

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

Faculty of Arts.
Faculty of Medicine.

SESSION 1873-74.

HALIFAX:

PRINTED FOR THE UNIVERSITY, BY NOVA SCOTIA PRINTING COMPANY.

1873.

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University Calendar,

1873-74.

1873.		WINTER SESSION.
Oct.	24. Fr.	Meeting of Board of Governors.
	29. W.	Opening of Winter Session. Matriculation Examination in Arts, at 10 o'clock A.M. Examination for Scholarships.
	30. Th.	Supplementary Examinations. Examinations in Ancient History and Geography for Second and Third Years.
	31. Fr.	Meeting of Senate at 10 A.M. Matriculation, Registration, and Library Tickets issued at 11 o'clock A.M.
Nov.	3. Mo.	Arts Classes opened and Class Tickets issued by Professors.
	4. Tu.	Meeting of Convocation at 10 o'clock p.m. Address by Chancellor Ross and Professor DeMott.
	5. Sat.	Anniversary of opening of the College in 1823.
	12. W.	Final Matriculation and Supplementary Examinations.
	13. Th.	Meeting of Senate, at 1 o'clock, P. M.
	14. Fr.	Meeting of Senate, at 1 o'clock, P. M.
Dec.	2. Tu.	Meeting of Senate, at 1 o'clock, P. M.
	24. W.	Christmas Vacation begins.
	25. Th.	Christmas Day.
1874.		
Jan'y.	5. Mo.	Class Lectures resumed.
	6. Tu.	Meeting of Senate, at 1 o'clock, P. M.
	10. Fr.	College established, 1823.
	23. Fr.	Meeting of Board of Governors.
Feb.	3. Tu.	Meeting of Senate, at 1 o'clock, P. M.
	15. W.	Ash Wednesday. No Lectures.
March	3. Tu.	Meeting of Senate, at 1 o'clock, P. M.
	14. Sat.	Prizes for the "Colonial Latin" Prize to be given to George Ramsey, Earl of Dalhousie, founder of the College, died 1838.
April	2. Th.	Last day for receiving M. A. Theses.
	3. Fr.	Good-Friday.
	5. Su.	Easter-Day.
	7. Tu.	Meeting of Senate, at 10 o'clock, A.M.
	15. Mo.	Examinations in Latin. Honor Examinations in Latin and Mathematics.
	14. Tu.	Meeting of Governors. Examinations in Greek. Honor Examinations in Greek.
	15. W.	Examinations in Mathematics and Mathematical Physics.
	16. Th.	Examinations in Experimental Physics. Honor Examinations in Latin. Last day for returning books borrowed from Library.
	17. Fr.	Examinations in Rhetoric, Logic, Metaphysics, History.
	20. Mo.	Examinations in French and German. Competed for the "St. William Young" Dissertation Prize.
	21. Tu.	Examinations in Chemistry, Honor Mathematics and Greek.
	22. W.	Meeting of Senate, at 10 o'clock, A.M.
	23. Th.	Results of Sessional Examinations declared.
	24. Fr.	Meeting of Convocation at 1 o'clock, P.M.
SUMMER SESSION, 1874.		
May	4. Mo.	Summer Session opens. Registration at 10 o'clock A.M. Meeting of Senate, at 11 o'clock, A.M.
	5. Tu.	Lectures begin.
	23. Sat.	Foundation Stone of College laid, 1820.
	24. Su.	Queen's Birthday.
June	1. Tu.	Meeting of Senate, at 1 o'clock, P.M.
	20. Sat.	Assession of Queen Victoria.
	31. Su.	Hallux settled, 1749. No Lectures.
	14. W.	Lectures close.
	21. Th.	Examinations.
	26. Fr.	Examinations. Session ends.

Dalhousie College and University.

BOARD OF GOVERNORS.

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DR. A. T. REID, *Dean of Faculty*.
DR. H. A. GORDON, *Secretary*.
W. V. FULLERTON, M.D., and H. S. BLANCHARD, M.D., *Demonstrators of Anatomy*.

Junior—JOHN WILSON.

Faculty of Arts.

§ I.—WINTER SESSION.

The Winter Session of 1873-74 will commence on Wednesday, Oct. 29th, 1873, and end on Friday, April 24th, 1874.

§ 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.

Undergraduates may take either of two courses: (1) The Curriculum for the Degree of Bachelor of Arts (B. A.); or (2) that for the Degree of Bachelor of Science (B. Sc.). (See § IV.)

The usual Course 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 prescribed 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, with the classes of the intervening Summer Sessions, as prescribed by the Senate.

Instead of attendance at the Summer Sessions, prescribed courses of study, with Examinations at the commencement of the following Winter Sessions, will be accepted.

The Matriculation Examinations this year will be held on Oct. 29th, 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 EXAMINATION

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

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

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

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.

The Subjects of Examination for entrance into the First Year of the B. Sc. Course are the same as the foregoing, except Greek, which is not required.

