

CALENDAR
OF
DALHOUSIE COLLEGE AND
UNIVERSITY,
HALIFAX, NOVA SCOTIA.

1880-81.



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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 constituents may be influenced by an example so graciously 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 Maritime 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. Stirling.....	1,000	Adam Burns.....	500
H. Stanley Brown.....	1,000	Peter Jack.....	500
John Gibson.....	1,000	Hon. Jeremiah Northrop.....	500
John P. Host.....	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. States.....	100 00	W. H. Pallister.....	20 00
Hon. Jeremiah Northrop.....	100 00	W. C. Muir.....	25 00
Thos. Baynes.....	100 00	Wm. Robertson.....	25 00
Alex. McLeod.....	100 00	Rev. Robert Laing.....	25 00
John McNab.....	100 00	Geo. F. Treap.....	20 00
W. P. West.....	100 00	Pritchard & Black.....	5 00
Jas. F. Avery.....	50 00	John Ross.....	10 00
Hon. Robert Boak.....	50 00	Jas. McLean, New Glasgow.....	10 00
Hon. J. W. Ritchie.....	50 00	Jas. McLean, Picton.....	10 00
Doull & Miller.....	50 00	J. D. B. Fraser & Son.....	10 00
Robt. Murray.....	50 00	John Silver & Co.....	10 00
Peter Jackson.....	50 00	John Crear.....	10 00
John R. McLean.....	50 00	Lawson & Harrington.....	20 00
A. Friend.....	50 00	D. Pottinger.....	10 00
Thos. A. Brown.....	50 00	John Pugh.....	10 00
Jane Scott.....	25 00	Donald Keith.....	10 00
Doug Croan.....	25 00	Friend.....	10 00
J. & E. R. Seaton.....	25 00	John Legan, Picton.....	10 00
M. Dwyer.....	25 00	M. S. Brown & Co.....	10 00
W. H. Webb.....	20 00	Hon. S. E. Shannon.....	10 00
Robert Taylor.....	20 00	W. H. Mackenzie.....	5 00
Rev. Geo. W. Hill, D. C. L.....	20 00	J. Kaye.....	5 00
James W. Carnegie.....	20 00	W. H. Newman.....	5 00
Esson & Co.....	20 00	J. Cornelius.....	5 00
H. H. Fuller.....	50 00	James Farquhar.....	5 00
James Thomson.....	25 00	Dr. S. Dodge.....	8 00
Hon. A. G. Jones.....	25 00	C. A. Stayner.....	5 00
Adam.....	25 00	C. F. Vose.....	2 50
M. H. Bishop.....	20 00	G. Holliday.....	5 00
A. K. Mackay.....	20 00	Malton Fox.....	5 00
John Gibson.....	50 00		
Prof. Lawson.....	50 00		

UNIVERSITY CALENDAR, 1880-81.

1879.		1880.		WINTER SESSION.	
Oct.	4.	Mo.	W.	Meeting of Governors.	
	27.	Th.	Fr.	Matriculation and Scholarship Examinations. 10 A. M., Mathematics, Physics, Classics and Modern Languages.	
	28.	Fr.	Mo.	Matriculation Examinations continued. English, Supplementary Examinations. 10 A. M.	
Nov.	1.	Mo.	W.	Meeting of Senate, 10 A. M.; Matriculation, Registration and Library Tickets issued. 11 A. M.	
	2.	Th.	Fr.	Classical and Modern Class Tickets issued. Entrance Examinations in Classical History and Geography. 3 P. M.	
	16.	W.	Th.	Meeting of Governors, 3 P. M.; Opening Address by Professor MacGregor.	
	17.	Th.	Fr.	Final Matriculation and Supplementary Examinations, 3 P. M.	
	28.	W.	Mo.	Meeting of Senate and of Faculty of Science, 4 P. M.	
Dec.	29.	Mo.	W.	Meeting of Senate, 4 P. M.	
	30.	Mo.	W.	Christians Vacation begins.	
Jan.	2.	Mo.	W.	Meeting of Governors.	
	3.	Mo.	W.	Lectures resumed. Supplementary Examinations in Classical History and Geography. 3 P. M.	
	4.	Th.	Fr.	Meeting of Senate and of Faculty of Science, 4 P. M.	
	5.	Fr.	Mo.	Meeting of Senate, 4 P. M.	
Feb.	6.	Th.	Fr.	Arch Wednesday. 20 hours.	
March 2.	7.	W.	Th.	Arch Wednesday. 20 hours.	
	8.	Fr.	Mo.	Meeting of Senate, 4 P. M.	
	9.	Th.	Fr.	Last day for receiving M. A. Theses.	
April	10.	Mo.	W.	Meeting of Governors.	
	11.	Mo.	W.	Last day for Lecture. Last day for returning Library Books. Meeting of Senate and of Faculty of Science, 4 P. M.	
	12.	W.	Th.	Semester Examinations begin. 10 A. M., Latin; 3 P. M., Honour Classics, Extra Latin.	
	13.	Th.	Fr.	10 A. M., Logic, Metaphysics, Honour Mathematics, Ethics.	
	14.	Mo.	Mo.	10 A. M., Geology, Botany, Zoology.	
	15.	Fr.	Mo.	10 A. M., Experimental and Mathematical Physics, Hon. Classics; 3 P. M., Experimental Physics, Honour Classics.	
	16.	Th.	Fr.	10 A. M., Rhetoric, Honour Classics, Honour Mathematics. " Chemistry, Honour Classics, Honour Mathematics.	
	17.	Mo.	Mo.	" French and German. Hebrew; 3 P. M., French and German, Extra Mathematics.	
	18.	Fr.	Mo.	10 A. M., Practical Chemistry, Honour Classics.	
	19.	Th.	Fr.	" Sir W. W. Willcocks Prime Competition. Meeting of Senate, 10 A. M.	
	20.	Mo.	Mo.	Meeting of Senate, 10 A. M.; Results of Examinations declared.	
	21.	Th.	Fr.	Meeting of Governors, 3 P. M.	
	22.	Mo.	Mo.	Meeting of Governors, 3 P. M.; Meeting of Alumni Association, 10 A. M.	
May	23.	Mo.	W.	SUMMER SESSION.	
	24.	Mo.	W.	Summer Session begins. Meeting of Senate, 11 A. M.; Class Queen's Birthday. No Lecture.	
June	25.	Mo.	W.	Hallitus settled, 1740. No Lecture.	
	26.	Mo.	W.	Examinations.	
	27.	Mo.	W.	" Continued.	
	28.	Mo.	W.	Results declared. Session closed.	
July	29.	Mo.	W.	Meeting of Governors.	

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.
HON. J. W. RITCHIE, Judge, Supreme Court of Nova Scotia.
HON. S. L. SHANNON, Q. C.
VERY REV. G. M. GRANT, D. D., Principal and Vice-Chancellor, Queen's
University, Kingston, Ont.
JAMES F. AVERY, Esq., M. D.
WILLIAM J. STAINES, Esq., Vice-Chancellor of the University of Halifax.
REV. JOHN MACMILLAN, M. A., B. D.
REV. JOHN FORREST.
HON. ALFRED G. JONES.
WILLIAM P. WEST, Esq.
JOHN S. McLellan, Esq.
PETER JACK, Esq.
JOHN DOULE, Esq.
HIS WORSHIP THE MAYOR OF HALIFAX, *ex officio*.
HUGH MCKENZIE, M. A., Pres. Alumni Association, *ex officio*.

