

CALENDAR

OF

DALHOUSIE COLLEGE

AND

UNIVERSITY,

HALIFAX, NOVA SCOTIA.

---

SESSION 1875-6.

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HALIFAX :

PRINTED FOR THE UNIVERSITY, BY NOVA SCOTIA PRINTING COMPANY.

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HARRIS

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1876

# University Calendar,

## 1875-76.

1875.

SESSION.

Oct.	23.	Fr.	Meeting of Board of Governors.
	27.	W.	Which Session begins. Matriculation Examination in Classics and Mathematics at 9 o'clock, A. M. Examination for Scholarships.
	28.	Th.	Matriculation Examination (English) continued; Supplementary Examinations, at 10 o'clock, A. M.
	29.	Fr.	Meeting of Senate at 10 o'clock, A. M. Registration, and Library Tickets issued at 11 A. M.
Nov.	1.	Mo.	Acad. Classes opened; class Tickets issued. Entrance Examinations in Ancient History and Geography for Second and Third Years, at 8 o'clock, P. M.
	3.	Mo.	Anniversary of opening of the College in 1863.
	13.	W.	First Matriculation and Supplementary Examinations at P. M.
	31.	Th.	Meeting of Senate at 1 o'clock, P. M.
Dec.	1.	Fr.	Meeting of Senate at 1 o'clock, P. M.
	23.	Th.	Christmas Vacation begins.
1876.			
Jan.	4.	Fr.	Class Lectures resumed. Meeting of Senate at 1 P. M.
	5.	W.	Supplementary Examinations in Ancient History and Geography at 9 P. M.
	14.	Th.	D. Degree established in 1822.
	21.	Fr.	Meeting of Board of Governors.
Feb.	1.	Fr.	Meeting of Senate at 10 o'clock, P. M.
	1.	W.	Ash Wednesday. No Lectures.
	7.	Fr.	Meeting of Senate at 1 o'clock, P. M.
	18.	Th.	Last-day for receiving Essays for "Leaves" Prize.
	22.	Th.	George Bursey, one of the Students, Founder of the College, died in 1855.
	23.	Fr.	Last-day for receiving M. A. Theses.
	4.	Fr.	Meeting of Senate at 1 o'clock, P. M.
April	7.	Fr.	Last-day of Class Lectures. Last day for returning Library Books.
	12.	W.	Examinations in Latin, 9 A. M. Honour Examinations in Classics, English, Mathematics, and CIVIL Latin, 1st and 2nd years, 9 P. M.
	15.	Th.	Examinations in Greek and Mathematical Physics, 4th year, 9 A. M. Honour Classes, Extra Greek, 1st and 2nd years, 9 P. M.
	14.	Fr.	Examinations in Logic and Metaphysics, 9 A. M.
	15.	Th.	Examinations in Mathematics and Mathematical Physics, 3rd year: Honour Classes, Honour Mathematics, Honour English, 9 A. M. EXAMINATIONS in Mathematics and Honour Examinations continued, 9 P. M.
	18.	Th.	Examinations in Ethics and Experimental Physics, 9 A. M. Honour Classes, 9 P. M.
	19.	Fr.	Examinations in History and History, 9 A. M.
	20.	Th.	Examinations in Chemistry, Honour Classics, Rhetoric and Theory, 9 A. M.
	21.	Fr.	Examinations in French and German. Extra Mathematics, 3rd year, 9 A. M.
	22.	Sat.	Competition for "Evang" Prize, 10 A. M.
	24.	Mo.	Meeting of Senate, 10 A. M.
	25.	Tu.	Results of Examinations declared.
	26.	W.	Meeting of Corporation, 10:30 A. M.
			<b>SUMMER SESSION, 1875.</b>
May	1.	Mo.	Summer Session opens. Registration at 10 o'clock, A. M. Meeting of Senate at 11 o'clock, A. M.
	2.	Tu.	Lectures begin.
	23.	Th.	Foundations Stone of College laid, 1823.
	24.	Fr.	Class's Birthday. No Lectures.
June	6.	Th.	Meeting of Senate, at 1 o'clock, P. M.
	7.	Fr.	Accession of Queen Victoria.
	11.	W.	Holidays end at 11:30. No Lectures.
	22.	Fr.	Lectures close.
	25.	Mo.	Examinations.
	27.	Th.	Examinations. Session ends.

# Dalhousie College and University.

## BOARD OF GOVERNORS.

HON. SIR WILLIAM YOUNG, Knight, Chief Justice of Nova Scotia, *Chairman*.  
HON. CHARLES TUPPER, C.B., M. D., M. P.  
HON. J. W. RITCHIE, Judge of Supreme Court of Nova Scotia.  
HON. S. L. ELLIOTT, Q. C.  
REV. GEORGE M. GRANT, M. A.  
JAMES F. AVELY, Esq., M. D.  
CHARLES EDMOND, Esq.  
ALEXANDER FORBES, Esq. M. D.  
REV. G. W. HILL, M. A.  
GEORGE THOMSON, Esq., *Secretary and Treasurer*.

## SENATE OF THE UNIVERSITY.

VERY REV. JAMES BOGA, D. D., *Principal*.  
REV. WILLIAM LYALL, LL. D.  
CHARLES MACDONALD, M. A., *Secretary of Senate*.  
JOHN JOHNSON, M. A.  
GEORGE LAWSON, Ph. D., LL. D.  
JAMES DEMMEL, M. A.

## FACULTY OF ARTS.

VERY REV. PRINCIPAL BOGA, D. D., *Professor of Ethics and Political Economy*.  
REV. WILLIAM LYALL, LL. D., *Professor of Logic and Metaphysics*.  
CHARLES MACDONALD, M. A., *Professor of Mathematics*.  
JOHN JOHNSON, M. A., *Professor of Classics*.  
GEORGE LAWSON, Ph. D., LL. D., *Professor of Chemistry and Microscopy*.  
JAMES DEMMEL, M. A., *Professor of History and Rhetoric*.  
JAMES LICHTI, Esq., *Tutor in Modern Languages*.

*Justice*—JOHN WILSON.

## Faculty of Arts.

### § I.—WINTER SESSION.

The Winter Session of 1875-76 will commence on Wednesday, Oct. 27th, 1875, and end on Wednesday, April 29th, 1876.

### § II.—ADMISSION OF STUDENTS.

Students may enter the College,

1. As Undergraduates, with the intention of applying for a University Degree at the end of their course; or
2. As General Students who do not look forward to a University Degree.

The usual Course for Undergraduates extends over Four Winter Sessions. Students taking this Course are required to pass the Matriculation Examination of the First Year (see § III), and take the classes proscribed for their respective courses.

But Students may shorten their attendance by one Year, by passing the Matriculation Examination of the Second Year (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 any preliminary Examination, and may attend such classes as they choose.

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

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

### § III.—MATRICULATION EXAMINATIONS.

#### FOR THE FIRST YEAR. (*Four Years' Course.*)

The Subjects of Examination for entrance into the First Year of the Course are:—

I. IN CLASSICS.—Latin Grammar, Greek Grammar, one Latin, one Greek Author.

*Latin.*—Cæsar, one book; Virgil, one book; Cicero, two Orations; Horace, one book of Odes.

*Greek.*—Xenophon, one book; Homer, one book; Lucian's Select Dialogues; New Testament, one Gospel.

The Books in which Candidates for Professors' Scholarships will be examined, will be prescribed from year to year. For Session 1875-76, they are in Latin, CÆSAR'S COMMENTARIES, Book V.; in Greek, XENOPHON'S ANABASIS, Book I.

II. IN MATHEMATICS.—Arithmetic; Euclid's Elements of Geometry, Book I.; Algebra, to the end of Fractions.

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

Special stress will be laid upon accuracy in Latin and Greek Grammar.

#### FOR THE SECOND YEAR. (*Three Years' Course.*)

In order to Matriculate for the Three Years' Course, a Student must pass an Examination,—

1. In the *Classics* of the first year as specified in § XIV, or their equivalents.

2. In the *Mathematics* of the first year as specified in § XIV.

3. In *English Grammar, English History, Geography and Composition.*

4. In Roman History and Ancient Geography, as specified in § XIV.

### § IV.—COURSE OF STUDY.

#### COURSE FOR DEGREE OF B. A.

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

For First or Second Class in Latin or Greek, extra work is prescribed, and special stress is laid upon accuracy in Grammar. See § XIV.

For First or Second Class in Rhetoric extra work is required.

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

For First or Second Class in Latin or Greek, extra work is prescribed, and for First or Second in Mathematics an additional hour's work is required. (See § XIV.)

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) French or German. (6) Greek or Chemistry.

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

*Fourth Year.*—(1) Latin. (2) Ethics and Political Economy. (3) History. (4) French or German. (5) Mathematical Physics or Greek.

A Student must take the same Modern Language as part of his Undergraduate Course in the Third and Fourth Years.

For First or Second Class in History, extra work is required.

### § V.—HONOUR COURSES.

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

Honour Courses are provided in the following groups of subjects:—(1) Classics; (2) Mathematics and Physics; (3) Mental and Moral Philosophy; (4) History, Political Economy, and English Literature and Language. Instruction of an advanced kind is provided in those subjects during the third and fourth years 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 groups of subjects obtains the Degree of B. A. with Honours in such subjects. But First Class 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 Class Honours to one who has not passed Second Class in the Ordinary.

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 relative 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 of.

A Student of the Third Year, for Honours, (see § XV).—

In *Classics*, may omit the Mathematical Physics of the year;

In *Mathematics and Physics*, in *Mental and Moral Philosophy*, in *History, Political Economy, &c.*, may omit the sixth subject of the Ordinary Course, (see § IV).

A Student of the Fourth Year, studying for Honours,

In *Classics*, may omit Mathematical Physics, and either Ethics and Political Economy or History;

In *Mathematics*, may omit either Latin or Ethics and Political Economy;

In *Mental and Moral Philosophy*, or in *History, Political Economy, &c.*, may omit the fifth (selective) subject of the Ordinary Course, (see § IV).

## VI.—SUMMER SESSION.

The Summer Session will commence on Monday, 1st May, 1876, and close at the end of June.

Classes will be opened for instruction in the following subjects:

Classics.	Optics.
Theory of Equations.	Chemistry.
Applied Logic.	History of English Literature.
Modern Languages.	

## VII.—FEES.

The Fee to each Professor, whose class or classes a Student enters, is *six dollars* for the Session.

An Undergraduate, who has completed two years of his course, may attend the Classics and Mathematics during the remainder of his Undergraduate Course without the payment of additional Fees.

Mathematical and Experimental Physics constitute a separate class.

General Students pay a fee for every class they attend.

Practical Chemistry, three months' course (optional), fee, *six dollars*. Students taking this class are required to provide their own materials. The use of the larger articles of apparatus will be given in the Laboratory free of expense.

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

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

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

The total fees of Undergraduates, who take the ordinary B. A. Course in Arts, are as follows:—

Classes of First Year, with Library and Matriculation Fee.	\$21 00
Second Year, with Library Fee.	25 00
Third "	13 00
Fourth "	13 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 at the close of the several years.

Undergraduates have also to pass entrance Examinations, as set forth in § IV.

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

### DEGREE OF M. A.

A Bachelors 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 a literary or professional subject.

Fee for diploma, which must accompany the Thesis, *twenty dollars*, except in case of those who entered as Undergraduates prior to 1869, who pay *five dollars*. Thesis to be handed in before the end of March.

## IX.—REGULATIONS FOR EXAMINATIONS.

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

2. If an 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 by the permission of the Senate, on giving notice to the Secretary of the Senate at or before the opening of the Winter Session; but failing in more than two subjects will involve the loss of the year. N. B.—In the application of this Rule, Mathematics will be reckoned as *two* subjects, and Latin and Greek each as *one* subject.

3. 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*.

4. Undergraduates of the Second and Third Years who fail to present themselves for the Entrance Examinations in History and Ancient Geography on the day named in the Calendar, may, on payment of a fine of *two dollars*, have another day appointed them for such Examinations.

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

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

### § X.—PROFESSORS' SCHOLARSHIPS.

Two Scholarships, entitling to free attendance on all the classes of the Undergraduate course as long as the holders maintain a First or Second Rank at the Sesssional Examinations, are offered by the Professors for competition this year; the competition to take place at the Matriculation Examinations. For subjects of Examination, see § III.

### § XI.—PRIZES, CERTIFICATES OF MERIT, AND MEDALS.

#### THE UNIVERSITY PRIZES.

These Prizes are awarded to those Undergraduates who stand first in the several subjects at the Sesssional Examinations, provided they occupy positions in the First or Second Class, and have passed in all the other subjects proper to their year.

#### THE ST. ANDREW'S PRIZE.

This Prize will be awarded this year to the Student who stands first in Mathematics at the Sesssional Examinations of the Second Year.

#### YOUNG PRIZES.

Two Education Prizes of \$20 and \$10 respectively, are this year offered by the Hon. Sir Wm. Vorne, Knt, Chief Justice of Nova Scotia, and are open for competition to all Arts 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.

#### LAURIE PRIZE.

A Prize of \$20 is offered by Colonel Laurie, Oakfield, for the best Essay on "Public Roads in Nova Scotia; on what system can their construction and maintenance be best provided for in the public interest?"

Essays to be sent in not later than 18th March, 1876, each signed with a motto, and accompanied with a sealed envelope, bearing the motto and containing the name of the writer.

#### THE WAVENY PRIZE.

This Prize, of the value of \$50, has been founded by an unknown Benefactor, whose object in so doing is to encourage the studies of the Curriculum, especially Mathematics. It will be awarded to the Undergraduate of the Third Year who makes the highest total of marks at the Sesssional Examinations, the

numbers being reckoned according to the following scale: Natural Philosophy, 200; Pure Mathematics, 100; Classics, 200; Chemistry, 150; Metaphysics, 150.

It is to be intended that, after this year, this Prize shall alternate with the North British Society's Bursary, and be held for two years by the successful competitor.

#### THE ALUMNI ASSOCIATION PRIZES.

The Alumni Association of this University, with judicious liberality, have this year provided Two Prizes of \$25 each for Students of the First and Third Years. These Prizes will be awarded to the two Students of these years who obtain the highest total of marks at the Sesssional Examinations.

#### 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 Sesssional Examinations of the Second Year's course, and held by the successful competitor for two years, namely, during the Third and Fourth Years of his Undergraduate Course. 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, 1876, at the Sesssional Examinations. In awarding this Prize, Classics, Mathematics, and Chemistry will be reckoned each 150; Logic, 100.

#### MELBOURNE PRIZE.

A Prize of \$25 in memory of an "earnest student," is offered this year by a donor who does not wish his name to be made public. It will be awarded to the Student of the First Year, who obtains the second highest total of marks on the subjects of the regular course at the Sesssional Examinations.

#### GOVERNOR GENERAL'S MEDALS.

His Excellency, Earl Dufferin, Governor General of Canada, has been pleased to offer a gold and a silver medal for competition, during his tenancy of office. These medals will be awarded to the two Students of the Fourth Year who stand highest at the Final Examinations for the Degree of B. A.

#### 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 caps and gowns, 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 illness, or intemperance or disorder in the Class Room, if persisted in after due admonition by the Professor or the discipline proper to the class, 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 or 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 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 1600 volumes. All Students are entitled to the use of the Books, on payment of the annual fee of one dollar.

## § XIV.—ALUMNI ASSOCIATION.

This Association has now entered upon the fifth 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*.