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

In order to Matriculate for the Three Years' B. A. 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.

The Subjects of Examination for entrance into the B. Sc. Course are the same as the foregoing, with the addition of French; but Greek is not required.

§ 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 Classics extra work is required, and special stress is laid upon accuracy in Grammar. (See § XIV.)

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

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

At the beginning of the Second Year, Undergraduates are required to pass an Examination in Roman History and Ancient Geography. (See § XIV.)

Third Year.—(1) Latin. (2) Mathematical Physics. (3) Experimental Physics. (4) Metaphysics. (5) French or German. (6) Greek or Chemistry.

For First or Second Class in Latin or Greek, extra work is prescribed.

At the beginning of the Third Year, Undergraduates are required to pass an Examination in Grecian History and Ancient Geography.

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.

COURSE FOR DEGREE OF B. SC.

First Year.—(1) Latin. (2) Mathematics. (3) Rhetoric. (4) French (or Spanish). (5) Experimental Physics.

Second Year.—(1) Latin. (2) Mathematics. (3) Chemistry. (4) Logic and Psychology. (5) French (or Spanish).

Third Year.—(1) Mathematical Physics. (2) Chemistry. (3) German. (4) Natural History.

A Student who has entered for the Three Years' Course, must take the Class in Experimental Physics during his third year.

Fourth Year.—(1) Ethics and Political Economy, or History, (2) Mixed Mathematics. (3) Natural History. (4) German. (5) Analytical Chemistry. (6) Either Physiology or Human Anatomy (Lectures by Professors in Medical Faculty.)

§ 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 Courses 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 these subjects during the third and fourth years of the Curriculum.

Examinations in the 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.

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, etc.*, 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 and Experimental Physics, and either Ethics and Political Economy or History.

In *Mental and Moral Philosophy, or in History, English Language, &c.*, may omit Latin and the sixth (selective) subject of the ordinary Course.

§ VI.—SUMMER SESSION.

The Summer Session will commence on Monday, 4th May, 1875, 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.		

Undergraduates in the Three Years' Course are required to take a selection of these Classes, as prescribed by the Senate; see also § II.

§ VII.—FEES.

The Fee to each Professor, whose class or classes a Student enters, is six dollars for the Session, except the following classes, the fee for each of which is \$4.00:—Spanish and Hebrew. The Fees for Anatomy and Physiology are \$6.00 each; but Students paying these limited fees are not qualified to present themselves for Examination in the Medical Department.

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.

Mixed Mathematics 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 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...	\$31.00
" " Second Year, with Library Fee.....	25.00
" " Third " ".....	31.00
" " Fourth " ".....	33.00
(for more, according to Classes selected.)	

The fees of Undergraduates who take the B. Sc. Course, are as follows:—

Classes of First Year, with Library and Matriculation Fee...	\$30.00
" " Second " " with Library Fee.....	25.00
" " Third " ".....	37.00
" " Fourth " ".....	35.00

§ VIII.—GRADUATION.

DEGREES OF B. A. AND B. Sc.

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

Undergraduates in the B. A. Course, 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.

Bachelors of Arts, of at least three year's 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 1862, who pay *fee* dollars. Theses 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, he will be allowed a Supplementary Examination on the first Thursday of the following Winter Session, on giving notice to the Secretary of the Senate as or before the opening of the Winter Session; but failure in more than two subjects at the Sessional Examinations

will involve the loss of the year. N. R.—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 mentioned in Rule 2nd, will be required to pay an extra fee of five dollars.

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

5. Students who pass the Examinations in the several subjects of their respective years, are arranged in three classes, 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 so long as the holders maintain a first or second rank at the Sessional Examinations, are offered by the Professors for competition this year; the competition to take place at the Matriculation Examination.

§ XI.—PRIZES AND CERTIFICATES OF MERIT.

THE CLASS PRIZES, AS USUAL.

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

THE ST. ANDREW'S PRIZE,

To be awarded this year to the Student who stands first in Mathematics at the Sessional Examinations of the Second Year.

THE SIR WILLIAM YOUNG PRIZE.

AN ANNUAL EDUCATION PRIZE of \$20 is offered by the Hon. SIR WM. YOUNG, Knt., Chief Justice of Nova Scotia, and is open for competition to all Arts Students. This prize will be competed for at the close of the Session; it cannot be held twice by the same Student.

THE ALUMNI ASSOCIATION PRIZES.

The Alumni Association of this University, with judicious liberality, have this year provided Two Prizes of \$20 each for Students of the First Year. These Prizes will be awarded to the two Students of that year who obtain the highest total of marks

at the Sessional Examinations; Classics being reckoned as 150; Mathematics, 150; Rhetoric, 100.

THE COLONEL 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 they be best made and maintained in the public interest?"

Essays to be sent in not later than 15th March, 1874, each signed with a motto, and accompanied with a sealed envelope, bearing the motto and containing the name of the writer.

NORTH BRITISH SOCIETY'S BURSARY.

