife of Bath.)

Beginning at: *A good wife was ther of byside Bath.*

Ending at: *But therof needeth nought to speke as nouthe.*

E. (Townpeople are persuaded by a traveller that the body of his murdered companion lies concealed in a cart. They take action in the matter.)

Beginning at: *The people upsterte and caste the cart to ground.*

Ending at: *Mordre will out, this my conclusion.*

1. Comment on the words and portions of words italicized in Extracts D and E: (*somdell, haunt, ne, noon, kevercheffs, weren, grounde, at chirche dore, withouten, nouthe*; *middes, newe, byreyest, wlatson, abhominable*.)

2. Account for the frequency of the final 'e' in Early English.

3. (a) What noteworthy differences exist between the *Canterbury tales* and the *Decameron*. (b) Is Chaucer's language "English unde-filed"?

4. Unfold the meanings of the following words and explain the allusions quoted: *me thinketh*; *nightertale*; *gauded al with grene*; *He wolde the see were kept for any thinge*; *Seynt Julian he was in his countré*; *He kepte that he wan in pestilence*; *Gattothed*; *the Tabard, faste by the Belle*; *why crydestow? wanhope*; *the shippes hoppesteres*; *the herte-spons*; *the fayre cheyne of love*.

III.

MODERN ENGLISH.

1. What is the general plan of the *Faerie Queene*, as set forth by Spenser in his introductory letter to Sir Walter Raleigh? What do the chief actors in bks. i. and ii. mean in the allegory? Explain a few archaic words and phrases in the *Faerie Queene*, and say whence Spenser derived the essentials of his stanza and how he modified them.

2. Describe (a) Arthur, and his combat with Orgoglio, (b) the visit of the Red Cross Knight to the Cave of Despair, (c) the sights shown to Sir Gayon by Mammon.

3. Say why Shakespeare merits the esteem in which he is held, and appeal to the plays you have studied for the corroboration of your statements.

4. Show that in "*Julius Cæsar*" there exist various types of conspirators and analyse, in especial, the characters of Brutus and Cassius.

5. What is noteworthy in the dramatic construction of the *Tempest*? Contrast the mental natures of Prospero, Ariel, Caliban.

6. Give the substance of the dialogue between Gloucester and Edgar on the cliff near Dover. Describe the choice of the caskets in the *Merchant of Venice*. To whom was Shakespeare indebted for the casket story?

7. Notice a few striking points of difference between Shakespearean and Modern English. In what connexion do the following lines occur?

(a) "*Aroint thee witch!*" the *rump-fed ronyon* cries.

(b) *The great man down, you mark his favourites flies.*

(c) *Throw physic to the dogs, I'll none of it.*

(d) but you, O you!
So perfect and so peerless, are created
Of every creature's best.

(e) And see *my wealthy Andrew* docked in sand.

(f) The fool hath planted in his memory
An army of good words.

Comment on the words italicized.

8. Justify by Bacon's arguments *one* of the following statements:—

(a) "There be therefore chiefly three vanities in studies whereby learning hath been most traduced."

(b) "Learning. . . . hath no less power and efficacy in enablement towards martial and military virtue and prowess."

9. Explain the titles *L'Allegro* and *Il Penseroso* and examine the construction of these poems. What is noteworthy about Miltonic epithets?

10. Give an outline of the plot of *Comus* or relate the incidents described in the second book of *Paradise Lost*. Can you cite the contexts of:

(a) *Battening* our flocks with the fresh dews of night.

(b) Farewell happy fields

Where joy forever dwells: hail, horrors, hail
Infernal world.

(c) Grate on their *scrannel* pipes of wretched straw.

(d) Thus sang the *uncouth* swain to th' oaks and rills.

Make a note or two on the words italicized.

11. What events are celebrated in the *Annus Mirabilis*? Sketch the character of Absalom or of Achitophel, as described by Dryden.

12. Discuss the philosophy of the *Essay on Man*. Notice, in order, the salient points of any one of its epistles. Supply the contexts of:

(a) Lo, the poor Indian! whose untutored mind
Sees God in clouds or hears him in the wind.

(b) The proper study of mankind is man.

(c) Order is Heaven's first law.