Hitherto the only assistance they have lent the University has been the furnishing of Prizes for competition to Undergraduates at the Sessional Examinations, (see § XI.), but it is expected that the time is not distant when the Association shall have developed into an important adjunct to the University. Next year a Bill to incorporate the Association will be introduced into the Provincial Parliament. The present Executive Committee are meantime empowered to take such other 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 Classes for at least two years, 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 evening of Convocation day, at the close of the Winter Session.

Office-bearers for the present year:

President.....	D. C. FRANKS, B. A.
Vice-President.....	L. H. JORDAN, B. A.
Secretary.....	J. M. OXLEY, B. A.
Treasurer.....	JAN. FORBES, M. A.
C. D. McDONALD, B. A.   To compose the Executive	
HOOR McKENNIE, M. A.   Committee together with	
ROBERT SANDERSON, B. A.   the officers.	



## § XV.—ORDINARY COURSE FOR B. A.

### LATIN AND GREEK.

#### FIRST YEAR.

**LATIN.**—*Caeser*; First Oration against Catiline.  
\* Third Oration against Catiline.

Virgil; *Aeneid*, Book V.

**GREEK.**—*Lucretius*; *Tyrrhus*.  
\* *The Dream*.

**COMPOSITIONS.**—Principia Latina, Part IV.

#### SECOND YEAR.

**LATIN.**—*Livy*: Book I, chaps. 1-30. \* Book I, chaps. 30-60.

*Horace*: *Odes*, Book I.

**GREEK.**—*Herodotus*: Book I, secs. 95-141. \* Book II, secs. 1-34.

*Demosthenes*; *Orations*, Book IX.

**COMPOSITIONS.**—Principia Latina, Part IV. Initial Greek, Part III.

#### THIRD AND FOURTH YEARS.

**LATIN.**—*Tacitus*: *Agriicola*; *Germania*.

Juvenal: *Satires* VII, VIII, XIV.

**GREEK.**—*Demosthenes*: *Olynthians*, II, III, *Philippic*, IV.

**COMPOSITIONS.**—Principia Latina, Part V. Initial Greek, Part III.

**PHILOLOGY.**—Outlines of Comparative Philology.

At the Seasonal Examinations of the Third and Fourth Years, passages taken from books not read in the Course will be set for translation.

### † ANCIENT HISTORY AND GEOGRAPHY.

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

**THIRD YEAR.**—History of Greece to the Roman Conquest. Geography of Greece, Africa, Asia.

Books recommended: *Liddell's History of Rome*; *Smith's History of Greece*; *Pillars's Classical Geography*.

### MATHEMATICS AND PHYSICS.

#### 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.

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

**PLANE TRIGONOMETRY.**—Solution of Plane Triangles.

#### SECOND YEAR.

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

**PLANE TRIGONOMETRY.**—Circular and Gradual Measure; Functions of arcs and differences of angles, &c.; Relations of the sides and angles of triangles; Measurement of Heights and Distances; Elementary Problems in Navigation; Use of Logarithms.

**ALGEBRA.**—Simple Indeterminate Equations; Binomial Theorem; Properties of Logarithms; Compound Interest; Annuities.

\* Only Students competing for a First or Second Class at the Seasonal Examinations will be examined in this additional work, which will not be read in class.

† The Examination in these subjects will be held at the beginning of the Winter Session.

### EVTLA.

**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 Coefficients, Higher Equations with Heron's Method of Solution.

#### EXPERIMENTAL PHYSICS.

(Third Year.)—Text Book: Ganot's Physics.

#### MATHEMATICAL PHYSICS.

(Third Year.)—Text Book: Galbraith and Houghton's Manual of Mechanics.

(Fourth Year.)—Text Books: Galbraith and Houghton's Manuals of Astronomy and Optics; Pless's Hydrostatics (or Galbraith and Houghton's.)

### 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 ESTHETICS.

(Third Year.)—Text Books: Sir William Hamilton's Lectures on Metaphysics; Maass's Metaphysics; Lewes' Progressional History of Philosophy. Cousin On the Beautiful. Alison's Essays on the Nature and Principles of Taste.

### CHEMISTRY.

(Second Year.)—Text Book: Fowler's Manual of Chemistry, the whole of the Inorganic part (excepting Physics), and a portion of the Organic.  
(Third Year.)—Same Text Book, including whole of the Organic Chemistry.

#### ANALYTICAL CHEMISTRY.

Macedam's Practical Chemistry; Fresenius's Qualitative and Quantitative Analysis.

### RHETORIC.

#### FIRST YEAR.

**INVENTION.**—Text Books: Quintilian's Institutio of Oratory. Whately's Elements of Rhetoric. Campbell's Philosophy of Rhetoric. Essays and exercises on the principles of Rhetoric, weekly.

**ELUCIDATION.**—Exercises every week after the Christmas holidays. Books recommended: Parke's Analysis of the Principles of Rhetorical Delivery. Russell's Elocution, Sargent's Standard Speaker. Donihou Elocutionist. Nova Scotia Reader No. 1 and No. 7.

## ENGLISH LANGUAGE.

## FIRST YEAR.

ANGLO-SAXON.—Text Books: Comparative Grammar of the Anglo-Saxon Language, F. A. March, LL.D. Anglo-Saxon Reader, by F. A. March, LL.D. ENGLISH.—Text Books: Specimens of Early English, by B. Morris LL.D., and W. W. Skeat, M.A. Part Second. The Philology of the English Tongue, by John Earle, M.A.

## HISTORY.

## FOURTH YEAR.

Text Books: Gibbon's Decline and Fall of the Roman Empire. Hume's History of England. History of France. Sismondi's Italian Republics. Hallam's Middle Ages. Taylor's Modern History.

## EXTRA.

History of Germany. Constitutional History.

## FOURTH YEAR.

Text Books: Stubbs' Constitutional History. Hallam's Constitutional History.

## MODERN LANGUAGES.

FRENCH.—(Third Year.)—Pajot's Grammar, (first part.)—Scribe's "Vulgar."

GERMAN.—(Third Year.)—Otto's German Conversation Grammar.—Adler's Reader.—Schiller's "Wilhelm Tell."

FRENCH.—(Fourth Year.)—Pajot's Grammar.—(fourth part.)—Mollie's "Le Bourgeois Gentilhomme."

GERMAN.—(Fourth Year.)—Otto's German Conversation Grammar.—Adler's Reader.—Schiller's "Wilhelm Tell" continued.

## § XVI.—HONOUR COURSES.

## CLASSICS.

(The following Course, in addition to the ordinary, is prescribed for Classical Honours in the fourth year.)

LATIN.—Plautus: Niles Gluciora.

Terence: Heautontimorumenos.

Virgil: Georgics, Books I., IV.

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

Juvenal: Satires, III., X., XIII.

Cicero: Tusculan Questions, Book I.

Facilius: Annals, Book I.

GREEK.—Æschylus: Prometheus Vincitur.

Sophocles: Œdipus Rex.

Homer: Iliad XVIII., XXIV.

Thucydides: Book II.

Plato: Phædo.

Demosthenes: De Corona.

COMPOSITION.—Latin Prose.

LITERATURE.—Müller and Donaldson's History of Ancient Greek Literature; Boccac Classical Literature (Brown's); Theology of the Greeks (Donaldson's).

PHILOLOGY.—Müller's Science of Language, Vols. I., II.; Clark's Comparative Philology; Donaldson's Ypresianisms, chaps. VI., VII., VIII., IX., XI., XIV.; Donaldson's Cratylus, Book I., chap. 5, Book III., chap. 2, Book IV., chap. 4; Lewis's Essay on the Romance Languages.

## MATHEMATICS AND MATHEMATICAL PHYSICS.

TRIGONOMETRY.—De Moivre's Theorem and Angular Analysis. Spherical Trigonometry, with application to Astronomy.

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 Functions 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, (includes course.) Application to Physical Investigations: *g*, Centre of Gravity, Attraction, Central Forces, &c.

## BOOKS RECOMMENDED—(in order of Preference.)

Tohunter's Spherical Trigonometry.

Tohunter's Plane Trigonometry, or Obolone's (2nd part.)

Tohunter's, Purkin's, or Salmon's Conic Sections.

H.P., H.M., or Tohunter's Differential and Integral Calculus.

Tohunter's or Young's Theory of Equations.

Boole's Differential Equations.

## EXPERIMENTAL PHYSICS.

First a Mode of Motion, by Tyndal.

Optics, by Sir David Brewster.

The Student's Text Book of Electricity (Wood.)

Nicol's Physical Science (Article, Magnetism.)

## MENTAL AND MORAL PHILOSOPHY.

## LOGIC.

Sir William Hamilton's Lectures on Logic. Whately's Logic, Books II., III., IV. Mill's Logic, I., II.

## METAPHYSICS AND ESTHETICS.

Descartes' Principles of Philosophy. Reid's Essays, VI. Sir William Hamilton's Lectures on Metaphysics. Sir Wm. Hamilton's Philosophy of Perception and Philosophy of the Unconditioned. Lower's Biographical History of Philosophy. Cousin's Philosophy of the Beautiful. Alison's Essays on the Principles of Taste. Books on the Sublime and Beautiful.

## ETHICS.

Mackintosh's Dissertation on the Progress of Ethical Philosophy. Butler's Sermons on Human Nature, with the Preface and the Dissertation on the Nature of Virtue. Smith's Theory of Moral Sentiments. Thompson's Christian Ethics. Aristotle's Ethics, Book I., III., VI., X., (in English.)

## HISTORY, ENGLISH LANGUAGE AND LITERATURE, AND POLITICAL ECONOMY.

## HISTORY.

Bede's Ecclesiastical History of England.  
 Freeman's History of the Norman Conquest.  
 Freeman's English Constitution.  
 Stubbs' Select Charters.  
 Macaulay's History of England.  
 Bryce's Holy Roman Empire.  
 Guizot's History of Civilization.  
 Martin's History of France.  
 Masson's History of Germany.  
 Haller's Northern Antiquities.

## ENGLISH LANGUAGE.

## ANGLO-SAXON.

Thorp's *Anglo-Saxon*.  
 Poems of Beowulf, the Scop or Gleeman's tale, and the Fight at Finnesburg.—Benjamin Thorpe.  
 Life of St. Guthlac—Charles Wylliffe Gaskell, M. A.  
 King Alfred's Anglo-Saxon Version of Orosius—Rev. Dr. Bosworth.

## ENGLISH.

Specimens of Early English—Morris & Skeat, part first.  
 Specimens of English Literature—W. W. Skeat, M. A.  
 The Vision of William concerning Piers the Plowman, by William Langland—W. W. Skeat, M. A.  
 Chaucer, Part First: The Prologue, The Knight's Tale, The Name of Prestre's Tale, Edited by E. Morris, Editor for the E. E. T. S. Part Second: The Prioresse's Tale, etc. edited by Rev. W. W. Skeat, M. A.  
 Spenser's *Fairy Queen*, Books First and Second, by G. W. Higgin, M. A.  
 Shakespeare's *Select Plays*, edited by W. G. Clark, M. A., and W. Aldis Wright, M. A. I. The Merchant of Venice; II. Richard the Second; III. Macbeth; IV. Hamlet; V. The Tempest.  
 Bacon, *Advancement of Learning*—W. Aldis Wright, M. A.  
 Milton, *Poems*—R. G. Brown, M. A.  
 Dryden, *Selects* by W. D. Christie, M. A.  
 Pope, *Essay on Man, Satires, and Epistles*, by Mark Pattison, B. D.

## Degrees Conferred, April, 1875.

## MASTER OF ARTS.

HUGH MCKENNER, B. A.      EMBRAIM SCOTT, B. A.

## BACHELOR OF ARTS.

JAMES FREDERICK,      LOUISE H. JORDAN,  
 ALEXANDER McLEOD,      GEORGE McHILLAS,  
 HECTOR M. STRAMBERG.

## DOCTOR IN MEDICINE AND MASTER IN SURGERY.

J. L. BETHUNE,      ROBINSON COX,  
 A. W. H. LINDSAY,      W. S. NEIR,  
 CAMERON ROBERT.

## General List of Scholarships, Special Prizes, Medals, &c.

### SCHOLARSHIPS.

- 1861—Arthur P. Silver, Halifax Grammar School; A. W. H. Lindsay, Pictou Academy.  
 1867—James G. McGregor, Private Study; James M. Inglis, Prince of Wales College, Charlottetown, P. E. I.  
 1868—Alex. W. Follick; W. P. Archibald, Halifax Schools.  
 1869—Charles D. MacDonald, Pictou Academy; Bruce A. Lawson, Henry Macdonald, Halifax Schools.  
 1870—Andrew C. Herdman, Pictou Academy; Alexander C. Patterson, Fort Macey Academy.  
 1871—William Brewster, Pictou Academy; George McMillan, Private Study.  
 1872—Francis H. Bell, Private Study; Frederick W. O'Brien, Pictou Academy.  
 1873—James McLean, Private Study; John Waddell, Pictou Academy.  
 1874—John L. George, Pictou Academy; John Stewart.

### GRANT PRIZE.

- For Essay.*—1896—Joseph H. Chase. 1867—Aubrey Lloyd. 1868—Arthur P. Silver. 1869—Herbert A. Byrne. 1870—Hugh M. Scott. 1871—Duncan C. Fraser. 1872—Alex. H. McKay.

### THE YOUNG PRIZES.

- General Prize, voted by Students.*—1867—1. John Gow, 3rd and 4th years; 2. Alex. C. McKenzie, 1st and 2nd years. 1868—George Murray, 2nd and 4th years; 2. Wentworth E. Rossie, 1st and 2nd years. 1869—1. John J. McKenzie, 3rd and 4th years; 2. Hiram Logan, 1st and 2nd years. 1870—*For Essay*, Walter M. Thurburn. *For Education*, Duncan C. Fraser. 1871—*For Essay*, James G. McGregor; *For Education*, Robert G. Sinclair. 1872—*For Essay*, Ephraim Scott; *For Education*, William A. Mills. 1873—*For Education*, Frederick W. Archibald. 1874—Richard A. Logan. 1875—8. J. McKnight.

### BOY PRIZES.

- For Education.*—1868—1. Alex. G. Russell; 2. James G. McGregor. 1869—1. Albert R. Quinn; 2. William M. Dowll.

### NORTH BRITISH SOCIETY BURSARY.

- 1868—Hugh M. Scott. 1870—Ephraim Scott. 1872—James C. Herdman. 1874—James M. Stewart.

### LAURIE PRIZE.

- 1871—Hugh M. Scott, B. A. 1872—Duncan C. Fraser. 1873—David F. Croftman. 1874—Archibald Gunn. 1875—Alex. McLeod.

### ST. ANDREW'S PRIZE.

- 1873—John W. McLeod. 1874—John W. McLeod. 1875—James McLean.

### ALUMNI PRIZES.

- 1875—James M. Stewart. 1874—1. James McLean; 2. John H. Sinclair. 1875—1. J. H. Cameron, Private Study; 2. Robt. H. Humphrey, Halifax Grammar School.

### "UNKNOWN" PRIZE.

- 1875—James McLean.

### WAYERLY PRIZE.

- 1873—William Besicote, William B. Eoss, equal. 1874—James Fitzpatrick. 1875—James McLean.

### MELBOURNE PRIZES.

- 1875—1. John W. McLeod; 2. James M. Stewart.

### GOVERNOR GENERAL'S MEDALS.

- 1875—Gold Medal, Louis H. Jordan; Silver Medal, George McMillan.

## SPECIAL PRIZES.

The SIR W. YOUNG PRIZE of \$25 for Eloquence, was won by DANIEL J. MCKENZIE.