A Bursary, of the annual value of \$60, has been founded in conjunction with Dalhousie College by the North British Society of Halifax, to be competed for at the Sessional Examinations of the Second Year's course, and held by the successful competitor for two years, namely, during the Third and Fourth Years of the 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, 1874, at the Sessional Examinations. In awarding this Prize, all the subjects of the Second Year's Course are reckoned of equal value.

WAVERLY PRIZE.

This Prize, of the value of \$10, has been founded by an unknown Benefactor, whose object in so doing is to encourage the studies of the Curriculum, especially Mathematics.

This Prize will be awarded to the Student of the Third Year who passes all the Examinations of the year, and takes the highest place in the Mixed Mathematics of that year and the Mathematics of the previous course.

CERTIFICATES OF MERIT.

Certificates of Merit of the First or Second Rank will be given to Students 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 tardiness, or inattention, 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 or tardiness 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 recommend privately, or in the presence of the Students, or report to the parents or guardians, or disqualify for accepting 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

Through the liberality of a number of the friends of the College, a Library has been formed, which consists of a careful selection of the most useful works 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 1200 volumes. All Students are entitled to the use of the Books, on payment of the annual fee of one dollar.

§ XIV.—ORDINARY COURSE FOR B. A.

LATIN AND GREEK.

FIRST YEAR.

LATIN.—Cicero: Fourth Oration against Catiline.

*First Oration against Catiline.

Virgil: *Æneid*, Book XI.

GREEK.—Lucian: Timon.

*Demosthenes: First Olynthiac.

COMPOSITION.—Principia Latine, Part IV.

SECOND YEAR.

LATIN.—Livy: Book I, chaps. 1-20. *Book I, chaps. 20-25.

Horace: Odes, Book III.

GREEK.—Herodotus: Book I, sec. 95-114. *Book II, sec. 1-14.

Homér: *Odyssey*, Book IX.

COMPOSITION.—Principia Latine, Part V. *Isis Græca*, Part III.

THIRD AND FOURTH YEARS.

LATIN.—Tacitus: Annals, Book I. *Jurætal Sacramenta*, III, X, XIII.

GREEK.—Demosthenes: Philippics, I, II, III. Plato: *Apology Sacramta*.

COMPOSITION.—Principia Latine, Part V. *Isis Græca*, Part III.

PHILOLOGY.—Outline of Comparative Philology.

† ANCIENT HISTORY AND GEOGRAPHY.

SECOND YEAR.—History of Rome, to B. C. 21. Geography of Italia, Sicilia, Gallia, Britannia.

THIRD YEAR.—History of Greece to the Roman Conquest. Geography of Greece, Asia, Asia. Books recommended: Liddell's History of Rome; Smith's History of Greece; Pillans' 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, Series, Proportion, Inequalities, Variation, Progressions.

GEOMETRY.—First Book of Euclid revised; Second, Third, and Fourth Books; Definitions of Fifth, 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 sum and difference 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; Composite Interest; Annuities.

* Only Students competing for a First or Second Class at the Sessional 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.

ENTRÉ.

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 Horner's Method of Solution.

EXPERIMENTAL PHYSICS.

(Third Year.)—Text Book: Lardner's Handbook.
(Fourth Year.)—Text Book: Lardner's Handbook.

MATHEMATICAL PHYSICS.

(Third Year.)—Text Book: Galbraith and Haughton's Manual of Mechanics;
(Fourth Year.)—Text Books: Galbraith and Haughton's Manuals of Astronomy and Optics; Preece's Hydrostatics (for Galbraith and Haughton'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: St. William Hamilton's Lectures on Logic, Prof. Lyle's "Intellect, the Emotions, and the Moral Nature."

METAPHYSICS AND AESTHETICS.

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

CHEMISTRY.

(Second Year.)—Text Book: Fownes' 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.

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

RHETORIC, ENGLISH LANGUAGE, ETC.

FIRST YEAR.

RHETORIC.—Text Books: Whately's Elements of Rhetoric, Campbell's Philosophy of Rhetoric.
ENGLISH LANGUAGE.—Text Books: Stoddard's English Language, Angus's Handbook of the English Language.
ANGLO-SAXON.—Text Book: Marsh's Anglo-Saxon Reader.
BIOGRAPHY. Books recommended: Porter's Analysis of the Principles of Rhetorical Delivery, Russell's Elocution.

HISTORY.

(Fourth Year.)—Text Books: Gibbon's Decline and Fall of the Roman Empire, Hume's History of England, History of France, Simonds's Italian Republics, Hallam's Middle Ages, Taylor's Modern History.

ENTRÉ.—Hallam's Constitutional History.

MODERN LANGUAGES.

ORDINARY COURSE.

FRENCH.—(Third Year.)—Pajol's Grammar, (first part.)—Boeth's "Vabrieu."

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

FRENCH.—(Fourth Year.)—Pajol's Grammar (fourth part)—Mollire's "La Bourgeois Gentilhomme."

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

§ XV.—HONOUR COURSES.