13. What light do Pope's *Satires* throw on the politics and the customs of his day?

IV.

HISTORY OF ENGLAND.

TIME: THREE HOURS.

[Bede, *Ecclesiastical History*; E. A. Freeman, *The Norman Conquest*; Froude, *Henry VIII*; Macaulay, *History of England*.]

1. What are the leading features of the history of English Saxondom before Wessex became supreme?

2. Give an account of the origin and the powers of the Witenagemót.

3. What important territorial division of England did Cnut make? Discuss Cnut's foreign policy.

4. Mention notable events in the history of Godwine and his family, during the reign of Edward the Confessor.

5. Describe the battle of Senlac and William's subsequent march to London.

6. Name, and express the tenor of the successive measures during the reign of Henry the Eighth, by which England was freed from Papal overlordship.

7. Notice Henry the Eighth's dealings with Ireland.

8. Give Froude's estimate of the character of Henry the Eighth.

9. Reproduce, as faithfully as you can, Macaulay's description of the arrest and the trial of the Seven Bishops. Tell, clearly, what issues were at stake.

10. Who were the Nonjurors? Cite a few of the arguments they advanced, and quote Macaulay's opinions concerning their principles.

11. What were the terms of the Capitulation of Limerick.

V.

HISTORY OF FRANCE.

TIME: THREE HOURS.

1. "They (the Phœnicians,) founded colonies on our shores just as they did on those of Spain and of Italy," (*Martin*). When and where?

2. Investigate (a) the social polity of the Gauls; (b) the more important tenets of Druidism.

3. Relate, in due order, the chief events of Julius Cæsar's campaigns in Gaul.

4. Through whom did Christianity find its way into Gaul? What is noteworthy in its early history there?

5. Sketch the victorious career of the Franks when establishing themselves in Gaul at the end of the 5th century A. D.

6. "Islamism found itself in front of the last bulwark of Christianity." Describe the famous battle that ensued between the two forces, and estimate its results.

7. Tell all you know concerning the Capitularies.

8. How was the empire divided on the death of Louis LeDébonnaire?

9. "Two great causes, the one moral, the other social, impelled Europe into the crusades." (*Guizot*.) Comment on this statement.

10. Examine the elements of feudal society.

VI.

GENERAL HISTORY.

TIME: THREE HOURS.

[Bryce, *The Holy Roman Empire*; Coxe, *History of the House of Austria*.]

1. What policy did Charles the Great pursue in regard to ecclesiastical and civil matters? Notice the general results of that policy.

2. Explain the title "Holy Roman Empire." By whom was the epithet "Holy" first used? "The Holy Roman Empire..... is the creation of Otto the Great;" comment on this statement.

3. Trace the connexion between Imperialism and the grand literary revival of the fourteenth century.

4. What is noteworthy concerning Nicholas Rienzi?

5. Demonstrate fully the supreme importance of the Peace of Westphalia, in the consideration of the last phase of the Empire.

6. Show the relations between Austria and Switzerland before the establishment of the Helvetic Confederacy.

7. When did Maximilian I. reign? Mention, in due order, the cardinal points in his imperial career.

8. What part has Turkey played in the History of Austria?

9. Who was Wallenstein? Sketch his campaigns.

10. Give a detailed account of the struggle which terminated in the Peace of Ryswick, and unfold the designs of each Sovereign engaged in it.

CONSTITUTIONAL HISTORY.

FOURTH YEAR.

HALLAM'S CONSTITUTIONAL HISTORY OF ENGLAND, VOL. II, VOL. III, CAP. I.

TIME : THREE HOURS.