GEORGE THOMSON, Esq., Treasurer.
WILLIAM M. DOULL, Esq., Secretary.

Senate of the University.

VERY REV. JAMES ROSS, D. D., Principal.
REV. WILLIAM LYALL, LL. D.
CHARLES MACDONALD, M. A., Corresponding Secretary.
JOHN JOHNSON, M. A.
GEORGE LAWSON, PH. D., LL. D., F. I. C.
JAMES GORDON MACGREGOR, M. A., D. Sc., F. R. S. E., Recording
Secretary.

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.

Dalhousie College and University.

FACULTY OF ARTS.

REV. PRINCIPAL BOSS, D. D., *Professor of Ethics and Political Economy.*

REV. WILLIAM LYALL, LL. D., *Professor of Logic and Metaphysics, and Intern Professor of Rhetoric.*

CHARLES MACDONALD, M. A., *Professor of Mathematics.*

JOHN JOHNSON, M. A., *Professor of Classics.*

GEORGE LAWSON, PH. D., LL. D., F. L. C., *Professor of Chemistry and Mineralogy.*

JAMES GORDON MACGREGOR, M. A., D. Sc., F. R. S. E., "George Muaro" *Professor of Physics.*

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, Palaeontology and Mineralogy.*

JOHN WILSON, JUNIOR.

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 R. 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*, *Aeneid*, Book III.

For 1881 : *Cæsar*, Gallic War, Book VI.; or *Virgil*, *Aeneid*, 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 Greek 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 those two on which lectures are being given.

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

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) Geography. (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) (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	18.00
" Second Winter, "	25.00
" Summer, " "	18.00
" 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.....	\$39.00 or 25.00
" Fourth Winter, with Library Fee, according to selection of classes.....	\$33.00 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	18.00
" Second Winter, "	\$37.00, \$31.00 or 25.00
" Summer, " "	\$33.00 or 18.00
" Third Winter " "	\$7.00, \$33.00 or 12.00

§ 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. Undegraduates 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 violates 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 holder obtains 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 : *Cesar, Gallic War, Book I.; Virgil, Aeneid, Book III.*
 1881 : *Cesar, Gallic War, Book VI.; Virgil, Aeneid, Book VI.*
 1882 : *Cesar, 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.*

Arithmetica: 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 shown.)

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 \$50 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*.

Hornbe: *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: *Anals*: Book I.

Composition: *Principia Latina*, Part V.

Philology: Text Book, *Pelle's Primer*.

GREEK.

FIRST YEAR'S CLASS.

Xenophon: *Cyropaedia*, Book I.; 1 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 Graeca*, Part III.

THIRD AND FOURTH YEAR'S CLASS.

Demosthenes: *Olynthiacs*.

Sophocles: *Antigone*.

Composition: *Initia Graeca*, 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 Greece, 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 Tisser'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.—Solutions 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 those 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 applications 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, the part; *Colenso's Trigonometry*, 1st part; Todhunter's Spherical Trigonometry; or Haan'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: Worsell'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: Osmond Airy's Geometrical Optics and Galbraith and Hangston'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 AESTHETICS.

(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; Formulae; 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 Gums, 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 Metalluhdes 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, Neutralisation, Condensation, Solubility, Affinity, &c. Illustrations of processes of Crystallisation, Distillation, Oxidation, &c. Systematic Analysis (commencement).

Flame Reactions. Use of Spectroscope.

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

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 : Thrice, 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 : DeMille's Elements of Rhetoric.

Books recommended : Quinidian'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 : Parker'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 : Maximer's English Grammar. Angus's Handbook.

MODERN LANGUAGES.

FRENCH.—[Third Year.]—Péjot's Grammaire, (first part).—Scribe's Dictionnaire, and Molére'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 and 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, Characeæ,

Musculæ, Muscular forces in the Plant, Aggregation of Organized Structures, Movements of Water and Gases, Chemical Processes, Constituents of Plant Food, Assimilation, Respiration, Influences 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 Palaeontology.

Zoology.—Differences 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 : Brachopoda, Polypina, Tentacula, Mammalia, Aves, Reptilia, Amphibia, Pisces, Cephalopoda, Gastropoda, Pteropoda, Lamellibranchiata, Insecta, Myriapoda, Arachnida, Crustacea, Annulida, Vermes, Rotifera, Echinoidea, Anthozoa, Hydrozoa, Infusoria, Embryology of the five groups of Vertebrates. Movements of the more common 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, Palaeeontology, Paleozoology.*)—Lecture Notes.

§ XV.—HONOUR COURSES.

L—CLASSICS.

LATIN.—PIRIFORME: TRIBUNALIS.

Terence: Heautontimorumenos.

Virgil: Georgics, Books I, IV.

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

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

Cicer: De Oratore, Books I, II.

Tacitus: Germania, Agricola.

GREEK.—Eschylus: Agamemnon.

Sophocles: Oedipus Coloneus.

Homer: Odyssey, Books V.—VIII.

Tacitus: Book VII.

Plato: Phædo.

Demosthenes: De Corone.

COMPOSITION.—Latin Prose.

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

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

LITERATURE.—Miller 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 Formulae of 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 Packell'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.

Bede'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. Whately's Logic, Books II., III., IV. Mills' Logic, I., II. Bacon's Novum Organum.

METAPHYSICS AND AESTHETICS.

Descarte'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. Lewes' 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.

Batler'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.	20	
					21	
9-10 A. M.	Inorganic Chemistry daily Hill Petreary.	Inorganic Chemistry daily till February.	Hon. Chemistry I. French (Arts) (Th., Th.) German (Scien.) (M., W., F.)	Hon. Chemistry I. French (Arts) (Th., Th.) German (Scien.) (M., W., F.)	Opsis & Anatomy (M., W., F.) Hon. Physics (Th., Th., Th.) Organic Chemistry (Th., Th.)	
10-11 A. M.	Latin (M., W., F.) Greek (Th., Th.)		Mathematics (daily) Organic Chemistry (Scien.).	Math. Physics (Th., Th.) Exp. Physics, (M., W., F.)	Physics (daily). Exp. Physics (M., W., F.)	
11-12 N.	Mathematics (daily)		Latin (M., W., F.) Greek (Th., Th.)	Latin (M., W., F.) Greek (Th., Th.)	Latin (M., W., F.) Greek (Th., Th.)	
12-1 P. M.	Rhetoric (daily.)		Extra Mathematics I. Zoology	Extra Maths (I.) Zoology	Extra Maths (I.) Zoology	Hon. Mathematics.
1-2 P. M.						
2-4 P. M.			Logic (M., W., F.) German (Scien.) (M., W., F.)	Metaphysics (Th., Th.) Logic (M., W., F.)	German (Arts) (M., W., F.) French (Scien.) (Th., Th.)	
3-4 P. M.	German (Scien.) (M., W., F.)		French (Scien.) (Th., Th.)	German (Arts) (M., W., F.) French (Arts) (Th., Th.)		
4-5 P. M.					Grocery	Geology

Degrees, April, 1880.