The ST. ANDREW'S PRIZE, for the best Examination in the Classics of the Second Year, was won by JAMES McLEAN.

The MEMORIZING PRIZES of \$25 and \$15, offered for the highest answers in all the subjects of the Third Year, were won by, 1. J. W. McLeod; 2. J. M. STEWART.

The WAVERLY PRIZE of \$50, for highest total of marks made at the Examinations of the Second Year, was won by JAMES McLEAN.

The ALBERT ASSOCIATION PRIZES of \$30 and \$20, for highest total of marks made at the Examinations of the First Year, were won by, 1. F. H. CLERSON; 2. SCOT. H. HAMILTON.

The UNKNOWN INVENTOR'S PRIZE of \$30, for highest total of marks made at the Examinations by an Undergraduate of any year, was won by JAMES McLEAN.

The COL. LAURIE PRIZE of \$25, for best Essay on "Our Lake and 'Nive Fisheries," was won by ALEXANDER H. McLEOD.

## Medals, Prizes and Certificates of Merit,

1875.

## THE GOVERNOR GENERAL'S MEDALS.

THE GOLD MEDAL.....	Louis H. Jordan,
THE SILVER MEDAL.....	George McMillan.

## UNIVERSITY PRIZES.

## FOURTH YEAR.

CLASSICS.....	G. McMillan,
PATRICKS.....	Louis H. Jordan,
ETRICS.....	Alex. McLeod,
HISTORY.....	Louis H. Jordan,
MODERN LANGUAGES.....	Louis H. Jordan.

## THIRD YEAR.

CLASSICS.....	J. W. McLeod,
NATURAL PHILOSOPHY.....	J. W. McLeod,
METAPHYSICS.....	J. M. Stewart,
MODERN LANGUAGES.....	B. McKittrick,
CHEMISTRY (Special Prize).....	G. L. Gordon.

## SECOND YEAR.

CLASSICS.....	1. J. McLean,
	2. A. A. McKenzie.
MATHEMATICS.....	1. J. McLean,
	2. H. H. Hamilton,
PSYCHOLOGY.....	J. McLean,
CHEMISTRY.....	J. McLean,

## FIRST YEAR.

CLASSICS.....	1. J. L. George,
	2. Robt. H. Humphrey.
MATHEMATICS.....	1. H. Cameron,
SCIENCE.....	2. H. Cameron,

## CERTIFICATES OF GENERAL MERIT.

FIRST CLASS.—Fourth Year—L. H. Jordan, G. McMillan. Third Year—J. W. McLeod, J. M. Stewart, F. H. Bell. Second Year—J. McLean, J. Waddell. First Year—J. H. Cameron.

SECOND CLASS.—Fourth Year—Alex. McLeod. Third Year—Thomas McKittrick. Second Year—J. McD. Scott, H. H. Hamilton. First Year—H. H. Humphrey.

## CLASS LISTS.

(The names of the Students are arranged in the order of merit.)

## Examinations, 1874-5.

## SCHOLARSHIP EXAMINATION, OCT. 1874.

The Professor's Scholarships, offered for competition to Students entering as First Year's Undergraduates were gained by  
 JOHN LEALD, GEORGE, FRESHMAN ACADEMY.  
 JOHN STEWART.

## UNIVERSITY EXAMINATIONS.

The following Undergraduates have passed the University Examinations in their several years:—

## SUPPLEMENTARY EXAMINATIONS, OCT. 1874.

SECOND YEAR.—Mathematics: J. S. Horton, J. N. Shannon.  
 Chemistry: F. H. Bell.

## ENTRANCE EXAMINATIONS IN ANCIENT HISTORY AND GEOGRAPHY, NOV. 1874.

THIRD YEAR.—Class 1.—F. H. Bell, (John Burns, J. M. Stewart,) equal.  
 Class 2.—J. N. Shannon, Wm. A. Mills, J. W. McLeod. Passed—G. H. Felton, J. S. Norton.  
 SECOND YEAR.—Class 1.—J. McLean, H. H. Hamilton, Class 2.—J. C. Sutherland. Passed.—H. McCully, (Wm. A. Mason, John Waddell,) equal. R. E. Chambers, J. H. Sinclair, Stanley McCurdy,) equal.  
 W. B. Grant, John M. Scott, A. Rogers.

## SUPPLEMENTARY EXAMINATIONS IN ANCIENT HISTORY AND GEOGRAPHY, JANUARY, 1875.

THIRD YEAR.—Wm. Brownrigg, R. McKittick, A. McLean, J. A. McLean.  
 SECOND YEAR.—G. A. Laird, A. A. McKenzie, J. S. Murray, C. Pihlbad.

## SESSIONAL EXAMINATIONS, 1875.

(The names of the Students are arranged alphabetically.)

FOURTH YEAR.—(Final Examination for Degree of B. A.)—James Fitzpatrick, Lewis H. Jordan, Alex. H. McLeod, George McKillas, Hector M. Stranberg.  
 THIRD YEAR.—Francis H. Bell, Wm. Brownrigg, Burgess McKittick, James A. McLean, J. W. McLeod, W. A. Mills, J. Minto, J. N. Shannon, J. M. Stewart.  
 SECOND YEAR.—R. E. Chambers, H. H. Hamilton, George A. Laird, Wm. A. Mason, H. McCully, A. A. McKenzie, J. McLean, John S. Murray, J. McD. Scott, J. H. Sinclair, J. C. Sutherland, A. Rogers, J. Waddell.  
 FIRST YEAR.—J. A. Cairns, J. H. Cameron, H. Chambers, J. L. George, R. H. Humphrey, W. T. Kennedy, J. B. Law, S. J. McKnight, Edw. C. Melroe, Wm. Miller, C. H. Mitchell, G. W. Munro, E. L. Newcomb, B. D. Ross, J. Stewart, A. Whitman.

## LATIN.

FOURTH YEAR.—Class 1.—George McWhan. Class 2.—Leah Jordan, Alex. McLeod. Passed. James Fitzpatrick, Hector M. Stranberg.  
 THIRD YEAR.—Class 1.—J. W. McLeod, F. H. Bell. Class 2.—J. M. G. Stewart, R. McKittick. Passed.—J. Minto, Wm. Brownrigg, Wm. A. Mills, J. S. Norton, G. L. Gordon, J. A. Shannon, J. A. McLean, G. E. Pitzer.  
 SECOND YEAR.—Class 1.—James McLean, A. A. McKenzie. Class 2.—J. McD. Scott, J. Waddell, H. McCully. Passed.—G. A. Laird, Collin Pihlbad, H. H. Hamilton, B. E. Chambers, B. E. Chambers, J. H. Sinclair, Anderson Rogers, J. S. Murray, W. B. Grant, Isaac Archibald, F. W. Archibald, William A. Mason, J. C. Sutherland, J. McKenzie.  
 FIRST YEAR.—J. L. George, Wm. Miller, Class 2.—R. Humphrey, J. H. Cameron, Robert D. Ross, G. W. Munro. Passed.—H. Chambers, E. L. Newcomb, S. J. McKnight, J. E. Law, A. Whitman, W. T. Kennedy, J. Stewart, J. A. Cairns, W. T. Montgomery, R. C. Melroe, F. G. Smith, Ch. Mitchell.

## GREEK.

FOURTH YEAR.—(Final Examination for Degree of B. A.)—Class 1.—G. McKillas. Class 2.—A. McLeod. Passed.—H. Stranberg.  
 THIRD YEAR.—Class 1.—J. W. McLeod, F. H. Bell, J. M. Stewart. Class 2.—R. McKittick. Passed.—Wm. Brownrigg, J. N. Shannon, J. Murray, A. McLean, J. A. McLean.  
 SECOND YEAR.—Class 1.—J. McLean, H. H. Hamilton, J. A. McKenzie, J. Waddell. Class 2.—J. McD. Scott. Passed.—G. A. Laird, J. S. Murray, J. H. Sinclair, C. Pihlbad, (W. B. Grant, H. H. Hamilton, S. McCurdy,) equal. R. E. Chambers, Wm. A. Mason, J. McKenzie, A. Rogers, J. C. Sutherland.  
 FIRST YEAR.—Class 1.—J. L. George, Robert H. Humphrey. Class 2.—W. Miller, J. H. Cameron, G. W. Munro, J. Stewart. Passed. E. L. Newcomb, J. B. Law, S. J. McKnight, J. A. Cairns, H. Chambers, A. Whitman, B. D. Ross, R. C. Melroe, W. T. Kennedy, F. Smith, Ch. Mitchell.

## NATURAL PHILOSOPHY.

FOURTH YEAR.—Class 1.—Lewis H. Jordan. Class 2.—James Fitzpatrick.  
 THIRD YEAR.—Class 1.—John W. McLeod, James M. Stewart. Class 2.—Burgess McKittick, George L. Gordon, William A. Mills, Geo. Fulton. Passed.—William Brownrigg, James A. McLean, John Munro, Joseph S. Morton.  
 Passed in Experimental Physics, Francis H. Bell, James N. Shannon.

## MATHEMATICS.

FIRST YEAR.—Class 1.—John H. Cameron. Class 2.—Ephodius C. Macrae, John E. Law, Robert D. Ross, Howard Chambers, A. Fred Whitman, Robert H. Humphrey. Passed.—William T. Kennedy, Edmund L. Newcomb, John S. Cairns, John Stewart, Ralph M. Hunt, William Miller, John H. Fitzpatrick, William T. Montgomery, John L. George, George W. Munro, Charles H. Mitchell, S. John McKnight.  
 SECOND YEAR.—Class 1.—James McLean, Howard E. Hamilton, John Waddell, John M. Scott. Class 2.—Ness. Passed.—George A. Laird, Archibald A. McKenzie, Robert E. Chambers, Fredk. W. Archibald, Barry McCurdy, Stanley McCurdy, John H. Sinclair, Isaac L. Archibald, Anderson Rogers, James C. Sutherland, William H. Grant, John S. Murray, Collin Pihlbad, William A. Mason.

## METAPHYSICS AND ESTHETICS.

THIRD YEAR.—Class 1.—J. McG. Stewart, W. A. Mills, F. H. Bell. Class 2.—J. W. McLeod, B. McKittrick, Passed.—J. A. McLean, J. N. Shannon, W. H. Brownrigg, John Munro.

## LOGIC AND PSYCHOLOGY.

SECOND YEAR.—Class 1.—J. McLean, J. H. Sinclair. Class 2.—A. A. McKenzie, F. W. Archibald, I. I. Archibald, J. Waddell, H. H. Hamilton, J. McD. Scott. Passed.—G. A. Laird, Colin Pittblado, Stanley McCurdy, E. E. Chambers, H. McCully, A. Rogers, J. S. Murray, J. C. Sutherland, Wm. A. Mason.

## ETHICS AND POLITICAL ECONOMY.

FOURTH YEAR.—Class 1.—Alexander McLeod, James Fitzpatrick, Louis H. Jordan, Hector M. Stranberg, George McMillan. Class 2.—Andrew Gray.

## CHEMISTRY (SENIOR).

THIRD YEAR.—Class 1.—George Lawson Gordon, G. H. Fulton. Passed.—J. S. Norton.

## CHEMISTRY (JUNIOR).

SECOND YEAR.—Class 1.—James McLean, John Waddell, J. E. Sinclair, Wm. M. Fraser. Class 2.—H. McCully, H. H. Hamilton, J. McD. Scott. Passed.—I. I. Archibald, R. E. Chambers, J. C. Sutherland, George A. Laird, W. R. Grant, Anderson Rogers, William A. Mason, J. S. Murray, F. W. Archibald, James McKenzie, A. A. McKenzie.

## HISTORY.

FOURTH YEAR. Class 1. L. H. Jordan, G. McMillan. Class 2. H. M. Stranberg, A. W. McLeod, James Fitzpatrick.

## CONSTITUTIONAL HISTORY.

L. H. Jordan, H. M. Stranberg, A. W. McLeod, Geo. McMillan.

## RHETORIC.

FIRST YEAR.—Class 1.—John H. Cameron, John Stewart, W. T. Kennedy. Class 2.—Robert D. Ross, B. H. Humphrey, Geo. W. Munro, Wm. M. Fraser, Wm. Miller, John A. Cairns, Rhoad C. Mclane. Passed.—(arranged alphabetically)—H. Chambers, J. E. George, Ralph M. Hess, J. E. Law, S. J. Mackintosh, C. H. Mitchell, W. T. Montgomery, E. L. Newcomb, W. P. Scott, F. G. Smith, Alfred Whitman.

## MODERN LANGUAGES.

## FRENCH.

FOURTH YEAR.—Class 1.—L. H. Jordan, Geo. McMillan. Class 2.—A. H. McLeod. Passed.—James Fitzpatrick, John T. Ross, H. M. Stranberg. THIRD YEAR.—Class 1.—Burgess McKittrick, James M. Stewart, Francis H. Bell, John W. McLeod. Class 2.—James N. Shannon. Passed.—W. A. Mills, Alex. McLean, John Munro, James A. McLean, Joseph S. Norton, W. H. Brownrigg, George Fulton.

## GERMAN.

THIRD YEAR.—Class 1.—Francis H. Bell. Class 2.—George L. Gordon.

Graduates and Undergraduates of the University,  
and General Students in Arts.

## GRADUATES.

## MASTERS OF ARTS.

	1869.	
Chase, Joseph Henry	....	.... Cornwallis.
	1870.	
McNaughton, Samuel	....	.... Gaysborough.
MacDonald, John B.	....	.... Kentville.
	1871.	
Cameron, J. J.	....	.... Georgetown, P. E. Island.
Carr, Arthur F.	....	.... St. Edward's, P. E. Island.
Smith, David H.	....	.... Truro.
	1872.	
Arnand, Joseph	....	.... Pictou.
Bayas, Herbert A.	....	.... Pictou.
Ferret, James	....	.... Halifax.
McKenzie, John J.	....	.... Pictou.
	1874.	
McGrager, James G.	....	.... Halifax.
	1875.	
McKenzie, Hugh	....	.... Eekwan.
Scott, Ephraim	....	.... Douglas Gore.

## DOCTORS OF MEDICINE AND MASTERS OF SURGERY.

	1872.	
DeWolfe, George H. H.	....	.... Dartmouth, N. S.
Hill, Charles W.	....	.... Bridgetown, Antigua.
McMillan, Finlay	....	.... Pictou Co.
McRae, William	....	.... Richmond, C. B.
Sutherland, Koderic	....	.... River John, Pictou.
	1874.	
Campbell, Deo. A.	....	.... Truro.
Chisholm, Donald	....	.... Loupout.
Mora, Edmond	....	.... Lunenburg.
	1875.	
Cox, Estienne	....	....
Bethune, J. L.	....	....
Lindsay, A. W. H.	....	.... Halifax.
Muir, W. S.	....	....
Cassidy, Robert	....	.... Arislat.