1. Tell all you know concerning the history and the jurisdiction of the Court of Star Chamber.
2. Discuss the leading features of the policy of Laud and of Stafford. On what grounds were they impeached?
3. When did the Long Parliament sit? Name some of its salutary measures.
4. Explain the following: The *Solemn League and Covenant*; The *Self-denying Ordinance*; The *Instrument of Government*.
5. Reproduce the essentials of the character of Charles the First, as told by Hallam.
6. Sketch the constitutional history of England from the death of Oliver Cromwell to the accession of Charles the Second.
7. What parallel in character does Hallam trace between Cromwell and Napoleon?
8. What famous *Secret Treaty* was drawn up in the reign of Charles the Second? Unfold its designs.
9. Cite the provisions of the *Habeas Corpus Act*. Can you relate an event which may have led to the passing of this act?
10. Hallam says the *Exclusion Bill* was "the rock on which English liberty was nearly shipwrecked." Justify his statement.
11. "The reign of Charles the Second was hardly more remarkable by the vigilance of the House of Commons against arbitrary prerogative than by the warfare it waged against whatever seemed an encroachment or usurpation on the other House of Parliament." Give an account of the well-known case by which Hallam substantiates his assertion.
12. Mention a few parliamentary measures framed with a view of oppressing or of favouring religious sects.

RHETORIC.

PROFESSOR WILLIAM LYALL, LL. D. *Examiner.*

1. What do you understand by Figures of Emphasis? Name some of them. What are Epistrophe and Antistrophe, regarded as figures of rhetoric?
2. Give an example, or examples of Synonymia, of Alliteration. What is remarked about Alliteration?
3. What do you mean by Inversion? Where do we find it greatly used? Give any example of the figure.
4. What is Tmesis? Give an example. Explain Hyperbaton. What is the effect of Exclamation? of Interrogation?
5. What is Sermocinatio? Is Zeugma not rather an instance of carelessness of style than a figure of Emphasis? What is Anacoluthon? What is Aposiopesis? Interruptio? Suppressio?
6. Give examples of Asyndeton and Polysyndeton respectively. Can you give any striking example of their combination?

7. What are Paroemiac Figures? Distinguish a Proverb from an Apothegm, and Epigram from both.

8. What are the requisites to Energy? Point out the faults opposed to Energy.

9. Give the degrees of Vivacity in style, as it refers to the thought, with their different characteristics.

10. Distinguish between Euphony and Harmony. What is the peculiarity in elegance of style? What is Rythm as compared with Harmony? Which is the more generic of the two? What are the offences against eloquence? How does the aim to convince differ from the aim to persuade? By which of these was Rhetoric formerly defined or characterized?

GERMAN.

Examiner PROF. JAMES LIECHTI.

FIRST YEAR.

Translate: I. Schiller's "*Kaniff mit dem Drachen.*"

II. Jacob's "*Gastfreundschaft.*"

III. Uhland's "*Des Sängers Fluch.*"

IV. Kotzebue's "*Der gerade Weg der beste.*"

Translate into German: Do what is right. Schiller, whose works we are reading, was born in 1775 (letters) and died in 1805. The death of that man is much to be regretted (bedauern). There is nothing new under the sun. The more one studies the more he learns. Many merchants are leaving (reisen) for England to buy goods. The weather is getting mild. London has more than a hundred times as many inhabitants as Halifax. Little has been done; much more might be done. You are right, there were no steamers sixty years ago. We are not to write but to read. They are not allowed to talk. With what do you write? People, good and bad.

Questions: 1) Parse the words: *strenge, ihn, an, der, kühnen, indem* (I). Account for the position of *an*, and give an ex. showing that its place is not always the same.

2) Decline in both numbers: *den kühnen Geist* (I), *mein wackerer Wirth* (II), *sel'ger goldner Zeit* (III).

3) What kind of derivative subst. are formed by means of the suffixes *er, in, chen, ung*. Form the *plur.* of: *das Regiment, das Kapital, die Ehre, der Kaufmann, der Tod*; and the *sing.* of: *Rathschläge, Welten, Wörter, Künstler, Geschwister*.

4) Write the 1st p. s. of *Impft* Indic the Infinif and the past part. of *dachte, anschickte, würde, betrachtet.* (II), *bin, gesprochen, verlängnen* (IV); *frühstücke, anvertrauen, übersetzen, studiren, rennen*.

5) *Ge.* Explain the use of this particle in connection with verbs, illust. and state the exceptions. Note down all the dissonant verbs with regular terminations.

6) Classify the following prepos. according to the case or cases they govern: *bei, durch, während, um, hinter, über, zu, nächst, von.* *Auf dem Tische liegen; Auf den Tisch legen.* Account for the difference in the case in these sents.

7) Illustrate the use of *nein, nicht,* and *kein*; and the difference between *aber* and *sondern*.