MASTER OF ARTS.

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

BACHELOR OF ARTS WITH HONORS.

EDWIN CLOWELL 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 CLOWELL: 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 Classics; First Class in Latin.

FEED. 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, Experimental 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 CONLEY: 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 Barony; 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 LANDBELLS: 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 (*Tiverton 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*): Professor's 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 Certificates 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 MCLEOD (*Pictou Academy*): Second Class Certificate of Merit; Second Class in Latin, Mathematics and English.

ARTHUR W. CAMPBELL (*Tiverton High School*): First Class in Mathematics; Second Class in English.

THOMAS S. McINTOSH (*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 Stewiacke 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 McCOLE (*New Glasgow Academy*): Second Class in Mathematics and Chemical Physics.

GENERAL STUDENTS.

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

STANFIELD LORDE: 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 MCNAULY: 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. *Etudes*, 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. *Etioric*, 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. Moran, 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 Election: 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. Moran, do.
3. J. A. McDonald, do.

In SCIENCE: A. G. Reid, do.

PASS LISTS.

SESSIONAL EXAMINATIONS, APRIL, 1890.

(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. Crighton, Wallace M. Macdonald, Howard Murray, James A. Sedgwick.

SECOND YEAR—George M. Campbell, George S. Carson, Johnson Davidson, George A. Doermer, 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. Moran, Enoch Thomson.

SCIENCE.

THIRD YEAR—William M. Fraser.

SECOND YEAR—Alex. G. Cameron.

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

SUPPLEMENTARY EXAMINATIONS, OCT., 1879.

SECOND YEAR—*German*: Costley; *Triposometry*, 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 F. 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. Skinnings, En. Thomson, H. P. Veale.
SECOND YEAR—Humphrey Mellish.

SCIENCE.

FIRST YEAR—J. A. Bremer, A. F. Brunner, Arch. McColl, Arch. 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: Kinman.

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, Skinnings, A. Bremer, Smith, Alex. Campbell, McRae.

GREEK.

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

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: Arch. Campbell, E. Thomson, J. W. McKenzie, (McGregor, McInnes,) equal. Skinnings, 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, (Arch. Campbell, J. McLeod,) equal, McGregor. Class II.: McInnes, J. McLean, E. Thomson, McColl, J. W. McKenzie. Passed: Alex. Campbell, Dickie, McRae, Smith, Douglas, Bremer, Forsyth.

ETHICS.

FOURTH YEAR—Class I.: None. Class II.: Dustin, Crowell, Kinman, R. D. Ross. Passed: A. E. Thomson.

METAPHYSICS AND AESTHETICS.

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, Arch. Campbell. Passed: (Blair, Douglas) equal, (Dickie, Skinnings,) equal, Forsyth, McColl, McRae, A. Bremer.

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. Bremer, McCell, A. Bremer, Knowles.

CHEMICAL ANALYSIS.

Class I.: Fraser.

CHEMICAL PHYSICS.

Class I.: None. Class II.: Reid, McCell. Passed: A. Bremer.

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.: Kieseraz.

THIRD YEAR—Class I.: Craelman.

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

B. A. HONOURS.

- 1875—MATHEMATICS AND PHYSICS: *Second Rank*, Alex. H. McKay.
 1874—CLASSICS: *Second Rank*, James Chalmers Herdman.
 MENTAL AND MORAL PHILOSOPHY: *Second Rank*, James McD. Okey.
 1875—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. Creighton.
 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. Ingle, Prince of Wales College, Charlottetown, P. E. I.
 1868—1. Alex. W. Pollett; 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 Craelman, Pictou Academy; 2. James S. Thomsen, 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. Morea, dñ; 3. James A. McDonald, dñ. 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. Bayre. 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 Rose, 1st and 2nd years. 1869: 1. John J. MacKinnon, 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: 1. 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 E. Quidnunc; 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. Thomsen. 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.
 1878: Howard Murray.

LAURIE PRIZE.

1871: Hugh M. Scott, B. A. 1872: Duncan C. Fraser. 1873: David F. Creelman. 1874: Archibald Gunn. 1875: Alex. McLeod.
 1876: No competition. 1877: Richmond Logan.

ST. ANDREW'S PRIZE.

1873—*For Classics: First Year*, John W. McLeod.
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. McQueens.
 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. Edward L. Newcombe. *First Year*, 1. Howard Murray; 2. W. H. Fraser. 1878: *Third Year*, 1. Roderick McKay; 2. J. M. McLean. *First Year*, 1. James S. Tremain; 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. McQueens.

Graduates and Undergraduates of the University, and General Students.

GRADUATES.

MASTERS OF ARTS.

1869.	Chase, Jos. Henry, Osslow.	1874.	Macgregor, J. G., D. Sc., Halifax.
		1875.	McKenzie, Hugh, Truro.
		1876.	Scott, Ephraim, New Glasgow.
		1877.	Allan, John M., Edinburgh.
		1878.	Archibald, W. P., Cavendish, P.R.I.
			Hendman, James C., B. D., Edin.
			Cassablon, N. B.
			Jordan, Louis H., Univ. Edinburgh.
			McLeod, Alexander, Osslow.
			Tremain, Arthur L., St. John, N.B.

DOCTORS OF MEDICINE AND MASTERS OF SURGERY.

1872.	DeWolfe, Geo. H., Sheffield, Eng.	Chisholm, Donald, Antigonish.
	Hiltz, Charles W., Mahone Bay.	Moore, Edmund, Chatham.
	McMillan, Finlay, (obit.)	
	McRae, William, Richmond, C. B.	1875.
	Sutherland, Robert, (obit.)	Cox, Robinson, Stewiacke.
		Bethune, J. L., Baddeck, C. B.
		Lindsay, A. W. H., Halifax.
		Muir, W. H., Truro.
		Casimir, Robert, Arichat, C. B.

BACHELORS OF ARTS.

1866.	Lippincott, Andrew, Pittsburgh, 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.

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, Masquashobit.

1869.

Anand, Joseph, New Hebrides.
Bayne, Herbert A., Kingston.
Miller, Eben D., Lunenburg.
MacKenzie, J. J., (obit).
Sutherland, John M., Pugwash.

1870.

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

1871.

Bayne, Ernest 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.
McKemie, Hugh, Truro.
Pollok, Alex. W., (obit).
Scott, Ephimus, New Glasgow.
Trusman, Arthur L., St. John, N.B.

1873.

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

1874.

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

McGregor, Daniel, New Dublin.
McLeod, Dos., Strathtalbyn, P. E. I.
Oxley, Jas. McD., El. 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.
McDowell, Isaac, St. John, N. B.
McLean, James A., Pictou Co.
McLeod, John W., Princeton, N. J.
Merton, Joseph, Shelburne.
Murphy, John, Montreal.
Stewart, J. McG., Pictou.

1877.