## BACHELORS OF ARTS.

Thas, J. Henry	1866	Cornwallis.
Shaw, Robert	.....	New Port, P. E. Island.
1867.		
Turgess, John C.	.....	Cornwallis.
Cameron, J. J.	.....	Georgetown, P. E. Island.
Lippincott, Aubrey	.....	New Glasgow.
McNaul, John H.	.....	Cornwallis.
McNaul, Samuel	.....	East River, Pictou.
Ross, Alexander	.....	Rogers's Hill, Pictou.
Redgwick, Robert	.....	Millie Macdonald.
Smith, David H.	.....	Truro.
Smith, Edwin	.....	Truro.
1868.		
Carr, Arthur E.	.....	St. Edward's, P. E. Island.
Clair, Thomas H.	.....	Yarmouth.
Crichton, James G. A.	.....	Halifax.
Forbes, James	.....	Halifax.
McKay, Kenneth	.....	Harwood Hill, Pictou.
Simpson, Isaac	.....	Redgwick, Pictou.
1869.		
Annand, Joseph	.....	Guy's River, Bantz.
Boyd, Herbert A.	.....	Pictou.
Edgar, Elzougar D.	.....	Rogers's Hill, Pictou.
McKenzie, John A.	.....	Green Hill, Pictou.
Sutherland, John M.	.....	West River.
1870.		
Lesley, Andrew W. H.	.....	Halifax.
Scott, Hugh M.	.....	St. John's.
Theodore, Walter M.	.....	Berwick.
Wallace, John	.....	St. John's.
1871.		
Boyd, Edward B.	.....	Pictou.
McGregor, James G.	.....	Halifax.
Russell, Alex. G.	.....	Truro.
1872.		
Archibald, Wm. F.	.....	Halifax.
Brace, Wm. T.	.....	Millie Macdonald.
Casselman, James	.....	New Glasgow.
Crawford, Wm.	.....	Lower Macdonald.
Fraser, Duncan G.	.....	New Glasgow.
Goss, Adam	.....	East River, St. Mary's.
McKenzie, Hugh	.....	Balltown.
Pelich, Alex. G.	.....	French River, Pictou.
Scott, Ephraim	.....	Loxton, N. B.
Treisman, Arthur J.	.....	Pondville, N. B.
1873.		
Allen, John M.	.....	Newfoundland.
Byrd, Ch. W.	.....	Tatamagouche.
Cameron, Wm.	.....	St. Charles's River.
Croftman, D. F.	.....	Stevie.
Irwin, Kenneth	.....	Lonsdale.
Hunter, John	.....	New Glasgow.
Logan, Melville	.....	Halifax.
McDonald, Chas. H.	.....	Pictou.
McKay, Alex. H.	.....	Dalhousie, Pictou.
McKee, James A.	.....	Tatamagouche.
Robinson, J. Millar	.....	Ballie, N. B.
Ross, Wm.	.....	East River, Pictou.

## 1874.

Doyle, Walter S.	.....	Halifax.
Frost, D. Selma	.....	Dalhousie, Pictou.
Herdman, James C.	.....	Pictou.
Herdman, Wm. C.	.....	Pictou.
McGregor, Donald	.....	Inverness, C. B.
McLeod, Donald	.....	St. John's, P. E. I.
Olney, James McD.	.....	Halifax.

## 1875.

Fitzpatrick, James	.....	Rogers's Hill, Pictou.
Jordan, Louis H.	.....	Halifax.
McLeod, Alex.	.....	Oxlow, Colchester.
McMillan, George	.....	South Hill, Pictou.
Stromberg, Hector M.	.....	Cape John, Pictou.

## UNDERGRADUATES, 1874-5.

## FOURTH YEAR.

Fitzpatrick, James	.....	Rogers's Hill, Pictou.
Jordan, Louis H.	.....	Halifax.
McLeod, Alex.	.....	Oxlow, Colchester.
McMillan, George	.....	South Hill, Pictou.
Stromberg, Hector M.	.....	Cape John, Pictou.

## THIRD YEAR.

Bell, Francis H.	.....	Halifax.
Dawson, Wm. H.	.....	Pictou.
Falton, George	.....	East River, Colchester.
McIntosh, Eugene	.....	Cornwallis.
McLean, Alex.	.....	Biblio, P. E. I.
McLean, James A.	.....	Pictou.
McLeod, John W.	.....	N. River, Colchester.
Mill, W. A.	.....	Bay Fortune, P. E. I.
Morris, Jacob S.	.....	New Glasgow.
Morris, John	.....	Valleyfield, P. E. I.
Shannon, James V.	.....	Halifax.
Stewart, James M.	.....	Whycosmough.

## SECOND YEAR.

Archibald, Fred. W.	.....	Truro.
Archibald, Is. L.	.....	Truro.
Charlton, Edw. B.	.....	Truro.
Grant, W. E.	.....	Springville, Pictou.
Hamilton, Howard A.	.....	Pictou.
Laird, George A.	.....	Cornwallis.
Mason, Wm. A.	.....	East River.
McDuff, Harry	.....	Ambler.
McQuay, Stanley T.	.....	New Glasgow.
McRae, Arch. A.	.....	Green Gorge, Pictou.
McRae, James	.....	Green Hill, Pictou.
McLean, James	.....	New London, P. E. I.
Murray, John S.	.....	Cornwallis, P. E. I.
Prestate, John	.....	Truro.
Scott, John McD.	.....	Gore, Halifax.
Senclair, John H.	.....	Booth, Gt. Barrington.
Simpson, Alexander	.....	Rogers's Hill, Pictou.
Sutherland, J. C.	.....	Pictou.
Watkins, John	.....	Shoet Harbor.



## FIRST YEAR.

Calms, John A. ....	Upper Free-town, P. E. I.
Cameron, J. H. ....	South River Antigua.
Chambers, Howard. ....	Trinidad.
Dall, Geo. W. A. ....	Windsor.
George, John L. ....	Pictou.
Humphrey, Robt. H. ....	Halifax.
Kennedy, W. M. T. ....	East River, Pictou.
Lowe, John B. ....	Kingston, N. B.
McLachlan, Hays. ....	Scotabam, P. E. I.
McRae, Theodore C. ....	Belfast, P. E. I.
McKnight, Samuel J. ....	Dartmouth.
Miller, Wm. ....	Halifax.
Nicholl, Charles. ....	Halifax.
Montgomery, Wm. F. ....	Halifax.
Munn, George W. ....	New York.
Newcomb, Edmund L. ....	Cornwallis.
Scott, Wm. F. ....	Langburg.
Smith, Fred. G. ....	Truro.
Sisaram, James W. ....	Halifax.
Stewart, John. ....	Scotabam, Pictou.
Tom, Robert D. ....	East River, Pictou.
Whitman, Alfred. ....	Annapolis.

## GENERAL STUDENTS.

NAME.	RESIDENCE.	CLASSES ATTENDED.
Caron, George O'B.	New Glasgow.	Latin, Math., Chemistry.
Chisholm, Murdoch	Loch Lomond.	Classics, Math., Metaph.
Chisholm, Wm. F.	Lower Orkney.	Classics, Math., Rhetoric.
Coburn, Thomas	Grey's River.	Class. Math., Log., Chem.
Taylor, Walter S., B.A.	Halifax.	Shعرية, French.
Feldman, George H.	New Faute.	Rhetoric.
Fitzpatrick, John K.	Sever's Hill, Pictou.	Classics, Math., Rhetoric.
Foxes, James A.	Bellevue, Pictou.	Class. Math., Log., Chem.
Francis, Wm. M.	Dartmouth.	Shعرية, Chemistry.
Francis, Wm. B.	Mount Flora, Pictou.	Classics, Math., Rhetoric.
Gray, Andrew	Salt Springs, Pictou.	Classics, Metaph., Ethics.
Grant, Joseph	East River, Pictou.	Class. Math., Log., Chem.
Groves, George J.	Sutherlandshire, G. B.	Lat., S. Phil., Met., Chem.
Gundry, Arthur W.	Halifax.	Mathematics, Shعرية.
Hunt, Ralph M.	Dartmouth.	Classics, Math., Shعرية.
Johanson, Wilbert	South River, Colchester.	Classics, Math., Rhetoric.
Kelso, Alex. W.	Orkney.	Latin, Math., Shعرية.
McGregor, Murdoch	Lake Simonds, C. B.	Greek, Hebrew, Logic.
McKenzie, James	Loch Lomond.	Classics, Math., Metaph.
McKenzie, Dun. Blair	Barnes's River, Pictou.	Rhetoric.
McLachlan, Eben.	East River, Pictou.	Class. Math., Log., Chem.
McMillan, Angus	St. Ann's, C. B.	Classics, Math., Rhetoric.
McMillan, Alex. H.	Lake Simonds, C. B.	Latin, Heb., Shعرية.
Mosley, Fred.	Dartmouth.	Rhetoric.
Moore, Wm. B.	Kentville.	Latin, Shعرية.
Oxley, Jas. M., B.A.	Halifax.	Rhetoric, French.
Ross, John T.	Halifax, Colchester.	French.
Smith, John	Belfast, P. E. I.	Class. Math., Log., Chem.
Thorp, Edward	Cornwallis.	Mathematics, Shعرية.
Underwood, James	Windsor.	Classics, Math., Rhetoric.
Waltour, Wm. S.	Upper Rawdon, Hants.	Classics, Heb., Logic.

Undergraduates in Arts	68
General Students in Arts	29
Graduates continuing their Studies	2
Total in Arts	99
Students in Medicine	35
Total number attending Classes	134



DALHOUSIE COLLEGE AND UNIVERSITY,

HALIFAX.

SESSIONAL EXAMINATIONS, 1875.

THURSDAY, APRIL 17th.

GREEK.

FIRST YEAR.

LUCIAN—SELECT DIALOGUES, 10—19.

PROFESSOR JOHNSON, ..... Examiner

I. Translate:—

(a) ΦΙΛ. 26 B, ὁ Μένειος, οὐκ ἔχθη ἀποθανῶν; MEN. 166, ἐς ἕσπετος ἐπὶ τοῖς θύραις, κτλ. ...

(b) ΔΑΞΕ. 'Αλλ' οὐ Σάββα εἶ, δ' αἰετοῦ, καὶ οὐ Τριῶν ἑλλομενος οὐκ ἐπιτοροῦντων τε ἵππων' ...

2. Decline throughout the following words—ἄλιος, τοῖς, τὸ γένος, ἀργυροῖς, ἄρα, θύρα.

3. Give the forms in the other degrees of comparison corresponding to—αἰγιός, μέγιστος, παρῆς, ἄλλος, ἕβης, χυμῶς.

4. Write the nom. and acc. sing., and nom. and gen. pl. of:—τοῖος, αἴτι', ὄρα, ἄλλοις, κατῆ.

5. Augment the following verbs:—ἵστημι, αἰσῶ, εἰσάγω, κτερίζω, ἵσταμαι, ἐργάζομαι, παύωμαι, κτερίζομαι, ἴαμι.

6. Write down the 3rd sing. perf. imperative pass. of:—αἰσῶμαι, φαίνομαι, δέχομαι, ἔρχομαι, λαμβάνω, ἵστημι, διακτερίζω, ἐργάζομαι, ἵσταμαι.

7. Show in a tabular form all the moods of the peculiar tenses in the active voice of ἔδωκα, ἴαμι.

8. Parse, giving principal parts:—ἀποβιβάζω, δίξωμαι, γελῶμαι, ἀφαιρῶμαι, ἐπιμαρτυροῦμαι, μετάνοιῶμαι, ἀπέθωμαι, ἔρχομαι, κτερίζομαι, γαίνομαι.

9. Give some account of the circumstances or persons mentioned in the following extracts:—(a) ὁρῶ παρ' αὐτοῦ παρὲς Κλειάρχου ἀποθνήσκοντος ...

ADDITIONAL FOR FIRST AND SECOND CLASS.

RECOMMENDED: FIRST CLASSIFIED.

1. Translate sec. 17, 18, 19. EdA. Bekk.

2. Explain the Syntax of the following clauses:—(a) τὸ μὲν εἶναι ἐστρατῶν ... (b) πρὶν ἂν ἴδῃται σφαιροῖς ἵππων.

3. Decline εἶς, ἀφαιρῶμαι, γαίνομαι, ἴαμι.

4. Indicate 1979 (1) by letters, (2) by words.

5. What verbs in -ω form the future in -σω? Give two examples of (1) Attic reduplication, (2) Attic pres. opt., (3) Synopausal pres. infin. act.

6. Name the tense, mood and voice of these verbal forms, and give their principal parts:—μαρτυροῦμαι, ἀποθνήσκω, ἀφαιρῶμαι, ἵσταμαι, ἀφαιρῶμαι, κτερίζομαι, ἀφαιρῶμαι, ἔρχομαι, ἀφαιρῶμαι, ἀφαιρῶμαι.

7. Compare the personal terminations in the sing. number of the pres. and imperf. indic. act. of the 3rd Conjugation in Greek with those in Latin, so as to show their original identity.

## DALHOUSIE COLLEGE AND UNIVERSITY,

HALIFAX.

## SESSIONAL EXAMINATIONS, 1875.

MONDAY, APRIL 13, 9 A. M. TO 1 P. M.

## MATHEMATICS—THIRD YEAR.

GENERAL.

PROFESSOR MACDONALD. . . . . *Examiner.*

1. At a given point in a given straight line, to make an angle equal to a given rectilinear angle.
2. If a straight line be bisected and produced to any point, the rectangle contained by the whole line thus produced and the part produced, together with the square of half the line bisected, is equal to the square of the line made up of the half and the part produced. (By the division of the straight line only, if you can.)
3. BCD is a triangle, obtuse-angled at C, and BE is drawn perpendicular to DC produced: prove  $BD^2 = BC^2 + CD^2 + 2 DC \cdot CE$ .
4. One circle cannot touch another internally in more than one point.
5. The angles in the same segment of a circle are equal to one another.
6. In equal circles, equal chords cut off equal arcs, the greater equal to the greater, and the less equal to the less.
7. Upon a given straight line to describe a segment of a circle which shall contain an angle equal to a given rectilinear angle.
8. If two chords in a circle cut one another, the rectangle contained by the segments of the one is equal to that contained by the segments of the other. Prove this for the case where one of the chords passes through the centre, cutting the other obliquely.
9. In a given circle, inscribe a triangle equiangular to a given triangle.
10. Enumerate the regular polygons, up to those of 60 sides, which Euclid's Fourth Book enables you to describe in or about a given circle.
11. Generalise some of the Propositions of the Second Book of Euclid in the same way as you would the 7th and 8th of the Third Book.
12. Through a given point draw a straight line, making equal angles with two given straight lines.
13. If straight lines be drawn from the angles of a triangle to the middle points of the opposite sides, the sum of the squares of the sides: the sum of the squares of these lines : : 4 : 3.
14. The radius of the circle inscribed in an equilateral triangle is equal to one-third of the perpendicular drawn from any angle to the opposite side.
15. Describe a circle of given radius, passing through a given point and touching a given line.

DALHOUSIE COLLEGE AND UNIVERSITY,  
HALIFAX.

SESSIONAL EXAMINATIONS, 1875.

MONDAY, APRIL 18, 2 P. M. TO 6 P. M.

MATHEMATICS—FIRST YEAR.

ALGEBRA.

PROFESSOR MACDONALD.....*Examinee.*

1. Reduce to Decimals the fractions  $\frac{1}{4}$ ,  $\frac{3}{8}$ ,  $\frac{5}{16}$ , showing by your method the reason of the common Rule for the purpose. State the comparative advantages of Vulgar and of Decimal Fractions in numerical calculations.

2. Show that the value of a Bill discounted at the Bank is less than the true value calculated on the strict method of Interest.

3. Find the least common multiple of  $x-y$ ,  $x+y$ ,  $x^2+y^2$ ,  $x^2-y^2$ ; and the greatest common measure of  $6x^2+11x^2-31x+14$ , and  $4x^2-47x^2+7x$ .

4. Show that  $\frac{x^2}{a-\sqrt{a^2-x^2}} - \frac{x^2}{a+\sqrt{a^2-x^2}} = 2\sqrt{a^2-x^2}$ ; and divide  $1 - \frac{2ab}{a^2+b^2}$  by  $\frac{a^2-b^2}{a-b} - 3ab$ .