CLASSICS.

[The following Course, in addition to the Ordinary, is prescribed for Classical Honours in the fourth year.]

LATIN.—Plautus: Miles Gloriosus.

Terence: Heautontimorumenos.

Virgil: Georgics, Books I, IV.

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

Juvenal: Satires.

Cicero: Tusculan Questions, Book I.

Caecilius: Agrícola, Germani.

GREEK.—Homer: Iliad, XVIII., XXIV.

Aeschylus: Prometheus Bound.

Sophocles: Œdipus Rex.

Thucydides: Book II.

Plato: Phædo.

Demosthenes: De Corona.

COMPOSITION.—Latin Verse.

HISTORY AND LITERATURE.—Arnold's History of Rome; Meumann's History of Rome, Vol. I.; Motteley's History of the Romans, Vols. I., II., III.; Grote's History of Greece, Vols. IV., V., XI., XII.; Miller and Donaldson's History of Ancient Greek Literature; Hase's Roman Classical Literature (Hase's); Theatre of the Greeks (Donaldson's).

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

MATHEMATICS AND MATHEMATICAL PHYSICS.

THIRD YEAR.

Spherical Trigonometry, with application to Astronomy; DeMoivre's Theorem and Angular Analysis.
Analytical Geometry.—The Circle, the Straight Line, the Parabola, the Ellipse, the Hyperbola.

Differential Calculus—Differentiation; Theorems of Leibnitz, MacLaurin, and Taylor; Maxima and Minima of Functions of One Variable. Theory of Equations—Theorems respecting the roots of Equations; Sturm's Theorem with Horner's Method of solving the Higher Equations.

FOURTH YEAR.

Analytical Geometry—The Locus of the Equation of the Second Degree between two Variables; Plane Locus.

Differential Calculus; Maxima and Minima of Functions of two Variables; change of the Independent Variable; Radius of Curvature; Osculating Circle; Envelopes; the tracing of Curves from their Equations.

Integral Calculus—Integration of Simple Forms; Integration by Parts and Formulae of Reduction; Applications to Surfaces, Volumes, &c.; Differential Equations, selected course.

EXTENSIVE OF THE ORDINARY COURSE IN MATHEMATICAL PHYSICS.

Prescribed Sections of Partinon's Elementary Mechanics, Partinon's Optics, and Hyzer's Astronomy. Selections from Waiter's Mechanical Problems.

BOOKS RECOMMENDED—(In order of Preference.)

Tolluher's Spherical Trigonometry.

Tolluher's Plane Trigonometry, or Olonzo's (2nd part.)

Puoble's or Tolluher's Conic Sections.

Halls (Hill's, Tolluher's,) Differential and Integral Calculus.

Tolluher's or Young's Theory of Equations.

Boole's Differential Equations.

EXPERIMENTAL PHYSICS.

Gard's Physics, by Atkinson.

Heat a Mode of Motion, by Tyndal.

Optics, by Sir David Brewster.

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

Nichol'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's Principles of Philosophy. Reid's Essay's, VI. Sir Wm. Hamilton's Lectures on Metaphysics. Sir Wm. Hamilton's Philosophy of Perception and Philosophy of the Unconditioned. Mill's Examination of Sir Wm. Hamilton's Philosophy. Lewis's Biographical History of Philosophy. Cousin's Philosophy of the Beautiful. Alison's Essay's on the Principles of Taste. Burke on the Sublime and Beautiful.

ETHICS.

Macleod'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 Theism.

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

HISTORY, POLITICAL ECONOMY, AND ENGLISH LANGUAGE AND LITERATURE.

ENGLISH LANGUAGE.

Cornor's Selections from Scotch and English Literature.

Lectures on the English Language, (Geo. P. Marsh.)

Study of the English Language (F. A. March.)

Latham's English Language.

Trunch's English, Past and Present.

HISTORY.

Boe's Ecclesiastical History of England.

Fremm's History of Norman Conquest of England.

Mason's History of England.

Hallam's Constitutional History.

Bryce's Holy Roman Empire.

Stephen's Lectures on the History of France.

Momms's History of Germany.

Mallet's Northern Antiquities.

Gibbon's History of Civilization.

POLITICAL ECONOMY.

Smith's Wealth of Nations, by MacCallloch.

Science of Wealth, by Walker.

Plato's Republic, Books I., IV., (in English.)



TIME TABLE.

FOURTH YEAR.	THIRD YEAR.	SECOND YEAR.	FIRST YEAR.	HOURS.
Classics—2 days. Honor Classics—1 day. French—2 days.	Prog. Chemistry—2 days. Honor Classics—1 day. French—2 days.	Prog. Chemistry—2 days. French (or Spanish).	French (or Spanish.)	9—10.
Ethics, Political Economy— Daily.	Classics—4 days. Honor Classics—1 day.	Mathematics— Daily.	Rhetoric— Daily.	10—11.
History— 4 days.	Metaphysics—Mo., Tu., Fri. Honor English Literature— 1 day.	Classics— Daily.	Mathematics— Daily.	11—12.
Expl. Physics—1 day. Math. Physics—1 day.	Expl. Physics—2 days. Math. Physics—2 days. Advanced Physics—1 day.	Logic and Psychology— Tu., Wed., Th., Fri.	Classics— Daily.	12—1.
Honor Mathematics— 2 days.	Honor Mathematics— 2 days.			1—2.
	Chemistry— Daily.	Chemistry— Daily.		2—3.
German— 1 day.	German— 2 days.			3—4.