Archibald, F. W., Truro.
Chambers, Robert E., Halifax.
Grant, W. H., Pictou Co.
Hamilton, Howard H., Pictou.
Herdman, A. W., Pictou.
Laird, George A., Manicouagan.
Logue, 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.
Pithlach, Colin, Manitoula.
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.
Murro, George W., New York.
Newcombe, Edmund L., Kentville.
Rogers, Anderson, Pine Hill, Hfx.
Whitman, Alfred, Bridgewater.

1879.

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

1880.

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

THIRD YEAR.

Blanchard, Chas. W., Truro.
Costley, Alfred, Halifax.
Creelman, Graham, Up. Stewiacke.
Creighton, H. S., Dartmouth.
MacDonald, Wallace M., Halifax.
Munney, Howard, New Glasgow.
Sedgwick, Jas. A., Mississquoi.
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.

UNDERGRADUATES IN SCIENCE, 1879-80.

THIRD YEAR.

Fraser, W. M., Dartmouth.

SECOND YEAR.

Cameron, A. G., Newtons, Guysborough.
Held, Arthur G., Halifax.

FIRST YEAR.

Bell, John A., Halifax.
Bois, George H., Truro.
Campbell, Arch., "
Dickie, Harry, Upper Stewiacke.
Douglas, A. F., Green Hill, Pictou.
MacDonald, Jas. A., Halifax.
McGregor, Th. S., Little Bras d'Or,
C. B.
McInnes, Hector, Pictou.
McKenzie, James W., Strathtalbyn,
P. E. I.
McLeod, John, Halifax.
McLeod, Jas. K., Sydney.

Mellies, W. L., Granton, Pictou.
More, Jas. A., Halifax.
Murray, Dan A., Truro.
Skinnings, R. H., Halifax.
Thomson, Enoch, St. John, N. B.
Veale, Herb P., Halifax.

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., Halifax.
Duston, John F., Dartmouth.
Fisher, George, Mid. Stewiacke.
Forsey, Jas. E., Bridgetown.
Fureaux, 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., Alzine, C. B.
McKay, Neil, "

McLean, John M., Londonderry.
McMillan, Dan, Annie, C. B.
McMillan, John, "
McNally, Wm., Co. Down, Ireland.
Mellish, J. M., Halifax.
Rose, John, Halifax.
Rose, Robt. D., East River, Pictou.
Smith, H. M., Halifax.
Stayner, E. G., Halifax.
Stewart, Thos., Whyconnah.
Story, J. D., Halifax.
Thomson, Arch., 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 Verde, N. B.	Morrison, Don, N., Loch Lomond.
Blois, Marsden, Gore, Hants Co.	Morton, Jos., n. a., Shalburne.
Cameron, Allan, Antigonish.	Rogers, Anderson, R. A., Halifax.
Casswell, Jas. A., Digby.	Rutherford, Thos., Halifax.
Crosshill, J., Halifax.	Smith, Gib, A., Caledonia, Queens.
DeMill, Wm. B., Halifax.	Spiers, H. H., Parrsboro'.
Forbes, J. A., N. Dalhousie, Pictou.	Spongale, Jos. A., Halifax.
Fullerton, Wm. S., Annapolis.	Stevens, Wm., Halifax.
Fulton, G. H., n. a., Gaspéboro.	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, n. a., "
 Students in Arts	66
Students in Science	34
 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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* * * 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 ANNO PROFESSOR ERETORICAE ATQUE

HISTORIE IN HAC UNIVERSITATE,

SUBITO, FLORENTE ETATE, E VITA EXCESSIT,

V. KAL. FEB., ANNO MDCCCLXXX.

ILLUM,

UPTOTE QUI DECUS ET ORNAMENTUM LITERARUM ET PRECEPTORUM

EXCELTUS BENEVOLUSQUE FUIT,

REGENTES HUJUS COLLEGII, PROFESSORES EJUS COLLEGE, ET

ALUMNI, AQUO MOROSE, LUGENT.

EXAMINATION PAPERS, 1880.

GREEK.

Examiner, J. JOHNSON, M.A.

FIRST YEAR.

XENOPHON : CYCLOPEDIA, Book IV.

TIME: THREE HOURS.

I.

- A. Translate Cyropaedia, Bk. IV., chap. ii., secs. 38, 39, beginning:
*Αὐτέρ γάρ τοι πρόσθιον μή δύτινος ξεγένει,

1. Account for the cases of: *μακάριον τοῦ καινοῦ αἵρετος*; *εὐτυχία*, Supply the ellipsis before *τοῦ καινοῦ*. Explain construction of *κατηγορούσεις*; *επιτελεσθήσεις*.

- B. Translate: Bk. IV., ch. iii., secs. 13, 14, beginning: *Ἄλλα μήτε
αἴτιον ἀλλὰ μᾶλλον τοῦ πολεμίου γεγένεται μήτε γενέσθαι,

1. Account for τὸν τῷ οὐ τοῦ δῆμος εἰπεῖται. Explain *εἰπεῖν* τοῦ γε
τερτίου γενοῦ τοῦ φίλου. Translate and explain according to a different reading.

2. Point out the irregular construction of the sentence:—
οὐ γάρ μήτεται διο τοῦ φιλοθεοῦ εἰπεῖται,

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

II.

1. What terminations result from the following combinations?

- a. In nouns: —ον —οη —οντο —οτο —οντον.
b. In verbs: —ει —εη —εο —εοι —εον —εοντο —εοντον.

2. (a) Name the gender and write the nom. and gen. sing. of:
βάλων; *νέρων*; *δέσμων*; *σάδεων*.

- (b) Write gen. and acc. sing. and dat. pl. of:
δημόσιον, *τάξις*, *μηδὲ*, *λέπτη*, *εἰτε*.

3. What parts in other degrees of comparison correspond to:—
άλλω (adverb); *αὐτός*; *δικαῖος*; *ἀριστερός*; *επιτελεσθείσης*?

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

- (a) In the active voice: *έργαστο*; *περιποιεῖτο*; *επιγράφετο*; *ταΐζετο*,
(b) In the passive voice: —*διέσταστο*; *επιστάσθητο*; *επιθετάσθητο*.

5. Write (a) the perfect infinitives of:
διέλευτο; *επέδειπτο*; *τρέπετο*; *επέδειπτο*; *διέλευτο*;

- (b) the aorist infinitives of:
έργετο; *αἴρετο*; *λύγετο*; *τίθετο*; *ἴκετο*.

6. Parse these verbs (found in the extracts) and give their chief parts: *ρεγεῖν*; *παραπονεῖν*; *δέσμευτεῖν*; *παῖσαν*; *παῖσετε*; *δίαι*; *τεμπεπεῖν*; *φιληθεῖν*; *ἀπελθεῖν*.

7. Translate into English and Latin:

- (a) εἰ τὸν λαγωνικὸν τοῖνα ποίειν. (b) οἴς δ' ἀριστεράς (άριστη)
σαλαζήσαντες ἀπειλήσαντες ἡ διατέταστα.

(For Candidates seeking a First or Second Class.)

TIME: TWO HOURS.