5. Extract the square root of  $104 - 2\sqrt{5}$ , and expand  $\left(1 - \frac{x}{2}\right)^4$  by the Binomial Theorem.

6. Solve the simultaneous equations,  $3x - 2y = 6$ ,  $3y - 2z = 5$ , and  $3z - 2x = -2$ .

7. Given  $x^2 + px + q = 0$ : prove the sum of the roots  $= -p$ , and their product  $= q$ ; and solve, by inspection,  $x^2 + 5x + 6 = 0$ ,  $x^2 - 3x + 6 = 0$ , and  $x^2 + 5x - 6 = 0$ .

8. Given  $x + y = 7$  and  $x^2 + y^2 = 64$ : to find the real values of  $x$  and  $y$ .

9. Solve by completing the square  $2x^2 = 5x + 63$ .

10. A cistern can be filled with water by two pipes, by the one of which it would be filled two hours sooner than by the other: also both together fill it in  $1\frac{1}{2}$  hours. Find the time each pipe takes to fill the cistern.

11. The third term of an Arithmetical Progression is 4, and the eighth is 61: find the series.

12. Show that when  $r$  is less than 1, the limit of the sum of a Geometrical series is  $\frac{a}{1-r}$ ; and apply the formula to find the value of the circulating decimal which is equal to  $\frac{1}{7}$ .

13. If  $a, b, c, d$ , prove  $\frac{a \pm b}{c \pm d} = \frac{a \pm b}{c \pm d} = \frac{a \pm b}{c \pm d}$

14. Find the sum of  $2n + 1$  terms of the series,  $1 - 3 + 5 - 7 + \&c.$

15. Prove  $(a+b)(b+c)(c+a) > 8abc$ .

DALHOUSIE COLLEGE AND UNIVERSITY,  
HALIFAX.

SESSIONAL EXAMINATIONS 1875.

WEDNESDAY, APRIL 21ST.

ANGLO-SAXON—FIRST YEAR.

PROFESSOR DEMILL, M.A. .... Examiner.

1. Translate :

Organ the Angustians mid his sunnum to gefenlicetere thera apostle 35, mid sigelara gebedan, and wæcess, and fæstenum Gode theowigende, and liles wort than the hi milnas bodigende, ealle middas eaclice thing, swa swa selfreode, forhogigende, the thing ana the hi to bigloofan behofolra underfords, be than the hi tacenra sefe lybbende, and for thære soddetere the hi baddan, georne wæron thimra to thaligesse, and deathe swetan, gif hi dæhton. Hwæt the gefylra forwal namige, and on Godes nama gefallode wurdon, wunsigende thære bilawitessa heora unseathhigra liles, and swetness heora heofenan lare.

2. Parse—Organ, gefenlicetere, wæcess, underfords, tacenra, thære.

3. Write out the cases of the adjective—blīd.

4. Define, and illustrate from words in the above passage—ablaut, assimilation, syncope.

5. Give the modern forms of as many of the above words as possible, and explain the nature of the euphonic changes that may have taken place.

6. Write out the parts of any one of the following verbs:—wean, magan, cuman, scolan.

7. Translate:

Ox bawel hrepon here fignas  
hilde gædige ; kænra gēd  
dæwig feþore o/er drit-toan,  
won wælcenaga. Welfas swigon  
atol acra-lead acra on wean,  
earlætan deot, cwylō-ref boolan  
on kalra læst lead-mærges fy.  
hrecpon meara-wearðas middum niðwe :  
Beal fæge ræt, forwæra gedunged.  
Heilum of than wende wænra thegna  
mæron nīl-petas meara bogum.

8. Explain the versification.

9. Parse—Hrepon, wælcenaga, swigon, beoðas, mæron, bogum.

10. Give examples from words in the above passage of apocope, epenthesis, elision.

11. Explain the construction of hilde, deot, lætan, fæh.

12. State the chief differences between Anglo-Saxon and Modern English in inflection and composition.

DALHOUSIE COLLEGE AND UNIVERSITY,  
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

WEDNESDAY, APRIL 23.

HISTORY.

PROFESSOR DEBELL, M. A. .... Examiner.

(Not more than one question is to be answered out of each group.)

1. Explain the ancient and modern views of Rhetoric. What are the ends of composition? Explain the nature of style.
2. The relations of Ictus and Gemma to one another. Define and illustrate Periods. Explain the following terms, *Concessio*, *Differences*, *Figuras*.
3. Under what circumstances is Ictus associated with the Five Arts. Define and illustrate Epiphony, Elegance. Explain rhythm in prose composition.
4. Show the importance of Antithesis in style and literature. The "quid" and "quod" in epithets. Hyperbaton.
5. What are Figures of speech? Define and illustrate Tropes. Explain "Iluminative Style," "Epygrammatic Style."
6. Explain Aristotle's three divisions of oratory. There are two kinds of invention. The *Enchyriens*.
7. Explain and illustrate the Sacra. Explain classification in exposition. Write out an analysis of a portion of any work, e. g., Bacon's *Advancement of Learning*, Book 2.
8. Define *Taxis* and enumerate its chief modes. Explain the difference between the *Scenic* and *Dramatic Taxis*. Give Quintilian's summary of things to be observed in the exordium.
9. There are two leading theories as to the nature of the Beautiful. Define and illustrate Wit and Humor. Explain *Enthusiasm*.
10. Critique the following passage —  
The Method discernible in Voltaire, and this on all subjects whatever, is a purely business Method. The order that arises from it is not Beauty, but at best, Regularity. His objects do not lie round him in pictorial, not always in scientific grouping; but rather in commodious rows, where each may be seen and come at, like goods in a well-kept warehouse. We might say there is not the deep natural symmetry of a forest oak, but the simple artificial symmetry of a parlor chandelier. Compare, for example the plan of the *Leviathe* to that of one so laborous *Harold*. The plan of the former is a geometrical diagram by Fermat; that of the latter a cartoon by Raphael. The *Harold*, as we see it completed, is a polished, square-baited *Tuheries*; *Harold* is a mysterious, star-parcel *Valhalla*, and dwelling of the gods.

DALHOUSIE COLLEGE AND UNIVERSITY,  
HALIFAX.

SESSIONAL EXAMINATIONS, 1875.

FRIDAY, APRIL 21.

ENGLISH LANGUAGE.

PROFESSOR DE MULL, M. A. .... Examiner.

(Not more than six questions are to be answered.)

1. Give a general classification of languages so as to show the ethnological position of the English.
2. Explain Grimm's Law.
3. Mention the languages which have most affected English and show how this has taken place.
4. Show the increasing importance of the Anglo-Saxon element in the English language.
5. Explain the former uses of the following words—witness, pecuniary, chateau, oera, most, thak, bribe, soldier, mystery.
6. Show the conservative influence of the English Bible, of Shakespeare, and of Milton.
7. What is the nature of the English noun as etymological material?
8. Derivative languages have a tendency to return to their radical forms.
9. Show the effects of conquest in corrupting a language.
10. The art of peering has been an agent in extinguishing local peculiarities of dialect and pronunciation.
11. Enumerate the chief orthoepical changes that have taken place in the English language.
12. Illustrate the disappearance of words indicative of slight distinctions.



## DALHOUSIE COLLEGE AND UNIVERSITY,

HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

WEDNESDAY, APRIL 14.

LATIN.—SECOND YEAR.

LIVY: BOOK I. CHAPS. 1-30.—HORACE: ODES, BOOK IV.

PROFESSOR JOHNSON, M.A. . . . . Examiner.

## 1. Translate:

a. Jam tam in Palatio monte Leporei hoc fuisse Indicem ferunt, et a Pallante urbe Ascedit Palatium, deinde Palatium montem appellavim. ibi Evandrum, qui ex eo genere Ascedit multo ante tempestates veniit loca, solenne illud ex Aradia instituit, ut nulli juvenes Lycæum Pæna venerantes per lacum atque insulam cernerent: (quem Romanæ fœdæ vocarant Iunus) Hinc deicit Indico, quam solenne vocant ecerit, insulam ubi iam præter amicos lacunos, quos Rotundas si se defendunt, Romanæ cepisse; captem regi Amalio tradidit, ultra securus. Crimini maxime habant in Numbri agro ab his impetum fieri: inde eos, collecta juvenum manu, hostiles in modum perdas agro. sic Numbri ad supplicium Romæ doliur.

b. Ad hæc consultantur procurandaque multitudi omni a ri et armis convensa, et animi aliquid agende occupati erant, et decorum assidua insidens cura, quam interesse rebus humanis esse non videretur, ex petant omnium pecore imbuatur, ac fides ne Juramentum, proxime legum ac possessionis institum, divitiarum regerent. Et quæ ipsi ac homines in regia, velut amici exempli, more firmos et tunc fœdatis citari passim, qui ante, castris, non urbem postiam in medio, ad sollicitandam omnium pacem, incidissent, in eam virentiam adducti sunt, et divitem totum in eam venant deorum violati discreti nefas. Lucus erat quæ multum ex opaco petra forte perenni rigabat aqua. quo quia se peragere Numa sine arbitrio, velut ad congressum deæ, inferret, Cameris eum lacum servare; quod curam ibi consilia cum conjugæ sua ligentia essent.

## 2.

Est nihil unum sperante animam  
 Romanæ Albani cadus: est in heros,  
 Phylli, successu optato coram;

Est hœdæ via

Maba, non erises religata fulgus:  
 Ridet atque formis; non castis  
 Vina verbena avert insolito  
 Spargit agro;

Cuncta festinat manns, hæc et illæ  
 Curantur solam pœne pœne,  
 Fordidam famam triplicant romanæ  
 Verite fatum.

Ut tamen peris quibus advocaris  
 Cassidæ, Idæ ubi sunt agnoscas,  
 Qui dico monum Venaræ maris  
 Finit Aprilis;  
 Jure solimanis ubi sanctiorque  
 Pæns natali populo, quod ex hæc  
 Luce Mæcenas meus adfuit  
 Orliat amos.

3. Analyse the first sentence of the second extract so as to show the connection of the clauses.

2. What is the force of 'hæc' in 'Leporei hæc'? What change has been suggested in 'precine . . . nastam,' and why? 'Vertite' may be translated in two ways! Who were the Cameræ? What is the origin of the names 'Leporei,' 'Lycæum,' 'Cameræ,' 'Idus'?

4. Account for (1) the cases of 'dedicit,' 'crimini,' 'multitudine,' 'rebus,' 'coram,' 'ibi'—(2) the moods and tenses of 'imperiit,' 'currerent,' 'esset,' 'cepisse,' 'postam,' 'quia . . . inferret,' 'quod . . . essent,' 'advocaris.'

5. Dactilo throughout: vate, Idæ, cubili, heros, vicia, Phylli, pæno, compede.

6. Parse, giving the principal parts: ferret, secto, menses, quatret, mæreberis, spangier, ferio, delixit, pereperat, orsi.

7. Scan the first stanza of extract c. Give the feet of the Alcaic stanza.

8. In turning *omni rebus* into a *oblique*, how are the moods changed?

9. When may and when must the periphrase be used for the gerund? How is the lack of participles in Latin supplied?

10. Give some account of Livy's History. Why is the Regal Period considered unhistorical?

11. Translate into Latin:—Forsena thinking it a great thing for the Tuscans that there should be a King at Rome as well as one of his own nation, came to Rome with a hostle army. Never before had such great terror shod on the Senate; so strong at that time was the Clotus Roman, and so great was the renown of Persena. And they feared not only the enemy but the very citizens, for the Roman youth struck with fear, having received the King into the city, should accept peace even along with slavery.

Additional for First and Second Class.

LIVY: BOOK I. CHAPS. 30 TO END.

1. Translate chap. 33.
2. Write in classical Latin. On the 29th of April, B. C. 101.
3. Supply proper cases to the following words, so as to make simple sentences: *expers, nilla, subvencâ, prope, imperator, circumdo, opas est.*
4. What verbs form the fut. participle from the pres. indic.?
5. Quote imitations of Greek syntax by Horace, and give the usual forms in prose.
6. Turn into *ostio recte* the passage 'Jam ab aliis . . . Latum,' chap. 33.
7. How may the story of Romulus and Remus be accounted for?



## DALHOUSIE COLLEGE AND UNIVERSITY,

HALIFAX.

## SESSIONAL EXAMINATIONS, 1875.

MONDAY, APRIL 13, 9 TO 4 P. M.

## MATHEMATICS—SECOND YEAR.

## TRIGONOMETRY AND ALGEBRA.

FRANCIS MACDONALD, ..... Examiner.

1. Explain what is meant by Circular Measure, distinguishing it from Gradual Measure. Also, if the measure of an angle be  $30416$ , find the number of Degrees &c. in it.
2. When  $x$  Trigonometrical Function passes through the extreme values,  $+0$ ,  $-0$ , it changes sign. Illustrate fully.
3. Given a Table of Natural Sines and Cosines; show how a Logarithmic Table may be constructed.
4. Given  $\tan A = \sqrt{3}$ ; find the general value of  $A$ .
5. In the triangle  $ABC$ , right angled at  $C$ , given (1)  $a$  and  $c$  (2)  $a$  and  $b$ ; show how to find the other parts in each case.
6. Given the three sides of a triangle; there are two methods for finding the angles. Explain them.
7. Prove  $\sin(A+B)\sin(A-B) = \sin^2 A - \sin^2 B$ ; and also  $\sin A + \sin 3A = \sin 2A$ ,  
 $\cos A + \cos 3A = \cos 2A$ .
8. Given  $A + B + C = 90^\circ$ ,  
prove  $\cot A + \cot B + \cot C = \cot A \cot B \cot C$ .
9. Prove that in any triangle  $\sin(A-B) = \frac{a^2 - b^2}{c^2} \sin(A+B)$ ,  
also  $\sin \frac{1}{2}A \tan \frac{1}{2}B = \frac{a+b-c}{a+b+c}$ .
10. A ship in latitude  $l$  sails due East or West  $d$  miles; find the Difference of Longitude.
11. Find general integral positive solutions for  $6x - 3y = 19$ , and test them in two cases.
12. There are 9 things,  $a, b, c$ , &c. In order to have the greatest number of combinations of them possible, how many must be taken at a time?
13. Find the present value of a Freehold, worth  $\Delta A$  annually, (1) to commence at the present time, (2) to commence  $q$  years hence.
14. Define a Logarithm; and explain how Logarithms can be employed to simplify numerical calculations, proving one of the rules you enunciate.
15. Show that imaginary roots of an equation in pairs, the equation,  $f(x) = 0$ , being a rational integral function of  $x$ .

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SESSIONAL EXAMINATIONS, 1875.

MONDAY, APRIL 19, P. A. M. 10 1/2 P. M.

MATHEMATICS—SECOND YEAR.

GEOMETRY AND MINERALS.

PROFESSOR MACDONALD,..... Examiner.