8) Adverbial and subordinat. conj. affect the verb in a sent. differently. Explain and translate: He was tired, still he continued studying. When the sun rose it was four o'clock.

9) In what respect do the English and German passive differ? Illustrate. Give the equivalents of: It is not to be thought of. There is a great deal of singing in Germany. He is a man much to be pitied (bedauern).

10) Ich würde ihm das Geld gegeben haben, wenn ich es nicht selbst gebrauchen würde. Write this sentence in the most simple form.

11) What is the leading feature of German Literature? Mention the most ancient documents of German poetry. What period do they belong to and what is their metrical form?

12) Mention the various periods into which the history of German literature has been divided, and give the characteristic features of each period. When was the Old High German language in use, and in what year was the New High German established.

ADVANCED.

Translate: I. & II. Schiller's "*Maria Stuart*," I. Act, VI. and VII. Scenes.

III. Novalis' "*Der Bergmann*."

Translate into German: Extract from Charles Lamb's "Tales from Shakespeare:" "*All's well that ends well*."

Questions: 1). Herr sagte der Alte—wandte. Explain the construction of this sentence, and mention, giving the rule, what form, clauses beginning with *indem*, assume in English.

2). Illustrate by an ex. how the English pres. part. expressing *cause* or *reason* is rendered in German. Translate the following pres. part., stating reasons: *Weeping* bitterly, the disciple left the room. He is a man *doing* his duty as a christian and as a citizen. He has decided on *going* to Germany. We form our mind by *reading* good books. Smoking is an expensive habit.

3). Write the 2nd p. s., indic. pres., the past tense, and past part. of ward, entgegenstieg, umfangen, schloss, erzog, sah, messen, sprächen, anbinden, geboren, abreisen, abreissen.

4). The *Impers. form* is variously expressed; translate and explain: There are people who believe nothing. There were hundreds of people in the gardens. Much was spoken, but little was done. Give an *impers. form* to the sentence: "Ein Wanderer kam die Strasse entlang." How does it affect the construction?

5). Mention three adverbial and three subordinative conjunctions. State how the position of the verb in a sentence is affected by each class, and form two sentences in illustration.

6). The English Perfect or comp. tense is expressed by the present tense in a certain case. Take, for example, How long have you been in this country? I have been here these five years.

7). What is the relative position of the adverbs of place and time, and of the negat. *nicht*? Take for ex., Your friend has not left for home yesterday. When is *nicht* placed before the *object*? Write an ex.

8). In what cases does the inversion of the subject and predicate occur? Write ex. in illustration.

9). Correct the following sentence and state your reason: Die Universität auf welcher ihn sein Vater studiren lassen hatte.

10). Give an account of Schiller and his works. Draw a parallel between Schiller and Goethe. Give an interpretation of Goethe's Faust.

FRENCH.

FOURTH YEAR.

APRIL 16, 1880.

Traduisez : I Corneille : " *Le Cid*."—Acte II ; Scène IX.

II. Cousin : " *Des différents arts*."

III. Molière : " *Le Misanthrope*."—Acte II, Scène V.

Traduisez en Français : Walter Scott : " *Quentin Durward*."—The Count of Crèvecœur, a renowned and undaunted warrior, entered the apartment; and, contrary to the usage among the envoys of friendly powers, he appeared all armed, excepting his head, in a gorgeous suit of the most superb Milan armour, made of steel, inlaid and embossed with gold, which was wrought into the fantastic taste, called Arabesque. Around his neck and over his polished cuirass, hung his master's order of the golden fleece, one of the most honored associations of chivalry then known in Christendom.

Questions : 1). Le mot *tout*, employé comme adverbe, est tantôt variable, tantôt invariable. Donnez des exs. Quelle distinction faites-vous entre : Ces gens sont *tout* savants et Ces gens, sont *tous* savants.

2). *Passé* trois mois vos prétentions ne seront plus admises. Ces dames chantent *faux*. Qu'y a-t-il à remarquer sur l'accord des adjs. *passé* et *faux*. Mentionnez d'autres mots semblables. Traduisez : Nero was as odious as cruel to the senators and simple citizens. Dites ce que vous savez du complément de deux adjectifs.