A. Translate: Bk. IV., ch. v., secs. 21, 22, beginning: "Ἄλλα πήρε
πάτρος γη τοὺς τοπίους δέμαντο,

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

2. Κύριος Κρατεῖσθαι: What governs *χαιρεῖσθαι*? Can you give the corresponding Latin form of address?B. Translate: chap. vi., sec. 3, beginning: "Οὐ δὲ τὸν βασιλεῖσθαι σιγή^ν
δέκατην παραπομπήσθαι,1. Parse δέκατην: *adicta dicitur*.C. I. What is *Hesistus*? 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: ρύμα : ρύματος : ρύματων ; αἰσθητός.

3. What peculiarities are there in the declension of:
αἴσθητος ? Αἰσθάλεα : αἴσθητος : αἴσθητον.

4. Give two examples of each: (a) Attic reduplication; (b) Attic pres. opt. act.; (c) Attic imperative act. 8 pl.

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

6. Distinguish according to accent: κρατεῖσθαι : ἀλλα : ταῦτα : αναπομπήσθαι : παραπομπήσθαι.

SECOND YEAR

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

TIME: THREE HOURS.

I

A. Translate Mem. Bk. III., ch. v., secs. 13, 14, 15, beginning "Εἴ τοι πάτη, οἴην, διὰ Σαρπηδόνας, κ. τ. λ.

2. Account for the mood of *γενέσθαι*. Supply the ellipsis in the clauses οὐ δὲ ἐπιχειρεῖσθαι, καὶ διέλειπεν, and compare the form of the first with the one corresponding to it.3. Briefly account for the cases of *ἀνερίσθαι*; *πολις γειτνεῖσθαι*: *τοπεῖσθαι*: *γεραστέσθαι*.

4. Αρχές ὅτι τοῖς Τούρκοις τοῖς γύρων τοῖς Δεβελιού τοιχοῖσιν εἰσῆρεν οὐ διότι ἴστροποι τοῖς Δούλοις, οὐ τοῖς τερατοῖσιν περὶ τοῖς τοῖς Αθηναῖς δέσαντο: write an historical and geographical note on this passage.

B. Translate Od. VI., 153-162.

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

2. Comment on, (a) *ἴδεντον φάσσειν*: *διφέρετεν τοῖς διόποις γυναις*. (b) *μητέ* διὰ αἰσθατούσας εἰσιστεῖν πάντας γηραιώτατος διάτοις.3. What words in Attic correspond to *σφίσι*: *σι* : *ισθεῖσθαι* ; *ἔσθισθαι* ; *ισθεῖσθαι* : *τισθεῖσθαι*.4. Parse, giving chief parts: *ἰστελλεῖσθαι* ; *ἴσθεται* ; *ἴσθεται* ; *ἴσθεται* ; *ἴσθεται* ; *ἴσθεται*.5. (a) Decline in the Singular: *ἴσθεται*, *ἴσθεται*. (b) Write the Epic forms of the singular of: *Ὀδυσσείς* ; *οἰς* ; *ισθεῖσθαι*.6. Scan the four lines beginning *ἴσθεται παντας παντας* 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. Of 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 (*πλῆθος*) 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 τοῖς εἴπερ τοῖς τῷ μηδέποτε εἰσῆρεν κ. τ. λ.

B. Translate: Mem. III., chap. xiii., secs. 1, 2, 3, ending at *τοῖς Ασσηροῖς*.1. (a) Comment on the construction of the clause, *τοῖς δέοντος, ισθεῖσθαι*; (b) *τοῖς εἴπερτοις*: explain the syntax. Give the equivalent Latin.C. I. Write with accents the Epic forms of the cases in the singular of *οἰσθεῖσθαι*: *οἰσθεῖσθαι* ; *οἰσθεῖσθαι*.

2. Give examples with accents of (a) Epic nominative; (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 *τις* thus accentuated?

THIRD AND FOURTH YEARS.

DEMOSTHENES: FIRST AND THIRD PHILIPPIES.
PLATO: APOLOGIA SOCRATIC.

TIME: THREE HOURS.

I.

A. Translate Phil. III. 61-63, beginning, "Ἐπειδὴ δὲ οὐτε προ-

(εὶς) πρὸς κούρους οὐτε προτέρων,

1. Explain clearly the construction of the clause: ἀλλὰ δε τοῖς πάλαισι
φύλακεσι τοῦ πρώτου καὶ τοῦ τεταρτοῦ; οἵτις πάλαισι ποὺ κακότης
παντούτας, οὐχι πρεσβύτερος τούτης γένεται;

2. Τίποτα τὸ Ελλήνων οὐ προτέρων ποτὲ θεάτρον τὸ "Ἀλισσός" καὶ τὸ τελε-

ευτόνων ποτὲ τὸ Ηὔπολις, οὐτε δὲ φύγεται. Describe the events referred
to.

3. Write notes on (a) δὲ τριάσσεται δραγμὸς ἔνθετος λευκίδης τοῦ
μητροῦ, δέσμων τάσσεται. (b) τυραννοῦς δικῆς πάρεργος οὐ ποτὲ προτρέπεται
παντούτου καὶ τούτου τούτους τούτους.

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

B. Translate Apol., ch. xxvii, to νόστος τυραννίου.

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

2. Parse, giving chief parts: προτέρως: λεπίτηρας: αὐτοτελεῖς:
ἴδεντος: λεψίστηρος: αὐτοτελεῖς.

3. (a) Comment on ὃ ποτὲ μητρὸν πειρῶντο τοῦ φόβου, ἀποτελεῖται
δι. (b) ὁ ἄλλη διατελεῖ: give some account of these.

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

(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: συνδεῖται διδόξει: τικεῖται: ποὺ οὐ τοτεί: οὐ ποτὲ δέδει,

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: Ἐπικράτειον γάρ (εἰς τὸ Κλεονός), εἶτα καὶ διάτη τοῦ ποτὲ ἑρμηνεῖον προβά-
ντος, ήτις αὐτοῖς τὸ διεύθυντο δράμα Εὐδόκια τοῦτο αὐτοῖς βρούσανθει, οὐδὲ ποτὲ οὐδὲ παντούτῳ ποτὲ τούτων σημεῖον, δικαὶος δὲ Αλεξανδρεῖος ὁ τοι-
νυν πρότιμος ποτὲ τούτων σημεῖον, ἀλλὰ καὶ τὸ γένος λεπτούτου προσδικούσας
καὶ τούτοις ἐπικράτειον, καὶ πάτη τούτου πράξεως τοῦτον ποτὲ
ποτὲ τὸ γένος λεπτον, ὅπερ δὲ τοῦτο τούτου δεῖπνου, διετέλει τούτου πρα-
κτικῆς διατέλειας (τοῦτο γάρ τοι τόπος τούτου λέγεται ἡ ἀπὸ τοῦ λόγου τοῦ διάτου),
τοῦτο δὲ Οὐδεῖται καὶ Ἀργεῖται πρότιμον τοῦ ποτὲ παντούτου τοῦ προ-
βάντος, τοῦτο δὲ τούτου προστάτης.