Degrees Conferred, April, 1873.

BACHELOR OF ARTS.

JOHN MUMY ALLAN.	DAVID F. CHERLMAN.
CHARLES BRAYDEN.	KENNETH DUFF.
WM. CAMERON.	MELVILLE LOGAN.
JOHN HUNTER.	ALEX. H. MCKAY.
CHARLES D. McDONALD.	JOSEPH MILLEN ROBINSON.
JAMES A. MCKEEN.	WM. EDGAR.

HONOURS

B. A. HONOURS IN MATHEMATICS AND PHYSICS.

Of the Second Rank—ALEX. H. MCKAY.

Prizes and Certificates of Merit, 1873.

CLASS PRIZES.

FOURTH YEAR.

CLASSICS.....	Charles D. McDonald.
ETHICS.....	David F. Creelman.
HISTORY.....	Alexander H. McKay.
MODERN LANGUAGES.....	David F. Creelman.
PETRES.....	Alexander H. McKay.

THIRD YEAR.

CLASSICS.....	James C. Herdman.
NATURAL PHILOSOPHY.....	David S. Fraser.
METAPHYSICS.....	James M. Osley.
CHEMISTRY.....	Walter S. Duff.
MODERN LANGUAGES.....	James M. Osley.

SECOND YEAR.

CLASSICS.....	Equal	{ George McMillan,
		{ William B. Ross.
MATHEMATICS.....		1. Wm. Beairds.
		2. Wm. B. Ross.
		3. Archibald Gunn.
PSYCHOLOGY.....		1. Wm. B. Ross.
		2. George McMillan.
CHEMISTRY.....		1. Wm. Beairds.
		2. J. R. Coffin.

FIRST YEAR.

CLASSICS.....	1. J. W. McLeod.
	2. F. H. Bell.
MATHEMATICS.....	1. George H. Fulton.
	2. J. M. Stewart.
	3. Burgess McKittrick.
RECREATION.....	1. James M. Stewart.
	2. F. H. Bell.

CERTIFICATES OF GENERAL MERIT.

OF THE FIRST CLASS.—Fourth Year—Alex. H. McKay, D. F. Creelman.
 Third Year—James C. Herdman. Second Year—William B. Ross.
 First Year—Francis H. Bell, John W. McLeod, James M. Stewart.
 OF THE SECOND CLASS.—Fourth Year—Charles D. McDonald. Second
 Year—William Beairds.

SPECIAL PRIZES.

THE YOUNG PRIZE of \$20 for Eloquence, open for Competition to Students of the First and Second Years, was won by Fred. W. Archibald.

The Prize of \$20 offered by Col. Laurin, for the best Essay on "Immigration as adapted to the Requirements of Nova Scotia," was awarded to David F. Creelman.

THE WAVERLY PRIZE of \$50, founded by an unknown Benefactor, whose object is to encourage the studies of the Curriculum, especially Mathematics, was equally divided this year between Wm. Beairds and Wm. B. Ross.

THE ALUMNI PRIZE of \$50, offered by the Alumni Association to the Student of the First Year who makes the highest average at the Sessional Examinations, was won by Jas. M. Stewart.

The St. Andrew's PRIZE, offered this year for proficiency in Classics, was won by John W. McLeod.

Examinations, 1872--3.

SCHOLARSHIP EXAMINATION, OCT. 1873.

The Professors' Scholarships, offered for competition to Students entering as Undergraduates, were gained by

FRANCIS H. BELL, Private Study.
 FREDERICK W. O'BRIEN, Pictou Academy.

UNIVERSITY EXAMINATIONS.

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

SUPPLEMENTARY EXAMINATIONS, OCT., 1872.

THIRD YEAR.—Kenneth Duff, J. Millen Robinson.
 SECOND YEAR.—Walter S. Duff.

ENTRANCE EXAMINATIONS IN ANCIENT HISTORY, OCT., 1872.

SECOND YEAR.—History of Rome—George McMillan, Wm. H. Brownrigg.
 Isaac McDowall, Wm. A. Mills, Alex. McLeod.

The following Students of the Second Year passed an equivalent Examination in previous years:—
 William Beairds, Louis H. Jordan, Alex. C. Patterson, John T. Ross, William B. Ross.

SUPPLEMENTARY EXAMINATION IN ANCIENT HISTORY, JANUARY, 1873.

SECOND YEAR.—J. R. Coffin, Andrew Gray, Arch. Gunn, Alex. McLean.
 John McLean.