3). Etablissez les règles sur l'accord du *verbe* dans les phrases : Liberty, like the sun, carries everywhere life, light and heat. One half of the human race live and laugh at the expense of the other (half). To grow old, to be sick and to die are the greatest evils of life. Most (la totalité) children sacrifice the future to the present. To speak and to offend is the same thing with (pour) certain people. (Traduisez ces phrases).

4). Nous écoutons avec docilité les conseils que nous *donnent ceux* qui savent flatter nos passions. Pourquoi y a-t-il inversion du *sujet* dans cette phrase ? C'est encore le cas lorsqu'il y a ellipse de la conjonc. *si*, et lorsque la phrase commence par : *que, dont, où*, etc. Ecrivez deux exs. à l'appui.

5). Pourquoi les phrases suivies sont-elles incorrectes ? C'est à mon esprit à qui je veux parler. Le souvenir des bonnes actions embellit et répand un parfum délicieux sur la vie.

6). La forme verbale en *ant* est variable ou invariable. Expliquez et prenez pour exs. Politeness is like running water which makes the hardest pebbles even and smooth (uni et lisse). He offered me a hand reeking (fumer) with blood. The vices of men increasing evermore (toujours) will leave a sad inheritance to future races.

7). Quelle distinction faites-vous entre : *intrigant* et *intriquant* ; *négligent* et *négligeant* ; *vacant* et *vaquant*. Mentionnez quelques formes verbales en *ant* qui sont toujours *invariables*.

8). Certains partic passés, placés avant les noms, sont invariables. Pourquoi ? Nommez-les et donnez un ex. A quelle règle d'accord sont sujets les particips. suivis d'un *infinitif*. Prenez pour ex : Cette dame a du talent ; je l'ai *vue* peindre. Cette dame a posé hier ; je l'ai *vu* peindre.— On les a *faits*. Les boeufs—on les a laissés *tuer*. Quelle est l'accord des deux derniers particips.

9). J'eusse été près du Gange esclave des faux dieux,

Chrétienne à Paris, musulmane en ces lieux — " *Zaïre* " de Voltaire.

Quelle figure de Syntaxe ces vers renferment—ils ? Est-elle régulière ou non ?

10). Qu'est ce qu'on appelle le grand siècle ou l'âge d'or de la littérature française. Cinq poètes ont rendu illustre cette époque ? Par quoi se sont-ils distingués individuellement. Mettez en parallèle Molière et Racine et classifiez leurs ouvrages.

THIRD YEAR.—ADVANCED.

Translate: I. Balzac: "L'Usurier."

II. Racine: "Athalie."—Acte II., Scène V., (Songe d' Athalie).

III. Volney: "Les ruines de Palmyre."

Translate into French:—The General, knowing by experience, how necessary it was for the French to be on their guard, when eating and drinking with Spaniards, lest they be deceived, invited the prior and two monks to dine with him.—"Gentlemen," said the prior, "if you have any worldly (mondain) affairs to settle, there is no time to be lost, this is the last meal you and I shall take on earth."—Parmenio, a friend of Alexander, hearing the great offers which Darius had made, said: "Were I Alexander, I would accept them."—"So would I," replied Alexander, "were I Parmenio."

Questions:—1). Ainsi donc périssent les ouvrages;—me dis-je;—ne peuvent suffire, (III.) Explain peculiarities in the construction of these sents., and mention the other forms exemplified in the 3rd ex.

2). Parse, and write down the primitive tenses of: *craignaient*, *peints*, (I.); *entretient*, *ronge* (II.); *sait peuvent* (III.) Mention the verbs that end in *tes* in the 2nd p. plur. of the Pres. Indic.

3). Give rules for the agreement of the *p. parts.*: *peignés*, *comparé*, *peints*, *montré*, *abattu*, *anéantis*. Correct and explain mistakes, if any, in: Les pluies qu'il a faites, ont gâtés les chemins. La dame que j'ai entendu chanter. La chanson que j'ai entendu chanter. Translate: Many learned men have died since the beginning of the year. Mary Stuart was compelled (forcée) to appear before the Judges whom Elizabeth had appointed (nommer). These persons have walked together and spoken to one another.