1. Define "Ratio;" and give algebraic proof that: if there be any magnitudes,  $a, b, c, \dots, l$ , of the same kind, the ratio of  $a$  to  $b$  is the ratio compounded of the ratios  $a : b, b : c, c : d, \dots, l : l$ .
2. If the exterior angle of a triangle be bisected by a straight line which cuts the opposite side produced, the segments of this side, measured from the angles of the triangle, have to one another the same ratio as the other sides have.
3. Find a third proportional to two given straight lines.
4. If four straight lines are proportional, the rectangle of the extremes is equal to the rectangle of the means; and conversely.
5. Similar rectilinear figures are to one another as the squares of their homologous sides. Prove this, after having given a sketch of the propositions which lead up to this one.
6. If two triangles which have two sides of the one proportional to two sides of the other, can be joined at one angle so as to have these sides parallel, the remaining sides shall be in a straight line.
7. If a tangent and a secant be drawn to a circle from the same point, the rectangle of the secant and its external segment is equal to the square of the tangent. Prove this shortly by the Sixth Book.
8. If a square be inscribed in a right-angled triangle, one side coinciding with the hypotenuse, the segments of the latter are in continued proportion.
9. One circle touches another internally, and a third circle is described in the included curvilinear space. Prove that the perimeter of the triangle formed by joining their centres is equal to the diameter of the including circle.
10. Cut off an  $n$ th part of a parallelogram by a straight line drawn parallel to a diagonal.
11. The length of a quadrantal arc is 154 feet: find the radius of the circle of which it is a part.
12. The length, breadth, and depth of a rectangular box are 14, 12, and 4 inches respectively, but there is no lid to it: find the number of square inches in the surface.
13. A solid right cone of lead is re-cast into the shape of a right cylinder, the radius of the base of the cylinder being made just one half that of the cone. Prove that its height will be  $\frac{1}{4}$  of the height of the cone.
14. Explain the common form of the Vernier Scale.

# DALHOUSIE COLLEGE AND UNIVERSITY,

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## SESSIONAL EXAMINATIONS, 1875.

FRIDAY, APRIL 23, 9 A.M. TO 11 A.M.

### MATHEMATICS—SECOND YEAR, (EXTRA.)

PROFESSOR MACDONALD.....*Examiner.*

1. If a straight line be at right angles to a plane, every plane which passes through it shall be at right angles to the same plane.
2. Through a given point in space draw a plane parallel to a given plane.
3. X and Y are two circles, the one not being within the other, and Z is a third circle touching them externally: prove that the line joining the points of contact passes through the external centre of similitude of X and Y.
4. If you had to construct Tables of the Logarithms of Numbers to the base 12, exhibit fully the process you would pursue, starting from the base of the Napierian system.
5. Prove  $\left(1 + \frac{1}{n}\right)^{nx} = e^x$  when  $n$  becomes indefinitely great.
6. All the combinations of  $n$  things, when an odd number of them are taken at a time exceed all the combinations of the same, when an even number are taken at a time.
7. Prove the Binomial Theorem for *negative* indices; and apply the Theorem to find approximately the cube root of 120.
8. In a bag are 4 balls, equal in other respects, but 3 are black and 1 white. A, B, C, are going to draw a ball in turn, replacing it before the next draw, till white is drawn. The successful drawer gets \$100. Find the values of their expectations.
9. If  $l, m, n$  are the lines drawn from the angles of a triangle to the centre of the inscribed circle, prove  $\frac{l \sin A}{a \sin C} = \frac{r}{a}$ .
10. Prove that if  $\cos v = \frac{\cos u - e}{1 - e \cos u}$ , then  $\tan \frac{v}{2} = \sqrt{\frac{1+e}{1-e}} \tan \frac{u}{2}$  and that if the sides of a triangle are in Harmonic Progression, then  $\cos \frac{B}{2} = \frac{\sin A \sin C}{\cos A + \cos C}$ .

DALHOUSIE COLLEGE AND UNIVERSITY,  
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SESSIONAL EXAMINATIONS, 1875.

FRIDAY, APRIL 30TH, 7 A. M. TO 1 P. M.

LOGIC AND PSYCHOLOGY.

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

1. Enumerate the laws of mind, according to the classification adopted of the mental phenomena. Distinguish Resemblance and Analogy.
2. To what department of mind, in our classification, may Reasoning be referred? What is the true theory of Reasoning?
  - a. Give some account of Memory. To what may it be ultimately reduced?
  4. What classifications have been given of the laws of Association?—Of reminiscence by Aristotle?
  5. What is the peculiarity of Imagination, viewed as a state or faculty of mind?
  6. What are the logical laws of Thought? Give the rationale or principle of the laws, respectively.
    7. Distinguish between a *concept* and a *generalization*.
    8. Which affords synthetic or progressive, and which analytic or regressive reasoning? Or, viewed as a matter of quantity, which affords the extensive and which the intensive or comprehensive syllogism?
    9. How may the Inductive process be shown to be really Deductive? Into what error does Sir Wm. Hamilton seem to fall in endeavouring to bring inductive reasoning within the scope of formal Logic?
    10. How are Syllogisms divided according to their internal or intrinsic character, and how according to their external or extrinsic? Show why the pure Categorical Syllogism is alone syllogistic, and what is the nature of the other so-called syllogisms?
    11. Explain the moods and figures of the Syllogism, and show why the 2nd and 3rd figures are properly the minor premiss, or but furnish the minor premiss, of Syllogisms, of which the major is the maxim of these figures respectively. Show how the 3rd figure is the form of the generalizing process, and also argument from example.
    12. Give a scheme of the Fallacies, showing how most of the fallacies fall under the "Quaterio terminorum," and specify those which do not. What fallacies come under Probation?
    13. What is the object of a Doctrine of Method? Give the twofold division of Logic. What is modified as distinguished from pure Logic?
    14. Distinguish between the two general kinds of Method—Analysis and Synthesis.
    15. Give the rules of Definition and Division. Show how these rules follow the principle of classification.
    16. How are Probations divided according to their matter, their form, and their degree of cogency. Give the rules of Probation.

SESSIONAL EXAMINATIONS, 1875.

THURSDAY, APRIL 22.—P. A. X. 101 P. M.

JUNIOR CHEMISTRY.—SECOND YEAR OF ARTS COURSE.

PROFESSOR LAWSON.....Examiner.

1. What is the meaning of the term "Element" as used in Chemistry? Is water in any sense an element? What is the chemical constitution of water? Write its formula in various ways so as to form types that may serve to explain the constitution of other compounds; compare it, for example, with hydrochloric acid, sulphuric acid, a metallic salt, or an alkaline hydrate).
2. Define what is meant by the term (1) Equivalent Weight; (2) Atomic (or Indivisible) Weight. Point out clearly the difference between these two. Show, by reference to Sodium Hydrate, that the Hydrogen of water may be replaced by a monogenic metal in two equal proportions, yielding successively a hydrate and an anhydrous oxide.
3. Explain the Law of Combination by volume, (with exceptions).
4. Describe minutely the common process for preparing Oxygen, with sectional equations, and give a brief history of Oxygen.
5. Show in what way you can detect, in water, soluble compounds of Iron, Lime and Soda, also whether these exist as Sulphates, Chlorides or Carbonates.
6. Give an account of Nitric Acid and Nitrates, their natural sources, mode of preparing the Acid, its properties, and its mode of action on certain metals.
7. Describe Chlorine, its preparation and properties. What is the strict chemical composition of the substance commonly (erroneously) called "chloride of lime?"
8. Describe Ammonia, its preparation, composition and properties. What is the constitution (theoretic) of an Ammonium Salt.
9. Explain what is meant by the terms; (1) Ultimate Analysis; (2) Proximate Analysis; (3) Distillation; (4) Fractional Distillation; (5) Desiccative Distillation.
10. Give a general account of the first series of Hydrocarbons  $C_n H_{2n+2}$  of the fatty Group.

DALHOUSIE COLLEGE AND UNIVERSITY,  
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SESSIONAL EXAMINATIONS, 1875.

FRIDAY, APRIL 11.

LATIN.—THIRD AND FOURTH YEARS.

HOBACE: SATIRES, BOOK I, 3, 4, 5 & C. A. TERENCE: ADELPHI.

PROFESSOR JOHNSON, M.A. . . . . Examinator.

I. Translate:

1. *Heo ego clementiam quam te, proculare scantor,  
Mellius atque alio vixi. Quomodo? Inhilo est,  
Incedo saltem; perorator quamvis clus ut fati;  
Pallidum Ceraso vespertinumque peroro  
Saepe Forum; edulio Helio; hinc domum meo  
Ad porti et ceteris refero laqueisque catinam;  
Consa adulatoris parca tibi, et lapsi abbas  
Pocula cum epulo duo molant; edulio edulio  
Vilia, cum potus guttas, Compensa appella.  
Deinde et dormium, non sollicitas mihi quod ras  
Surgam hinc et mane, occurrus Marci, qui se  
Vultus forte negat Noveram posse minucia  
Ad quertus jaces; post hinc vagari, aut ego, lecto  
Aut scilicet quod me factum fecit, unque edivo,  
Non quo incantato immortales Natus horrens  
Aut ubi me formis sed? Sic te lacrimas  
Admorat fingo Composit lacrimas, rigorem.  
Ponitur sine arilla, quantum, interposita laque  
Vomere dicit canere, haemolens alior. Haec est  
Vna clementiam abbas subditus gratior;  
Hic me consider victorem curatis ad al  
Quaestor vixi patre atque meos potestatis facist.*

2. *Esset, ubi non habet; ubi sit scilicet placet;  
Petas quare scire in petem, Simio,  
Serpente et perdit tetari, claudere face.  
Mica fecem essendit aliunde. SA. Et mihi,  
Etiam de seris tunc nescio in dubium riter?  
Pudet illi? omnis denis labelit mihi;  
Praeterea colaphis triser est totum curari;  
Etiam inueneri dimitit? inquam alio. SY. Vx iulet;  
Nepheri et qui abest? SY. Iammi herede hoc quomo, Nere,  
Vt ut hinc emi ora, potius quam illa secum,  
Meum mihi reddi fac, saltem quam emiserit, Syne,  
Scio te non vram amebae amicitia mea;  
Memorem me diva esse et gratum. SY. Solutio  
Fictio, sed Credi hunc videri; hanc est  
De amica. SA. Quid quasi te oro? SY. Paterper vram.*

3. *Ille hinc hinc transferebat. De. O Impetore,  
Lussine pacto oportet? M. Quid faciam simpliciter?  
De. Quid faciat et non ipse te ubi non loquit,  
Simulari certe ut hominis. M. Quo hinc nigritum  
Dignitatis; re componitur; hinc topilax;  
Dignitatis nostrum; hinc scire non hominis. De. Conrari  
Ploset tibi lacum, Mica? M. Nor, et quomam  
Mature, tunc quon non cono, amito atque fero.*

*In ulnar hostium, quid quom inosa inserit,  
Si illud quod maxime opes est lecta non caeli,  
Iliud quod excludi fere, id ante ut corrigas.  
De. Correcer; nempc rim ante vigitu minae  
Ero pudica perire; case paratum paret  
Aliaque abscindas, et non paret, gratis.  
M. Nempc meo teque illam sate vigitu mure.  
De. Quid igitur facies? M. Dum eris. De. Pro dium dtem,  
Mentis et vicitur familia una in dtem!*

2. Write the singular cases of: 'obus,' 'far,' 'coris,' 'supellex,' 'Marsus,' 'trigonon,' 'mostris.'
3. Account for ( ) the cases of: 'quatu,' 'juvis,' 'nihil,' 'lecta,' 'ambitione.' Quod quod in 'hominis,' 'gratis' & the roots of 'Surgentium sit,' 'jures,' 'in lavatum,' 'dunare,' 'predas,' 'defudet,' 'facias'
4. Parse the following verbs, giving their principal parts; potus, incedit, redolam, ignoscit, paret, quom, quib, confidit, molando, apparet, largitur.
5. Give the meaning and derivation of: exercit, trigonon, mina, rilm a, villan, scelle, podagra, silicium, epul, parasitaster, togaric, solas.
6. What is the origin of these French words: sei, écolé, démons, palas, nite, sur, dent, mola, clus, cono.
7. What are the reasons for supposing that Helios Ladin differed considerably from the ordinary speech of the people? How does this question affect the occasion of Terence's life and works?
8. Write a short sketch of Terence's life and works.
9. Translate into Latin: Italy was at that time subject to the government of Proconsuls. One of these officers, named Serrilus, stationed in the Picennian territory, received information that the citizens of Aesulum were organizing insurrection. He immediately crossed that city with a small retinue and met with the citizens with valour; thence, the people set upon him and slew him; and new blood and been split, the rest was given to passion. All Romans who fell into their hands were massacred and their goods confiscated.

Additional for First and Second Class.

1. Point out some peculiarities of syntax in the following sentences, and give the usual constructions:
 

a.	durus componere verus.
b.	cum non nemo
c.	Scriptis legi vulgo redire tendis.
	utique plures
d.	Culpati dignus.
	sonare
2. Explain these forms: componit, edula, fero, silt, parin, slet, base, vork, crepentes, solbe, perioras, prostrum.
3. Distinguish: scia, toce, avi—hic, ice, ille is,—fres elegit, tres palant,—postula casu ignis, postula casu et alis,—tenuis qui sit, nescio quis et.
4. Trace the usage by which a bar comes to be the sign of the plural, and the absence of it the sign of the sing. in French nouns. Mention exceptions.
5. Give some account of the different kinds of stage performances in Italy.





DALHOUSIE COLLEGE AND UNIVERSITY,  
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SESSIONAL EXAMINATIONS, 1875.

MONDAY, APRIL 13, 9 A.M. TO 1 P.M.

STATICS AND DYNAMICS—THIRD YEAR.

PROFESSOR MACDONALD..... Examiner.

1. Assuming the proposition called the "Parallelogram of Forces" to be proved for *directions*, prove it for *magnitudes*.
2. A B C is a triangle, and D the middle point of B C. Forces represented by A B, A C, D A, act at the point A: find the resultant.
3. If P, P' &c. be forces acting at a point O, making angles  $\alpha'$ ,  $\alpha''$  &c. with the line O X, find the magnitude and direction of the resultant, and deduce the conditions of equilibrium.
4. Define "centre of gravity," and show that in the case of a rigid body, if the centre of gravity is supported, the body is supported. Also, a homogeneous triangular disc weigh 2 lbs., and a weight of 3 lbs. is suspended at one angle: find the centre of gravity of the whole.
5. Draw a system of Barton pulley, and find its mechanical advantage.
6. Prove the principle of Virtual Velocities for the inclined plane.
7. Prove the formula  $v^2 = u^2 + 2fs$ ; and find what initial velocity must be given to a body projected vertically upwards in order that it may ascend 400 feet.
8. The time down chords of a circle drawn from the end of a vertical diameter is constant.
9. Explain Atwood's machine; assume numerical values for P and Q, and hence calculate through what space the system would move in the 1st second.
10. A body describes  $\frac{1}{2}$  of the entire length through which it falls in the 1st second. Find the height and the time of descent.
  11. In the tetrahedron polygon, show that the horizontal tensions are equal, and show how the whole tension can be represented by a *Diagonal in solid*.
  12. The angle of greatest range with a given velocity on an inclined plane bisects the angle between the plane and the vertical.
  13. A body revolves uniformly in a circle, constrained by an extensible string. Suppose it to strike directly an inelastic body at rest; compare the tensions of the string before and after the impact.
  14. A cylinder (weight W) with its axis horizontal, is held at rest on a rough inclined plane by a string wrapped round its middle and fastened so as to be horizontal and at right angles to the cylinder. If the cylinder be on the point of turning round, prove that the tension of the string is equal to the resistance due to friction, and that  $\mu$ , the coefficient of friction, =  $\frac{\sin \lambda}{1 + \cos \lambda}$ ,  $\lambda$  being the angle of deviation of the plane. Find also the tension in terms of W and  $\lambda$ .

DALHOUSIE COLLEGE AND UNIVERSITY,  
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SESSIONAL EXAMINATIONS, 1875.