53

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 quare, si
quicquid paternissimas; ending: Summae nobis crudelitatis in patriae civitatemque
paracie fama sublevanda est.

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

2. Write notes on (a) meo nomine supplicationis decurritatis; (b)
equites Romanos: ingenuos: honestum libertinorum: liberi.

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

B. Translate Aen. VI, 199-209.

1. Explain "quod non sua semiant 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 discriminas
vocum.

2. What legends are connected with: His Phaedra, Procrustine
lock, moestanque Eryphyle.

II.

1. Write in combination all cases in the singular and the gen. pl.:
aliquis paternissimas, ianui mense, laugor aetere.

2. What forms in the other degrees of comparison correspond to:
longo, celeris, ianui, veterum, brevius (adverb), optime?

3. Parse, giving chief parts: norunt, miserante, interante, posent,
refert, ambit.

4. (a) Te tua fato docebis. (b) Proxima sorte tenenti lacis loca.
(c) Quicquid sui memores alios fecerit. (d) Hoc (vila) ter Elysiae nobis.
Under what rules of Syntax do the italicized words come?

5. Scan the first three lines of extract B.

6. Distinguish: δε, δε, δε, δε; Μέντρο, Μέγαρο, Μέγιστρο, Λέπραι, Λέπραι, δεκάδε, δεκάδε.

7. How is the place "whence" 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 molestis istius invidiae, si in exilium justus consulis iuris, misceris.*

1. Dixi ego idem in senata, eadem te optimissimum contulisse in ante diem V. Kalendas Novembres, tam quum multi principes civitatis Romae non tam sui coasservandi quam tuorum consiliorum reprehendendorum causa proficerent. 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: *et, iusus, sis, artus, vulpis, vir, anna.* (b) Mention a dozen nouns that have different meanings in sing. and in pl.

3. Write in full: I^o C^o Cl^o I^o XLIX. What is the Latin of: *i., i., i., i.*

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) st. and subj., (c) genit. 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, accident, credit, videbat, caperat, tolleret.*

2. Explain the syntax of italicized words: (a) *Cave si's mentitur.* (b) *Profectus id tempora.* (c) *Quem sciret Clodius...iter sollempne ...dico dies XIII. Kalendas Feb. Milioni case Lomellini de flammeo procedunt.* Describe also the method of finding the (zonomically) 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, Palatina, Bosporus.*

2. Non me Philippis versa aries 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: *filibus, ancillarum, Tempe, tigres, Praeneste.*

2. Parse, giving chief parts: *caperat, convivibus, revixerit, segnatio, blandieati, 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, illa, ista, hic; quis, aliquis, quinem, quidam.* (b) Show by simple examples in what various ways "that" may be used.

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 ressaltat Jovi,*
Derupta Parthenos superbita
Postibas.

- (b) *Jannus Quirini clausit.*

2. Quote imitations of Greek syntax in Horace.

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

- (a) *Nen dedit equis rosea,*
(b) *Angulus ridet ubi non Hymetto,*
(c) *Victis minores volvere verices,*
(d) *Crinibus ambiguoque valvi.*

- 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: CAPITIVI. TERENCE: ADULENTI. JUVENAL: SATIRES, XIII., X., XIII.

TIME: THREE HOURS.

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

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

2. Explain: *Nil moratur iam Laccos iisi sepselli cires.*

3. Elucidate (a) account for the forms: *dixi, reconciliasse, creduli, votum, donicem;* or (b) give meaning and derivation of: *sequlopus, latomias, horsem, libella, plagipeditas.*

B. Translate: Adel., Act IV., Sc. 6, vss. 15-25.

1. Explain syntax of: "et ne qua exist," "indicasse." What does "ipsum M" refer to? What is the opposite of "pulare fore?"
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., 233-242.
1. Write a critical note on: "ingenti curret super ora Liberno."
2. Comment on: Et qui see Cynicos nec Stoica dogmata legit
A Cynicos tamen distinxi.
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 cleavage 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 aks 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:

Necnon quoque ejus causa in fenus prodico,
Nihil suspicimur etiam mali. (Sæc.) Ubi, quid est? (Simo.) Scies.
Effector, fens. Interrea inter bellum,
Quae libi advenit, forte unam nigrorum adolescentium,
Fornax—Sæc. Bonis fortunæ.—Sæc. ut valut, Sæc.
Adeo modesto, sideo venusto, ut nihil expex.
Quia cum mihi lumenari præter castors
Vt quia est, et quia cur fenus præter castors
Honesta et liberal, accedo ad pedessequas:
Quis sit rogo. Sororum esse alius Chrysilla.
Percusisti illuc natusum: at n! hoc illud est.
Hinc illæ lacrimæ: haec illa est misericordia.

MATHEMATICS.

Examiner C. MACDONALD, M. A.

FIRST YEAR.—GEOMETRY.

TIME: THREE HOURS.

1. Is 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 parallelogram 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 show that the greater the number of sides, the greater is the angle of the polygons.

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. Show the arithmetical advantage of rationalising the denominators of surd expressions. Treat also the following example,

$$\frac{3x^2+x^2-5x+21}{5x^2+25x^2+25x-21} \text{ also}$$

prove $m^4 - n^4 + 2n(x^2 + n^2) - (m+n)(m-n)^2 = 2m^2n(m+n)$.

3. Reduce to lowest terms $\frac{3x^2+x^2-5x+21}{5x^2+25x^2+25x-21}$
also
prove $m^4 - n^4 + 2n(x^2 + n^2) - (m+n)(m-n)^2 = 2m^2n(m+n)$.

4. $ax+by+cz=m$; $a_1x+b_1y+c_1z=m_1$; $a_2x+b_2y=n$. Show 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 $x^2+px=q$, show the sum of the roots $=-p$, and their difference $=q$.

7. Form the equation whose roots are 0, 1, 2, -2. Also, if $x^2+px+q=s$, 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 50 years, and if the age of the son be double it will exceed the father's by 10 years. Find their ages.

9. Show 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 139. Find the Series. Sum also the 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 show that, in all cases, $x^2 + y^2 > x^2 y + xy^2$, unless $x = y$.

SECOND YEAR.—GEOMETRY.

TIME: THREE HOURS.

1. Find a mean proportional between two given lines. Show 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 rectilineal figure.

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

5. Show 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.

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

7. A point P is taken in the radius CB of a circle, the centre being C, and CP 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 s^2 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 $\frac{3}{4}$ 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 fractions of an angle, and show 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 show that the area of a triangle is $\sqrt{s(s-a)(s-b)(s-c)}$.

5. Write the formulae for $\sin(A+B) \pm \sin(A-B)$; and show $\sin(n+1)A = 2 \sin nA \cos A - \sin(n-1)A$, 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. Show that the radius of the inscribed circle that touches side a is $= \frac{a}{s-a}$.

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 $\left(x - \frac{1}{x}\right)^n$.

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

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 $\frac{A^{\circ} + B^{\circ} + C^{\circ} - 180^{\circ}}{360^{\circ}} \pi r^2$.