SESSIONAL EXAMINATIONS, APRIL, 1873.

FOURTH YEAR.—FINAL EXAMINATION FOR DEGREE OF B. A.—John M. Allan, Charles W. Bryden, David F. Creelman, William Cameron, Kenneth Duff, John Hunter, Melville Logan, Charles D. McDonald, Alex. H. McKay, James A. McKee, William Ross, J. M. Robinson.

THIRD YEAR.—Daniel S. Fraser, William C. Herdman, James C. Herdman, David McGregor, Donald McLeod, R. G. Sinclair, Hector Stranberg, James E. Orley.

SECOND YEAR.—William Beairds, James R. Coffin, Arch. Gunn, Louis H. Jordan, Isaac McDowall, John McLean, Alex. McLeod, George McMillan, Wm. A. Mills, John T. Ross, Wm. B. Ross.

FIRST YEAR.—Francis H. Bell, George H. Fulton, Richmond Logan, Burgess McKittrick, James McLean, John W. McLeod, Joseph S. Morton, Fred. W. O'Brien, John Menno, Benjamin Pearson, Arch. Purves, James M. Stewart, James C. Sutherland.

CLASS LISTS.

The NAMES of the Students are arranged in the order of merit.

LATIN.

- FOURTH YEAR.**—(Final Examination for Degree of B. A.) Class 1—Chas. McDonald, David F. Creelman. Class 2—None. Class 3—Wm. Cameron, James A. McKee, Charles W. Bryden, Kenneth Duff, Wm. Ross, equal, (John Hunter, Melville Logan), equal, J. M. Robinson.
- THIRD YEAR.**—Class 1—J. C. Herdman. Class 2—None. Class 3—D. S. Fraser, Donald McLeod, J. M. O'Leary, W. C. Herdman, R. G. Sinclair, Daniel McGregor, Hector Stramberg.
- SECOND YEAR.**—Class 1—Wm. B. Ross, George McMillan. Class 2—None. Class 3—Wm. Beattie, Wm. A. Mills, Isaac McDowall, John T. Ross, J. R. Coffin, A. C. Patterson, L. H. Jordan, Arch. Gunn, John McLean, Alex. McLeod.
- FIRST YEAR.**—Class 1—F. H. Bell, J. W. McLeod. Class 2—F. W. O'Brien, J. M. Stewart, Arch. Purves. Class 3—B. McKittrick, J. N. Shannon, J. C. Sutherland, J. S. Morton, B. F. Pearson, R. Logan, John Murray, F. W. Archibald, G. H. Fulton, James A. McLean, Colin Pittblado.

GREEK.

- FOURTH YEAR.**—(Final Examination for Degree of B. A.) Class 1—Charles D. McDonald.
- THIRD YEAR.**—Class 1—J. C. Herdman. Class 2—None. Class 3—D. S. Fraser, Hector Stramberg, W. C. Herdman, Don. McGregor.
- SECOND YEAR.**—Class 1—George McMillan, Wm. B. Ross. Class 2—None. Class 3—Wm. Beattie, Alex. McLeod, Wm. A. Mills, J. R. Coffin, L. H. Jordan, John McLean, A. C. Patterson, Arch. Gunn, I. McDowall, J. T. Ross.
- FIRST YEAR.**—Class 1—J. W. McLeod, F. H. Bell. Class 2—F. W. O'Brien, J. M. Stewart, Arch. Purves. Class 3—B. McKittrick, R. Logan, J. C. Sutherland, John Murray, Colin Pittblado, J. A. McLean, R. F. Pearson, J. N. Shannon, G. H. Fulton, J. S. Morton.

MATHEMATICS.

- SECOND YEAR.**—Class 1—William Beattie, William B. Ross. Class 2—Archibald Gunn, William A. Mills, Louis H. Jordan. Class 3—James R. Coffin, John T. Ross, George McMillan, Isaac McDowall, Alex. McLeod, John McLean.
- FIRST YEAR.**—Class 1—George H. Fulton, James M. Stewart, Burgess McKittrick. Class 2—Francis H. Bell, Fred. W. Archibald. Class 3—James A. McLean, Richmond Logan, Frederick O'Brien, Benjamin F. Pearson, John S. Murray, James C. Sutherland, Archibald Purves, Isaac Archibald, James G. Morton, Andrew Jack, John Young.

NATURAL PHILOSOPHY.

- THIRD YEAR.**—Class 1—Daniel S. Fraser. Class 2—Robert G. Sinclair, James C. Herdman, James M. O'Leary. Class 3—William C. Herdman, Donald McLeod, Hector Stramberg, Daniel McGregor, Walter S. Doull.
- FOURTH YEAR.**—Class 1—Alex. H. McKay, David H. Creelman. Class 2—J. Millen Robinson, William Cameron, James A. McKee. Class 3—William Ross, Kenneth Duff, Melville Logan, John Hunter, John A. Logan, Charles W. Bryden.