TUESDAY, APRIL 20.—9 A. M. TO 1 P. M.

EXPERIMENTAL PHYSICS.

VERY REV. PRINCIPAL BIRD, D. D. . . . . Examiner.

1. Define the terms "Mass," "Volume," "Density," "Inertia."
2. How is the hardness of a body determined? Describe the scale by which the relative hardness of bodies is expressed.
3. Upon what does the mechanical advantage of a machine depend? How may it be varied? Describe a compound lever.
4. How can a body be kept from falling when the line of direction is outside of its base?
5. What is auxiliary attraction? Give examples. State its laws.
6. Outline the instrument by which the correctness of Marotte's law may be experimentally proved.
7. How are sounds produced? Echoes? Explain the construction of whispering galleries.
8. What effect has temperature upon the velocity of sound? What is the ratio of increase?
9. Mention the various sources of heat. How is warmth preserved in the living animal? How does the fire down of the eider duck tend to preserve its animal heat?
10. What constitutes the delicacy of a Thermometer? How may those properties be secured?
11. What is specific heat?
12. How does it happen that some stars which are invisible at the level of the sea are seen distinctly at the summit of high mountains?
13. Explain by a figure the cause of a Penumbra.
14. How is the image of an object affected by being reflected from the surface of a Cylindrical Mirror? Why?
15. How is the absorption of light accounted for on the Undulatory theory.
16. Account for the appearance of different colors and of dark lines in the Solar Spectrum.
17. Explain the phenomenon of Double Refraction. What is its probable cause?
18. How is the Intensity of Terrestrial Magnetism determined?
19. What remarkable coincidence has been recently observed between Solar Protuberances and Terrestrial Magnetism?
20. Mention the various ways in which Electrical equilibrium may be disturbed. How can electricity be accumulated.
21. State differences between Frictional and Voltaic Electricity.
22. How is Electro-motive Force increased? Intensity? Quantity?
23. Explain the nature of a Secondary current. How is it produced? To what practical purpose has it been applied?



## SESSIONAL EXAMINATIONS, 1870.

THURSDAY, APRIL 22 - 9 A. M. TO 1 P. M.

SENIOR CHEMISTRY.—THIRD YEAR OF ARTS COURSE.

PROFESSOR LAWSON.....*Examiner.*

1. In what state of combination does Phosphorus exist in the soil, in what part of the plant is it chiefly found, and in what state of combination? In what portions of the animal tissues and fluids, and in what state of combination?
2. Outline the general method of systematic testing for Bases. Give, in the order in which they would be applied, the smallest number of tests necessary to eliminate every Base except Potash.
3. Give satisfactory tests for (1) Ferrous, (2) Ferric, (3) Mercurous, (4) Mercuric, (5) Arsenic, (6) Aluminium, (7) Zinc, and (8) Cobalt Salts.
4. Give a concise classification, founded upon the equivalence or atomicity of Carbon, of all the more important Series of Organic Compounds.
5. Describe Ethyl Alcohol, with reference to its chemical and physical characters, specific gravity, boiling point and solvent properties; also how produced, (1) from Ethene (what is Ethene?); (2) by fermentation of Glucose (what is Glucose?). Notice some of the principal Ethylic Ethers, their preparation and properties.
6. Compare the Hydrocarbons of the fatty Group with the Alcohols, the latter with the Ethers, those with the Organic Acids, those Acids with the Aldehydes, and the last mentioned with the Ethers, so as to show the exact constitutional relationship between each series.
7. Give a brief account of the Hydrocarbons of the Aromatic Group called Terpenes,  $C_{10}H_{16}$ , and show in what way the Volatile Essential Oils are related to them.
8. Describe Cyanogen, and, briefly, its principal compounds, preparation, properties, &c.
9. What is the constitution of an Amine? an Alkaloid? a Phosphoric? a Sulfur? an Amino? an Azotic?
10. Explain the constitution of Zeigler's Salts, taking HCl, H<sup>2</sup>C, or any other compound, as a type.

DALEHOUSIE COLLEGE AND UNIVERSITY,  
HALIFAX.

SESSIONAL EXAMINATIONS, 1875.

FRIDAY, APRIL 23.

FRENCH—THIRD YEAR.

JAMES LIEBIGAL, Esq., ..... Examiner.

THÈME: I. La vie passive de l'homme n'est ni et ne peut être qu'un corps dans le sens matériel; mais sa vie active et morale, qui doit influer sur tout son être matériel dans l'exercice de sa volonté. La vie est en soi seul le médium qui prospère, et un bien pour l'homme et homme infortuné; car ce n'est pas une modification passagère, mais son rapport avec son objet, qui la rend bonne ou mauvaise. . . . Change donc des aspects lui; et lorsque l'on dans la nouvelle disposition de son âme qu'est tout le mal, change ses affections dégradées et se laisse pas sa maison pour n'avoir pas le péché de la rage.

J. J. ROUSSAU, (*Le suicide.*)

II. *Lectre:* Ah çà, jeune homme, si ton vœux modère tes espérances; c'est un ton esquis je ne suis point habitué.

*Charles:* Tu n'y renoncez, car on n'a tout fait. J'aurais d'abord besoin de l'accommoder, mais j'ai changé d'idée. On m'a demandé quel on faisait, est-ce à parler ainsi, je n'osais à l'écrit, à condition que tu serais à mes ordres. . . . Je n'ai compté pas être un homme de génie! et pour ce que tu te troubles en paroles d'esprit, c'est tout ce que j'ai osé faire. Mais peut-être que tu n'as pas de la patience, et en son absence, nous voulons douter et tu es chétive. C'est la face de village.

*Lectre:* Mais Monsieur.

*Charles:* Encore donc, tu es son gouverneur; c'est à toi d'arranger pour qu'il n'en sache rien. *ERNEST SCHERER, (Les Professeurs.)*

III. Les traits de son visage impassible autant que celui de M. de Talleryand, paraissent avoir été modelés en bronze. Son âge était un problème; on se pouvait pas savoir s'il était vieux avant le temps, ou s'il avait subi sa jeunesse afin qu'elle lui eût servi toujours. A l'instigation de Fontanelle, il économisait les mouvements vifs, et concentré tous les sentiments humains dans le mal. Ainsi sa vie s'écoulaient—elle sans être plus de bruit que le sable d'une horloge antique. Vers le soir, l'homme-bête se changeait en un homme ordinaire, et ses manières se réhabilitaient; on eût dit un cœur humain. Nul élan content de sa journée, il se levait les mains en l'air, et s'échappait par les rides caractéristiques de son visage une foule de gémissements, car il est impossible d'exprimer autrement le jeu mesuré de ses muscles. Enfin dans ses plus grands accès de joie, sa conversation restait monotone, monotone, et sa conversation était toujours négative.

BALRAC, (*L'homme.*)

Translate into French:

A. Towards ten, a gentle knock was heard at the door; "interject he said etc; a second knock was heard, rather louder, but still gentler." "Go and see who it is," said the king; it was Colonel Harker. "Let him come in," said the king. "Sir," said the colonel, with a low and half speaking voice, "it is time to go to Whitehall; but you will have some further news to see there." "Will you direct?" answered Charles; "leave me, Harker went out.

GRUBER—(*Last moments of Charles I.*)

R. Alas! my money, my last money, my dear friend; I have been deprived of that; and since that has been taken from me, I have lost my support, my consolation and joy; all is over with me, I have done with the world. I cannot live without thee. Alas! I am exhausted; I am dying, I am dead; I feel as if I were buried already. Is there no one to revive me by giving me back my beloved money, or by informing me who has taken it. From the "Miser."

(1.) Account for the following words, giving full explanation: *couper* (1); *enlever*, *ty*, *d'aler*, *maner*, *construire* (II); *avoir*, *servir*, *le mal* (III).

(2.) Mention at least two of the leading points in which the English and French differ, giving at example in illustrations of each point.

(3.) Explain the construction of the *Object Prop.* (*diag.* and *conj.*) writing short examples. Name those Prop. which are both *conj.* and *diag.* Why is the following sentence incorrect: *Permettez que je vive lui présent.* They are to be seen in line three.

(4.) Que. show by examples the various meanings this word admits of. Which is the position of the *relat. Prop.*? The Queen's daughter who is to be married. What I have been thinking of, and what I am speaking of now, will shortly be done.

(5.) *Quelque* soit son influence, quels que talents, qu'il ait et quel que succès qu'il soit, il n'a pu réussir. Correct and explain. *Quelque* is necessary before a noun in one case? Write an example.

(6.) Both words of a negation may be placed together, or either may be used without the other? State the three cases. Name principal negation.

(7.) Show how and when the *reflex form* is to be used. What is the *Passive Form of nouns, verbs?* Certain nouns, verbs are conjugated with *être* only! These nouns are spoken of. The use of the word is made in less than 30 days. These genders are writing see another.

(8.) Form Adverbs from *good*, *desire*, *injury*, *treason*. Illustrate the various meanings of *conscience*, and state what word is used in each of the several instances of *conscience*. Translate: *He studies very much. You are late. The mail is due. It is late.*

(9.) Explain the difference between: *deux ans et six*; *six ans et deux*; *deux et six*; *deux et six*. How is *deux* to be applied? In truth. In the United States. In the year 1875.

(10.) Give the equivalents for: *the first*; *either* (either nouns). Trans. Both in English and French. Whether I read or write. Unless you do your duty.

(11.) Explain in full the agreement of Present and Past Participle, giving examples.

(12.) Write short notes on: Lalbracère, Mal. de Sévigné, Mal. de Sully, Chateaubriant, Eugène Scherle, and Jules Janin.

# DALHUSIE COLLEGE AND UNIVERSITY,

HALIFAX.

SESSIONAL EXAMINATIONS, 1875.

FRIDAY, APRIL 23.

GERMAN—THIRD YEAR.

JAMES LEICHT, Esq. . . . . Examiner

Translate: I. "Schiller": *König mit dem Dornen.*

Der Dorn ist lang gebogene Lanz  
 Bis auf jezt ein Blüthe Strauch,  
 So wie der Ritter die sprachen,  
 Will ich schufsch an Gemüth, abbrechen,  
 Wilt der verschleihten Stangen Schell  
 sich losschneid von an Weisheit.  
 Lanz Erdere, wider das Ordere Blüthe,  
 Das man die Heilrose von Irthe,  
 Und dümble in Trübnis gepirg  
 Will ihn cas Voth dem Velle selgen;  
 Da fallen weis Stiere streng  
 Der Meiner und gelücht Schwelgen.

Und sprecht: thu Dornen, der du lang,  
 Verheeren, schlagst du mit rapier Hand,  
 Ein Gott hat du dich Velle wunden.  
 Ein Feind kommt da sprich von Irthe,  
 Ist nicht schiffen Wern gebir  
 Iden Hiern, die Stier Reate war.  
 Die schlagte, da du ihre wüffte,  
 Die Schwelche und Verleihen selbst,  
 Das ist für widerrechtge Gist,  
 Der gegen Recht sich hat empört,  
 Der wernung heißt das zu pervert;  
 Dass er ist's der die Wern abschert.

II. "Goethe": *Beizke Fuchs.*

"Gehen wir," sagte der Fuchs, "es soll an Hosiog nicht fehlen,  
 Heute bis ich zwar schlecht an Fasse; doch soll mir die Liebe,  
 Die dich auch stetge gevidnet, die saeren Trütz Verwachen,  
 Denn ich keem niemand von allen meinen Verwachen,  
 Der ich vorkeem, wo escht? Doch kommt! Ich verordl dagegen  
 An des Kieglies Hof an Herrengege wie demen,  
 Dass ich der Feinde Gewalt und ihre Kieglies beschneie,  
 Eowigent mach' ich casu heate, so viel der leumer vor tragen  
 Mögen."—Die meiste der Gehalt die Schlinge der zorigen Bayern,  
 Beizke löf ihm saeren und hündlings folgte der Leume.  
 "Will mir's seligen," so lachte der Fuchs, "ich bringe dich heute  
 Noch zu Mithke, wo die ein Hiren Hosiog zu Thill wird."

III. "Friedrich Jacobi": *Gastfreundschaf.*

Auch dieses Mal suchte das Anerbten nicht. Ich warte auf das  
 Freundliche begrüßte, in das Glas gefüllt, mit Speis und Trank reichlich  
 befristet und endlich in ein Bett gebracht, hoch was ein Berg, und  
 gerühmt genug, am roch die Andern, war es nitig gevers, automeh-  
 men. Da war es mir fürgnar, als war ich in die Zeit entrückt, wo die  
 Hauskiter an der Strasse saßen, und wenn ein Wanderer vorüberzog, oft  
 witternd mit einander ihn unter ihr Luch einlöden und an ihrem Herd  
 bewirthen, oder auch nur zu fragen? Wo er herkam, was er für Geschäfte  
 trieb und wie lange er zu welen gedachte.

Translate into German: "Diogenes."

*Diogenes.* But why dost thou revere? Hast thou no fear of death? Is it not said thou, to seek it?

*Pythias.* I return to suffer, though I do not deserve death. Honour forbids me to let my friend die for me.

*Diogenes.* Hast thou, then, love him better than myself?

*Pythias.* No, I love him as myself; but I know I ought to suffer death rather than my friend, since it was I whom thou hast decreed to die. It were not just that Diogenes should suffer, to free me from that death which was not to him, but for me only.

*Diogenes.* But thou sayest that it is as unjust to inflict death upon thee as upon thy friend.

*Pythias.* Very true, for we both innocent, and it is equally unjust to make either of us suffer.

(1.) Write the *Genit. sing.* and the *Nom. Plur. of:* Bach, Bauer, Engel, Kennma, Beichthun, Gold, Meer, Wald, Herz. Also the *Nom. Sing. of:* Belle, Wörze, Edelsteine, Kapitäle, Leute, Gassener, Eisenbahnen, Inseln.

(2.) *Ein neues, einpulsendes Boot und ein von einpulsenden Boot; ein gutes, neues Haus und ein gutes neues Haus.* State the differences in the meaning of these sentences, and give the reason. Decline in full: *ein schönener Wurm; alle seine Verwandlung littor Hanis.*

(3.) Write the equivalents of: In the first, best manner; most politely; most humbly; extremely; the worst of all. Name a few comparatives that have no positive. Compare: *sees vid, laud, amare, male, raud.*

(4.) What are the particular functions of the verb *werden*. Explain fully, giving examples. Translate. The course is being completed. When will the college be closed. We are not allowed any dictionary. German is spoken best. Dinner is preparing.

(5.) Distinguish the meanings of the conjunctions *ob, wenn, da, und* give examples. The sentence: Wir lernen nicht nur French, aber auch Translating, is incorrect. Why? There is no language but has its difficulties. (Schwierigkeiten.)

(6.) State the cases governed respectively by the prepositions: *mit, von, durch, gegen, unter, gegen, bei, neben, ohne.* Translate: I did not think of it. Of it assumes a peculiar form? Mention corresponding expressions.

(7.) Explain the formation of the past, *pass. ed. reg. and irreg. verbs.* Which verbs reject the syllable *ge*. He has studied more than any one. Write 1st person of the *Imperf. and the Past Part. of:* lesen, stehen, thun, unterlegen, abschauen, aufhören, herangehen, sprechen, rufen.

(8.) Auch dieses Mal suchte das Anerbten nicht. Freundlich und er mich ein, (saw he) Die Sprache, die ich studirt habe. Nachdem er sein Diploma erhalten hatte, reiste er nach Hause. Explain fully the construction in the preceding examples. Write two other forms.