4. Do you calculate a Table of Napierian logarithms before finding common logarithms? If not, show the necessary steps. From the expansion of e^x prove that $x = \frac{-1}{1}, \frac{2}{2}, \frac{4}{3}, \frac{6}{4}, \dots, \frac{2k}{k}, \dots, \infty$.

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° . Show 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 $ab + ac + bc = r^2 + r'^2 + r''^2 + r'''^2$.

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. Show that if he can get any one to lay 3 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}{R - 1} = \A .

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

5. Show that the parallelogram law applies to the composition of rotations.

(B.) 1. Give the "Second Law of Motion." Hence show 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 $\frac{1}{2}$ ft. above the earth's surface. Show 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. Show that if a simple pendulum of length l vibrates 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. Show 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 such 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, impulse 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. Those 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. Show 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. Show 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. Show 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 mercury.

*4. 49 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 -49° 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 show 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 1.2332 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 18TH, 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 show 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 79 mm. pressure, a volume of 4 litres. Find its volume at 340° C and 234 mm. pressure.

8. Describe the mercarial thermometer.

9. Reduce 24° C to the Fahrenheit Scale, and -22° F to the Centigrade Scale.

BOTANY.

Examiner PROFESSOR LAWSON.

APRIL 10, 1890.—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 Mold Fungus, such as *Apergillus* (*Pestilliculus*) 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 Pycnangia, the Peltose, the Process of Impregnation, and the mode of development of the fern-frond from the Prothallium.

7. Describe the process of reproduction in true mosses (Moss).

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 gasses 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 Hg 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 connection 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. Show 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 *Product*, *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. Show 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 Philosopher 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 modifications does the controversy as between Realism and Nominalism, or Conceptualism, undergo from the time of Locke?

4. How do the theories of perception held 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 cosmthetic and representational as the theories which he advocates?

5. What is Aristotle's division of mind? What solerist 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 premise 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 premise, 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 dictis" and "extra dictis."

10. What is the doctrine of Method? Give the rules of Division and Definition. What are Probations in respect of their Matter, Form and Cognacy? 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.....*CHAR. E. MOYRE, 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: *Dhāt̄ that̄ onfānde se fela mōr.*
Ending at: *Sēcean wylde wīf.*

1. Make a note of two, either grammatical or philological, on the words and portions of words italicized: (*the fōl, cymē, wið, hōlōm, nālē, gēlēðer, nēglēn, cysprung, scoldē, thōmē, wylde, etc.*)

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: *Cora thāt̄ heorot, dīhr Hring-Dene.*
Ending at: *hyrnan sīde, thāt̄ hīne se braga angēt.*

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

2. Explain the system of Anglo-Saxon alliteration.

- C. (Pope Gregory sees the English slaves on sale at Rome.)
 Beginning at: *Dha gelāmp hit, se sumum sare, swa swa gyl*
 for oft death.
 Ending at: *and swilcum gedafanadl hif se heofenum*
enga gefaran been.

Questions on Extract C.

1. *Sæle, exact meaning?* can you cite derivatives? *lyris*, stymology? *code*, *parse*; *stœf*, etymology? *grotte*, *parse*; *ordfældas*, resolve into elements; *inseadre*, decline in singular (all genders); *swilfes*, can you give the subsequent history of this word? *asrads*, quote other examples of kindred metathesis; *desfæcas*, etymology? from what is the word *hal* derived? *swilcian*, can you name other words that, before they assumed their present form, underwent the same changes as *swilc*?

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: *Thā wæs Tātwine gehisiten sunn man*.
 Ending at: *to thare stowe the man hædeth Cruxland.*

Questions on Extract D.

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

2. Tell the difference in meaning between *sc* and *dc*; *her* and *her*; *bed* and *bed*; *geset* and *geset*; *mas* and *mas*.

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: *Ice hafe don swa summ thā hadd*.
 Ending at: *thatit is hreohit 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 Orm's work belongs. Can you give any infections 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: (*instill*, *wibb*, *gome*, *ferthi*, *wæsc*.)

- B. (The King of Scots and the Duke of Cornwall take counsel touching King Lear.)
 Beginning at: *Tha hlemp hit seodlðhe*, *sone thanfer*.

Ending at: *and libben on lieve, the while he leode.*

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

5. By reference to the infections 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: *Thame heilis I wonder in my wi* what weomen

hit were.

Ending at: *"How I may save my soule that saint art i-heile."*

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. (Chancer's description of the wife of Bath.)

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

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

- E. (Town-people 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 upstarte and caute the cart to grounde.*
 Ending at: *Mordre will out, this my conclusion.*

1. Comment on the words and portions of words italicized in Extracts D and E: (*sondell*, *hæst*, *se*, *soosa*, *kwerkeſt*, *were*, *grounde*, *at*, *clercs dore*, *exilhouse*, *aswile*, *middle*, *newe*, *lyngere*, *silfstan*, *awlofisweare*.)

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 Chancer's language "English undefined"?

4. Unfold the meanings of the following words and explain the allusions quoted: *me思思kith*; *mysteriale*; *gouedal al with grome*; He wold the see were kept *fir any thiȝt*; *Seyn Julian he wæs in his comræd*; He keþtis that he was in *posidunce*; *Gottold*, the Tabard, faste by the Bellis; why *christenes*? *awakepe*; the shippes *keppestres*; the *herte-spassas*; 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 book 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 Caesar" there exist various types of consciousness and analyse, in especial, the characters of Brutus and Cassius.

5. What is noteworthy in the dramatic construction of the Tempest? Contrast the mortal nature 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 Shakespearian and Modern English. In what connexion do the following lines occur?

(a) "Aointis thes which!" the *crusped* *resyss* cries.

(b) The great man down, you mark his *fareswiss* 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 plashed 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 *H' 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) Bedevelling our flocks with the fresh dews of night.
Farewell happy fields

Where joy forever dwells; hail, horror, hail
Infernall world.

(c) Grate on their scrossed pipes of wretched straw.

(d) Thus sang the weasell swain to th' oaks and rills,
Mark 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 epitaphs. Supply the contexts of:

(a) Lo, the poor Indian! whose ancestors mind
Saw 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 Saxonism before Wessex became supreme?

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

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 Capitalisation of Limerick.

V.

HISTORY OF FRANCE.

TIME: THREE HOURS.

1. "They (the Phoenicians,) 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 Caesar'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 Capetianaries.

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

9. "Two great causes, the one moral, the other social, impelled Europe into the crusades." (*Girard*). 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 Boccaccio?

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 Lancast 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-slaying 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 Italian trace between Cromwell and Napoleon?
8. What famous Secret Treaty was drawn up in the reign of Charles the Second? Unfold its details.
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 Alliteratio?

3. What do you mean by Inversion? Where do we find it greatly used? Give any example of the figure.

4. What is Thesis? Give an example. Explain Hyperbaton. What is the effect of Exclamation? of Interrogation?

5. What is Sarcasmatio? Is Zeugma not rather an instance of carelessness of style than a figure of Emphasis? What is Anacoloutha? What is Apophasis? Intercupio? Suppression?

6. Give examples of Asyndeton and Polysyndeton respectively. Can you give any striking example of their combinations?

7. What are Paroemetic Figures? Distinguish a Proverb from an Apotheosis, and Epigrams 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 thoughts, with their different characteristics.