METAPHYSICS AND ESTHETICS.

- Class 1—James McD. O'Leary, Donald McLeod, Hector M. Stramberg, James C. Herdman, Daniel McGregor, Daniel S. Fraser, Robert G. Sinclair.
- Class 2—William C. Herdman, Walter S. Doull.

LOGIC AND PSYCHOLOGY.

- Class 1—William Ross, George McMillan, William Beattie.
Class 2—Archibald Gunn, J. R. Coffin, Isaac McDowall, Alexander McLeod, W. A. Mills.
Class 3—Lewis H. Jordan, John McLean, A. C. Patterson, John T. Ross.

CHEMISTRY—SENIOR.

- Class 1—Walter S. Doull. Class 2—Donald McLeod, Robert G. Sinclair.

CHEMISTRY—JUNIOR.

- Class 1—William Beattie, James Robert Coffin. Class 2—W. A. Mills, A. C. Patterson. Class 3—Archibald Gunn, Louis H. Jordan, John T. Ross, George McMillan, Isaac McDowall, Alex. McLeod, Wm. B. Ross, John McLean, Alexander McLean.

SPECIAL EXAMINATION FOR DEGREE OF B. A.

- Class 3—John M. Allan.

PRACTICAL CHEMISTRY.

- Class 1—Walter S. Doull, Donald McLeod.

ETHICS AND POLITICAL ECONOMY.

- Class 1—D. F. Creelman, J. H. McKay, C. W. Bryden, J. M. Robinson, C. D. McLeod, Kenneth Duff, J. H. Hunter, J. A. Logan, Melville Logan. Class 2—J. A. McKee, Wm. Cameron, W. Ross.

HISTORY.

- Class 1—A. H. Mackay, D. F. Creelman. Class 2—J. Millen Robinson, Melville Logan. Class 3—Wm. Ross, Wm. Cameron, C. W. Bryden, J. A. McKee, John Hunter, C. D. Macdonald, Kenneth Duff, John A. Logan.

MODERN LANGUAGES.

FRENCH.

- FOURTH YEAR.**—Class 1—David F. Creelman, Charles D. Macdonald, Alex. H. Mackay. Class 2—Charles W. Bryden, John A. Logan, James A. McKee, J. Millen Robinson, Melville Logan, William Cameron. Class 3—John Hunter, William Ross.

GERMAN.

- FOURTH YEAR.**—Class 1—Kenneth Duff, Charles D. Macdonald.

FRENCH.

- THIRD YEAR.**—Class 1—James McD. O'Leary, James C. Herdman. Class 2—Donald McLeod, Daniel S. Fraser, Walter S. Doull. Class 3—Robert G. Sinclair, H. M. Stramberg, Daniel McGregor, Wm. C. Herdman.

GERMAN.

- THIRD YEAR.**—Class 1—James C. Herdman. Class 2—Robert G. Sinclair.

RHETORIC.

- Class 1—James McD. Stewart, Francis H. Bell. Class 2—Richmond Logan, J. M. McLeod, A. R. Purves, Burgess McKittrick, F. W. Archibald. Class 3—F. W. O'Brien, G. H. Fulton, Jas. A. McLean, Theo. Corbett, I. L. Archibald, R. F. Pearson, J. C. Sutherland, John Murray, J. S. Morton, Colin Pittblado, John S. Murray, James Shannon.

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

GRADUATES.

MASTERS OF ARTS.

	1869.	
Chase, Joseph Henry	.....	.....Cornwallis
	1870	
McNaughton, Samuel	.....	.....Georgetown
Macdonald, John H.	.....	.....Kentville
	1871	
Cameron, J. J.	.....	.....Georgetown, P. E. Island
Carr, Arthur, P.	.....	.....St. Edward's, P. E. Island
Smith, David H.	.....	.....Truro
	1872	
Anand, Joseph	.....	.....Pictou
Bayne, Herbert A.	.....	.....Pictou
Forsyth James	.....	.....Halifax
McKenzie, John J.	.....	.....Pictou

DOCTORS OF MEDICINE AND MASTERS OF SURGERY.

	1872	
DeWolf, George H. H.	.....	.....Dartmouth, N. S.
Hiltz, Charles W.	.....	.....Bridgetown, Antigua.
McMillan, Finlay	.....	.....Pictou Co.
McRae, William	.....	.....Richmond, C. B.
Sutherland Eoderik	.....	.....River John, Pictou.

BACHELORS OF ARTS.