(9.) Show by examples the position of the *adverbial of time*, and the negation *nieht*.

(10.) Which are the two Classical Periods of German Literature? Mention the most distinguished writers of the second period. Give some account of *Lessing*.

(11.) Mention the principal works of Goethe. Give an interpretation of his *Faust*.

(12.) Classify Schiller's Dramas: and give a short criticism of each. Which is the fundamental idea of Schiller's views of life.

# DALHOUSIE COLLEGE AND UNIVERSITY,

HALIFAX

SESSIONAL EXAMINATIONS, 1875.

TUESDAY, APRIL 20. - 9 A. M. TO 1 P. M.

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

## ETHICS.

1. Explain the dependence of the Active Powers and Moral Faculty on the Intellect and the Emotions.
2. State the theory of a self-determining Power of the Will; and the arguments for and against it.
3. Explain the nature of Instinct, and its use in the inferior animals;—and its stain.
4. What is the difference between self-love and selfishness?
5. Can design be legitimately inferred from conduct? Assign reasons or give examples.
6. Hutcheson designates the Moral Faculty a *Moral Sense*. What theory is implied in this designation? State some of the consequences which follow from its adoption.
7. State and criticise the Hobbesian Theory of morals.
8. Show from reason that Truthfulness is a duty.
9. What is the essential element in Falseness?
10. Is an Advocate justified in asserting his belief that his cause is just when he believes it to be unjust?
11. What opinion should we form of the conduct of the wife of Croesus, who told a falsehood to save her husband's life?
12. What arts would necessarily be cultivated first, by men in a state of nature.
13. What is probably the original type or types of the pillar in Architecture?

## POLITICAL ECONOMY.

1. Distinguish between *Politics* and *Political Economy*.
2. Define the terms "Wealth," "Utility," "Value," "Price."
3. What are the conditions necessary to value as Exchange? Which of these most frequently regulates the price.
4. What nations are most likely to trade most extensively with each other?
5. Does the exportation of money necessarily impoverish a country?
6. Does the population of a country, as a general rule, increase more rapidly than the means of subsistence? Upon what fundamental error do those who maintain the affirmative base their argument?
7. It is generally assumed that Ireland first cultivated a country are the most fertile. Is this assumption warranted by historical facts? Assign reasons for your opinion.
8. What class in a community ought to be exempted from taxation?
9. What effect would the prohibition of all unproductive consumption produce on the wealth of a community?



DALHOUSIE COLLEGE AND UNIVERSITY,  
HALIFAX.

SESSIONAL EXAMINATIONS, 1874.

WEDNESDAY, APRIL 21.

EARLY ENGLISH HISTORY.

PROFESSOR DeMILL, M. A. . . . . *Examiner.*

(Not more than six questions are to be answered.)

1. Explain the mark system and show its permanent results.
2. What was folcland? boctand? soc and soc? tol and team?
3. What was the hundred? the tithing? the wapentake? the franchise?
4. What was the geseith? sheling? ealforman? eard? thane?
5. What were the powers of the Anglo-Saxon King.
6. Explain the nature of the Anglo-Saxon Witenagemot.
7. The civil and ecclesiastical policy of William the Conqueror.
8. The Curia Regis and Exchequer.
9. What was the origin of Doomsday Book?
10. Describe the National Council under the Normans, and Plantagenets, and show the gradual introduction of the representative system.
11. Discuss the question of the origin of Trial by Jury.
12. Mention the chief provision of Magna Charta.

DALHOUSIE COLLEGE AND UNIVERSITY,  
HALIFAX.

SESSIONAL EXAMINATIONS, 1875.

WEDNESDAY, APRIL 21.

CONSTITUTIONAL HISTORY.

PROFESSOR DeMELL, M. A. .... *Examinee.*

(Not more than six questions are to be answered.)

1. At the accession of Henry VII. there were essential checks upon the Royal authority.
2. The House of Commons, under the Tudors, frequently asserted their privileges.
3. The dissolution of Parliament in 1640 was fatal to the King's popularity.
4. Discuss the question of the execution of Charles II.
5. After Cromwell's death a Republican settlement was impossible.
6. The proceedings of the Convention Parliament.
7. The Habeas Corpus Act.
8. The reign of James II. may be divided by several points of time which mark so many changes in the posture of the Government.
9. In the Revolution of 1688 there was an unusual combination of favourable circumstances.
10. The government of William III. was in considerable danger for three or four years after the Revolution.
11. The Act of Settlement.
12. Show the diminution of the personal authority of the Crown after the Hanoverian settlement.

DALHOUSIE COLLEGE AND UNIVERSITY,  
HALIFAX.

SESSIONAL EXAMINATIONS, 1875.

WEDNESDAY, APRIL 21.

HISTORY.

PROFESSOR DEWELL, K. A. .... Examiner.

(Not more than one question is to be answered out of each group.)

1. Divide modern history into periods and state the leading characteristics of each. Mention the chief events of the reign of Justinian. Give a brief account of the reign of Leo the Isaurian.
2. Give an outline of the history of France from the accession of Louis VI. to the end of the reign of Philip Augustus. The reign of Louis XI. The administration of Richelieu.
3. Give a list of Emperors from Otto the Great, to Charles V., with dates. Give an outline of German history under the Saxon Emperors. The reign of the Emperor Charles VI.
4. The Thirty Years War. The Seven Years War. The rise of Prussia to the death of Frederick the Great.
5. Give an outline of the history of Florence during the 14th and 15th centuries. Write briefly the history of Naples under the House of Anjou. Give brief biographical sketches of the following Popes—Boniface XIV., Clement XIV., Pius VI.
6. Give an account of the Omniades in Spain. The history of Castile to the marriage of Ferdinand and Isabella. The history of Spain during the eighteenth century.
7. Mention the different appearances of the Turks in history. Give an account of the Abbassides—the Fatimites. The reign of Solyman II.
8. The Union of Calmar. Switzerland from Morgarten to Morat. The Revolt in the Netherlands.
9. The influence of the Arabians on the intellectual development of Europe. The chief philosophical systems of the sixteenth century. Give brief biographical sketches of Thomas Aquinas, Giordano Bruno, Galileo.
10. The revival of letters. Dante. The literature of the Elizabethan

## SESSIONAL EXAMINATIONS, 1875.

THURSDAY, APRIL 12, 9 A. M. TO 1 P. M.

## FOURTH YEAR—HYDROSTATICS, OPTICS, AND ASTRONOMY.

PROFESSOR MACDONALD..... *Examiner.*

1. Prove the principle of the "transmission of Pressure" in a fluid.
2. A right cylinder (radius of base  $r$ , and height  $h$ ) is filled with a liquid. Compare the pressures on the base and on the cylindrical surface.
3. Consider *stable* and *unstable equilibrium* in the case of a floating body. Show hence how a vessel freighted with very heavy goods ought not to have its cargo stowed.
4. The height of the barometer being  $A$ , find the height  $H$  of the mercury in the sphygmograph after a stroke of the piston of an air-pump, and show that a complete vacuum cannot be thus produced.
5. If successive heights be taken in the atmosphere by Aërometrical Progression, the corresponding densities of the air are in a decreasing Geometrical Progression. Hence find the fundamental equation for the Barometric measurement of heights,  $z - z' = r \log \frac{A}{A'}$ .
6. Describe and account for the action of the spherul.
7. A ray of light passing through a transparent medium of parallel surfaces (e. g. a glass plate) suffers no deviation.
8. An object is placed in front of a convex spherical mirror. Find the position and size of the image, seen along the axis.
9. When you look vertically downwards through clear water, the apparent depth, if the bottom is visible, is about  $\frac{3}{4}$  of the real depth.
10. Find the principal focus of a concavo-convex lens, and adapt to the case of a double convex lens.
11. Prove that "the altitude of the Pole is equal to the latitude of the place"; and draw a figure to illustrate the path of the Sun in the heavens from day to day, in the different seasons of the year, at the Equator.
12. If the mean distances of the Earth and Venus from the Sun, are as 100 : 72, find the periodic time of Venus.
13. Consider the causes of the "equation of time"; and apply its results to the mean solar day.
14. Explain the "aberration of light," and its effect on the apparent positions of celestial bodies. Also, if its amount for the pole of the ecliptic be  $20''$ .5, show hence how to find the Velocity of Light.

## SESSIONAL EXAMINATIONS, 1875.

FRIDAY, APRIL 23.

## FOURTH YEAR—FRENCH.

JAMES LIECHT, Esq. . . . . *Examinateur.*Traductions: I. *Célimène:*

Et ne faut-il pas être que mensonge comédies ?  
 A la comédie vois venton qu'il se rédoite,  
 Et qu'il ne fasse pas estimer en tous lieux ?  
 L'esprit contrariant qu'il a reçu des ciens ?  
 Le sentiment d'autres n'est jamais pour lui plaire :  
 Il prend toujours en malis l'opé-dou contraire,  
 Et pensent parler un homme du comain,  
 Si ton voyait qu'il fit de l'air de quelq'un !  
 L'honneur de contredire a peut lui cost de charmes,  
 Qu'il prend course lui-même sans attendre les armes ;  
 Et ses vrais sentimens sont combats par lui,  
 Amoult qu'il les voit dans la bouche d'autrui."—MOLIERE.

## II. "Compagnons," leur dit-il, "achevez votre ouvrage,

Et de mon sang glorieux en rendez le blanc.  
 Que le sort des combats respecte charmes.  
 Fuyez, ne craignez rien : Cédiez vous parloine ;  
 Ma vie est peu de chose, et je vous l'alloinsme ;  
 J'essaie même intrait à perdre en combattant pour vous."  
 Ces titres, à ses yeux, tombent à ses genoux ;  
 L'air, sans d'épouvante, abandonne ses armes ;  
 L'autre embrasse ses pieds qu'il trempe de ses larmes ;  
 Et de ces assassin le grand homme intrait  
 Semblait un roi puissant par son peuple adoré.—VOLTAIRE.

## III. "Mais croyez vous, savez que vous n'avez pas payé ce que vous ne devez plus rien ? Croyez-vous que les milliers, les milliers d'hommes qui périssent en son instant, par l'explosion terrible ou par son contre-coup, soit ce qui fait la consolation de leur vie et peut être leur unique moyen de la mériter, vous laissez paisiblement jouir de votre crime ? Contempler les statues des rois idolâtres, que cette catastrophe verra qui la France, impossibles d'oublier, qui peinent que ces convulsions du désespoir et de la misère passent comme tout d'autres, et d'autant plus rapidement qu'elles seront plus violentes, êtes-vous bien sûr que tant d'hommes sans pain sans logement inégalement avoués les meurs-dou vous n'aurez voulu dédaigner ni le nombre ni la bêtise ?"

MIRABEAU. (*Discours contre le Impératrice.*)

## IV. On accuse l'enthousiasme d'être passager; l'exaltation serait trop heureuse si l'on pouvait recevoir des émotions si belles; mais c'est parce qu'elles se dissipent nécessairement qu'il faut s'occuper de les conserver. La poésie et les beaux-arts servent à développer dans l'homme un bonheur d'illustre origine qui relève les causes obscures, et met à la place de l'existence stérile de la vie le sentiment habituel de l'harmonie divine dont nous et la nature faisons partie. Il n'est assez de voir, au lieu d'un sentiment qui s'imprime de l'enthousiasme je ne sais quel prestige, d'accord avec le pur charme de la vérité.

Mme. de STAËL. (*De l'enthousiasme.*)Traductions: *Ernestine:*

(1.) In travelling, the best instrument, the most efficacious passport, is so speak fluently the language of that country which we may happen to visit. The traveller who is unable to mix in conversation is like a being

both deaf and dumb, who can do no recreation so generous, and moreover, like one who, all but blind, perceives objects under a false light. Charles the Fifth used to say, that a man who knew four languages was worth four men; in fact, all men have need of one another, and a stranger may be said not to exist for us, if we cannot understand his language.

(2.) The Normans were then the foremost race of Christendom. Their valor and ferocity had made them conspicuous among the rovers whom Scandinavia had sent forth to ravage Western Europe. Their sails were long the terror of both coasts of the Channel. Their arms were repeatedly carried far into the heart of the Carolingian empire, and were victorious under the walls of Maestricht and Paris. At length one of the bold heirs of Charlemagne sailed to the straggler's fertile province, watered by a noble river, and contiguous to the sea, which was their favorite element.

MAGUELAT.

## Questions de Syntaxe et de Littérature.

(1.) I thought my friends were busy, but they are not. Education is to the mind what cleanliness is to the body. What is at moment to man, is to fulfill his duties upon earth. He had determined to go to England, for which purpose he saved all the money he could. There is not sufficient ground for complaining. Expliquez la syntaxe des phrases dans ces phrases.

(2.) Construirez quelques phrases pour illustrer l'emploi de l'Impersonnel.  
 (3.) Mesurer, boire et dormir, c'est leur unique occupation. C'est moins son ambition que ses malheurs qu'il faut peindre. Plus d'un soldat a été par ses propres intrigues. Le peu de biens qu'il a eus lui ont fait gagner de grandes richesses. Donnez les règles sur l'accord des verbes dans ces phrases précédentes.

(4.) Quelle est qui est trouvée dans les phrases qui suivent: Je lui aurais tout ce qu'il m'a besoin. La charité estienne nous commande d'aimer et de prêter assistance à ceux qui souffrent. Il n'aime ni à causer, ni à le jeu, ni à l'opérette, ni à se promener. Le physicien arrache tous ses sens à la nature.

(5.) Les comptes d'Alexandre tombent sous à ses capitaines de s'être éprouvés les uns les autres. La foye de Spézet, renfermé dans cette phrase, est vicieuse!

(6.) Qu'est-ce que le Géométrie, et quel en est l'emploi? He passed my time while speaking to me. Quel est l'accord de Part. Present, accompagné de conjoncteurs.

(7.) Qu'y a-t-il à remarquer à l'égard des Part. Present suivants: Vous et moi croquit. Elle se sentait. Les arbres que j'ai eu abattre. On les a faits sortir. Elle s'est levée hier. Elle s'est proposé pour vous peindre. mandare. The little trouble they have taken, (se donner). I made all the efforts I could.

(8.) Quelles sortes de verbes on de vers a-t-il en français? Donnez les règles principales sur l'emploi de la césure. A quels vers-est-ce qu'elles s'appliquent?

(9.) Faites l'examen des vers suivants, et corrigez-les. "L'ingrat, il me laisse cet embarras fineste." "Un petit emor vous restre ou filo que vous pleurez." Vous pouvez bientôt lui prodiguer vos larmes.

(10.) Le chère est bien employé dans ce vers de Boileau: "Un tel rose pour avoir réjoui le lecteur"

(11.) Quelle était l'influence de Racine, de Molière de Boileau et de Bossuet sur la littérature sous Louis XIV? La poésie à chasser? Classifiez les ouvrages de Racine et mentionnez les chefs-d'œuvre des autres. En quel Molière et Boileau se ressemblent-ils?

(12.) Qu'est-ce qu'on entend par "les classiques de la littérature? Écrivez ou que vous savez sur "Jacques Dufrenoy."

(13.) Par qui la poésie du XIX. siècle se caractérise-t-elle? Châteaubriand ou Mar. de Staël son sont signalés par quoi? De quelle école Victor Hugo fait-il le chef, et qu'avait-elle pour but?

(14.) Quelle est la caractéristique de la prose remarquable de notre époque? Quels hommes ont été illustrés à niveau des autres pays? Quatre hommes se sont distingués surtout dans la critique?