4). Illustrate the agreement of the *adverb* assuming the form of an *adj.* Mention the expressions most in use. Give the meaning and etymology of: *ailleurs*, *encore*, *alors*, *jadis*, *aujourd'hui*, *naguère*.

5). "Whatever" admits of two forms in French. Translate, taking for exs.: Whatever may be his knowledge (connaissances), he is ignorant of many things.—Whatever wealth (richesses) he may possess, he is not to be envied. *Quelque* (however) is always *invariable*. Write an ex.

6). Distinguish, giving exs between: *plutôt* and *plus tôt*; *parce que* and *par ce que*; *dans* and *en*, relating: 1) to time; 2) to place; *près de* and *p. ét. à*.

7). Which are the conjuncts. that require the verb in the *subjunct* with *ne*. Write an ex. Translate: But for his assistance (secours) the family would have starved.

8). Do you know *whether* I have succeeded? I doubt *whether* you have succeeded (réussir). *Whether* I read or write, it does not matter. Show how *whether* is expressed in these sents.

9). Ne me faites pas de reproches. Je ne vous fais pas des reproches frivoles.—Nous avons vu de petites maisons. Nous avons vu des petites—maisons. Account for the use and suppression of the article.

10). There may be Ellypsis of the article in certain cases? Write exs. in illustration. How do you translate *with*, *in*: You are covered *with* dust. I am satisfied *with* you. Come *with* me. Your work will be compared *with* his. *With* the Ancients.

THIRD YEAR.—JUNIOR.

Translate: I. Scribe's "Le Diplomate," Acte I., Scène III.

II. J. J. Rousseau's "Le Suicide."

III. Châteaubriand's "L'Océan et la prière du soir, à bord d'un vaisseau."

Translate into French: Troy was a famous city. When Priam was king, the Greeks came to the city. They besieged it ten years without success. They could not take it by force, because its walls were high and broad; but at last it was taken by the stratagem of a wooden horse. This horse being filled (remplir) with armed men, was admitted into the city as a gift to Minerva. In the middle of the night, when all were asleep (endormis) the armed men came out of the belly of the horse and burned the city.

Questions: 1). *S'y* opposer, je ne m'en doutais pas; tant de choses. Account for the words *y*, *en*, and *de* in these sents. Form a sent. with *y* as *adverb*. Illustrate the use of *en* as *preposit.* and as *partit. article*, and mention exceptional forms of the rule exemplified by *tant de*.

2). When do you write *notre* with a circumflex? Show by ex. that *sa* may assume the mascul form before a fem. noun. Give the prons. corresponding to *ma*, *son*, *nos*. Translate, Take me there.

3). Illustrate the difference between: *quoi que* and *quoique*, *qu'elle* and *quelle*, *quand* and *quant*. Translate, Ne one was killed, though a few were wounded.

4). Nature, whose beauty we admire, is the work of God. Give the equivalent in French and state the reason for the difference in the construction. Write short sents. on *whose* denoting possession.

5). La femme de cet homme qui vient d'être enterrée n'avait que vingt ans. Why is this sentence incorrect?

6). How do you render *what* in the following sents.: Do you speak of what happened? Did you think of what I told you? You know what he has done? Tell me what you are in need of (avoir besoin de)? What makes you angry (fâcher)? What do I see? What is the matter? What news!

Parse the following verbs, and write down their primitive tenses: *Voulait*, *doit*, *perdu* (I); *soient* (II); *allait*, *saisi* (III). Write the 1st p. imperf. ind. of *prier*, and the pres. psrt. of *ranger*.

8). Voilà ce que l'on ne saurait peindre. Point out peculiarity in the construction of this sent, and mention corresponding forms.

9). By what forms is the English passive ordinarily expressed in French? Take for exs., Life is composed of joy and sorrow. French is spoken here. This word is pronounced thus. Intransit. verbs do not admit of the *passive* voice. Explain and translate: This measure (mesure) was not thought of.

10). Write the equivalents of: How long ago? How mild it is! How long have you been in town? Everybody wants money. Distinguish between: Il faut écrire, il me faut écrire, and il faut m'écrire. Write a few exs. in illustration of certain idiomatic tenses.

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