10. Distinguish between Euphony and Harmony. What is the peculiarity in elegance of style? What is Rhythm 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 LIECHT.

FIRST YEAR.

- Translate:
- I. Schiller's "Kanzler mit dem Drachen."
 - II. Jacob's "Geist/gescheide Zeit."
 - III. Uhland's "Das Sängers Flucht."
 - IV. Kotzebue's "Der gerade Weg der harten."

Translate into German: Do what is right. Schiller, whose works we are reading, was born in 1759 (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: *steigen, illa, an, der, künften, 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: *des fülligen Geist* (I), *mein unzäher Wirth* (II), *seiner goldenen Zeit* (III).

3) What kind of derivative substantives are formed by means of the suffixes *er, in, ehn, ang*? Form the plural of: das Regiment, das Kapital, die Ehre, der Kaufmann, der Tod; and the sing. of: Rathschläge, Weisen, Wörter, Künster, Geschwister.

4) Write the 1st p. s. of Impf! Indic the Infinitif and the past part. of decline, anschließen, wärde, betrachtet. (II), bin, gesprochen, verlassen (IV); fröhliche, auvertrennen, überstehen, studieren, rennen.

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

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

7) Illustrate the use of *aus, nicht, und kein*; and the difference between *aber* and *wieder*.

8) Adverbial and subordinate 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 Gold gegeben haben, wenn ich es nicht selbst gehabt wärde. 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 Bergmensch."

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

Quotations: 1). Herr sage der Alte—wannte. Explain the construction of this sentence, and mention, giving the rule, what form, clauses beginning with *wante*, assume in English.

2). Illustrate by an ex. how the English pres. past, expressing cause or reason is rendered in German. Translate the following pres. part., stating reasons: Weygn bitterly, the disciplo 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, entsprechen, umfangen, schloss, erzog, sah, messen, sprächen, antänden, geloren, scheiden, schreisen.

4). The *Imperf. form* is variously expressed; translate and explain: There are people who believe nothing. There were hundreds of people in the gathering. Much was spoken, but little was done. Give an imperf. form to the sentence: "Ein Wunderer kann 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 those five years.

7). What is the relative position of the adjuncts 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 welches ihm sein Vater studiren lassen habe.

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

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FRENCH.

FOURTH YFAR.

APRIL 16, 1889.

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

II. Cossin: "Des différents arts."

III. Moléire: "Le Misérable."—Acte II, Scène V.

Traduisez en Français: Walter Scott: "Quentin Durward."—The Count of Crèvecoeur, 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 late the fantastic taste, called Arabesque. Around his neck and over his polished cuirass, hung his master's order of the golden fleur, one of the most honored associations of chivalry then known in Christendom.

Quotations: 1). Le mot tout, employé comme adverbe, est tantôt variable, tantôt invariable. Donnez des exs. Quelle distinction faudrait entre: Ces gens sont tout savants et Ces gens, sont tous savants.

2). Passez trois mois vos pertinacions ne seront plus admises. Ces dames chantent fous. Qui n'aî pas à remarquer sur l'accord des adjts. passe et fous. Mentionnez d'autres mots sensibles. Traduisez: Nero was as odious as ever to the senators and simple citizens. Dites ce que vous savez du complément de deux adjets.

3). Établissez les règles sur l'accord du verbe dans les phrases: Liberty 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] certaine people. (Traduisez ces phrases).

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

5). Pourquoi les phrases suivantes sont-elles incorrectes? C'est à mon avis à qui je veux parler. Le souvenir des bonnes actions embelli et répand un parfum délicieux au vrie.

6). Le forme verbale en est 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 recking [fumer] with blood. The vices of men increasing enormous (tonjures) will leave a sad inheritance to future races.

7). Quelle distinction faites-vous entre: *intelligible* et *intelligently*; *admissible* et *admissibly*; *correct* et *correctly*. Mentionnez quelques formes verbales qu'on soit toujours invincibles.

8). Certains partic. passés, placés avant les noms, sont invincibles. Pourquoi? Nommez-les et donnez un ex. A quelle règle d'accord sont sujets les partic. suivis d'un infinitif. Prenez pour ex.: Cette dame a de talent; je l'ai vu prendre. Cette dame a pose hier; je l'ai vu poser. — On les a faits. Les boeufs—ils se laissent mener. Quelle est l'accord des deux derniers partic.

9). J'ensei été pris du Gange esclave des faux dieux, Chrétienne à Paris, musulmane en ces lieux—"Zoro" de Voltaire. Quelle figure de Syntax ces vers rendent-ils? Est-elle régulière ou non?

10). Qu'est ce qu'on appelle le grand siècle sur 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 Mollière et Racine et classez leurs ouvrages.

THIRD YEAR.—ADVANCED.

Translate: L Balzac: "L'Ueasier."

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 (monde) affairs to settle, there is no time to be lost; this is the last meal yes and I shall take on earth."—Parmenius, a friend of Alexander, hearing the great effects which Darius had made, said:—"Were I Alexander, I would accept them."—"So would I," replied Alexander, "were I Parmenius."

Questions:—1). Ainsi donc persécutent 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: *croisiez*, *peints*, (I); *exterré*, *reuge* (II); *solt peusset* (III.) Mention the verbs that end in *es* in the 2nd p. plur. of the Pres. Indic.

3). Give rules for the agreement of the *p. parts*: *peuplés*, *espard*, *peint*, *esterré*, *reulta*, *assassiné*. Correct and explain mistakes, if any, in: *Les pluies qu'il a faites, ont gâté les chemins.* La dame que j'ai entendu chanter. *La chance que j'ai entendu chanter.* Translate: Many learned men have died since the beginning of the year. Mary Stuart was compelled (forced) 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 *adv.* Mention the expressions most in use. Give the meaning and etymology of: *ailleurs*, *encore*, *dès*, *jusqu'à*, *enjoué/laï*, *aujourd'hui*.

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

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

7). Which are the conjuncts, that require the verb in the subject 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 malices. Nous avons vu des pettites—malices. Account for the use and suppression of the article.

10). There may be Ellipsis of the article in certain cases? Write exs. in illustration. How do you translate *suis*, 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 Souicide."

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

Translate into French: Troy was a famous city. When Prism 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 strategem of a wooden horse. This horse being (remplie) 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 doutez pas; tout 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 prepos. and as *partit. article*, and mention exceptional forms of the rule exemplified by *tout de*.

2). When do you write *sois* with a circumflex? Show by ex. that *se* may assume the masculin form before a *fem. nom.* Give the prsns. corresponding to *sois, sois, sois.* Translate. Take me there.

3). Illustrate the difference between: *quel que* and *quelque*, *quelle* and *quelque*, *quand* and *quand*. 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 enterré n'avait que vingt ans. Why is this sentence incorrect?

6). How do you render *sois* 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: *Posent, dou, peufs* (I); *savent* (II); *aiment, saient* (III). Write the 1st p. imperf. ind. of *voir*, and the pres. part. 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 (measure) was not thought of.

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