	1866.	
Chase, J. Henry	.....	.....Cornwallis
Shaw, Robert	.....	.....New Perth, P. E. Island.
	1867.	
Burgess, Joshua C.	.....	.....Cornwallis
Cameron, J. J.	.....	.....Georgetown, P. E. Island
Lippincott, Aubrey	.....	.....New Glasgow.
McDonald, John H.	.....	.....Cornwallis
McNaughton, Samuel	.....	.....East River, Pictou.
Ross, Alexander	.....	.....Rogers Hill, Pictou.
Sedgwick, Robert	.....	.....Malibu Musquodouit.
Smith, David H.	.....	.....Truro
Smith, Edwin	.....	.....Truro
	1868.	
Carr, Arthur P.	.....	.....St. Edward's, P. E. Island.
Christie, Thomas M.	.....	.....Vernon.
Creighton, James G. A.	.....	.....Halifax
Forsyth, James	.....	.....Halifax
McKay, Kenneth	.....	.....Hardwood Hill, Pictou.
Stimpon, Isaac	.....	.....Morrisville, Pictou.

	1869.	
Anand, Joseph	.....	.....Gray's River, Pictou.
Bayne, Herbert A.	.....	.....Pictou
Miller, Bonnard D.	.....	.....Rogers Hill, Pictou.
McKenzie, John J.	.....	.....Crown Hill, Pictou.
Sutherland, John M.	.....	.....West River
	1870.	
Lindsay, Andrew W. H.	.....	.....Halifax
Scott, Hugh M.	.....	.....Southbrook.
Therbers, Walter H.	.....	.....Berquias.
Willace, John	.....	.....Shubenacadie.
	1871.	
Bayne, Ernest S.	.....	.....Pictou
McGregor, James G.	.....	.....Halifax.
Russell, Alex. G.	.....	.....Truro
	1872.	
Archibald, Wm. P.	.....	.....Halifax
Brown, Wm. T.	.....	.....Malibu Musquodouit.
Carmichael James	.....	.....New Glasgow.
Crookshank, Wm.	.....	.....Lower Musquodouit
Fraser, Deacon C.	.....	.....New Glasgow.
Gunn, Adam	.....	.....East River, St. Mary's.
McKenzie, Hugh.	.....	.....Earleton
Pollock, Alex. W.	.....	.....Fonth River Pictou.
Scott, Ephraim	.....	.....Douglas Cove.
Treeman, Arthur L.	.....	.....Point DeBute, N. B.
	1873.	
Cameron, Wm.	.....	.....Sutherland's River, Pictou.
Crookshank, D. F.	.....	.....Stewiacke
Duff, Kenneth	.....	.....Lansburg
Hunter, John	.....	.....New Glasgow.
Lagoo, John H.	.....	.....Upper Stewiacke.
Lagoo, Melville	.....	.....Halifax
McDonald, Chas. D.	.....	.....Pictou
McKay, Alex. H.	.....	.....Dalhousie, Pictou.
McKoon, James A.	.....	.....Tatamagouche.
Robinson, J. Milton	.....	.....Bellefleur, N. B.
	UNDERGRADUATES, 1872-73.	
	FOURTH YEAR.	
Cameron, Wm.	.....	.....Sutherland's River, Pictou.
Crookshank, D. F.	.....	.....Stewiacke
Duff, Kenneth	.....	.....Lansburg
Hunter, John	.....	.....New Glasgow.
Lagoo, John H.	.....	.....Upper Stewiacke.
Lagoo, Melville	.....	.....Halifax
McDonald, Charles D.	.....	.....Pictou
McKay, Alex. H.	.....	.....Dalhousie, Pictou.
McKoon, James A.	.....	.....Tatamagouche.
Robinson, J. Milton	.....	.....Bellefleur, N. B.
	THIRD YEAR.	
Duff, Walter S.	.....	.....Halifax
Fraser, Eva B.	.....	.....Dalhousie, Pictou.
Fordman, James C.	.....	.....Pictou.
Fordman, Wm. C.	.....	.....Pictou.
McGregor, Daniel	.....	.....Inverness, C. B.
McLeod, Robert	.....	.....St. Catharines, P. E. Island.
Oxley, James McD.	.....	.....Halifax
St. John, Robert G.	.....	.....Miramichi, P. E. Island.
Stranberg, Hector	.....	.....Cape John, Pictou.
	SECOND YEAR.	
Brown, William	.....	.....Pictou.
Coffin, James Robert	.....	.....Savage Harbor, P. E. I.
Grey, Andrew	.....	.....Pictou.

Cunn, Archibald	Pictou.
McLellan, Isaac	Tatamagouche.
McLean, Alexander	Belfast, P. E. I.
McLeod, Alexander	Quincy, Colchester.
McMillan, George	Scott's Hill, Pictou.
Mills, William Addison	Bay Fortune, P. E. I.

FIRST YEAR.	
Archibald, Fred. W.	Truro.
Archibald, Isaac L.	Truro.
Bell, Francis H.	Halifax.
Chambers, Robert K.	Truro.
Corbett, Thomas	Guy's River.
Forbes, James A.	Halifax, Pictou.
Fulton, George H.	Doss River, Colchester.
Logan, Richmond	Stewiacke.
McKitterick, Burgess	Corwallis.
McLean, James A.	Pictou.
McLeod, John W.	N. River, Colchester.
Morton, Joseph S.	New Glasgow.
Murray, John S.	Carvondish, P. E. I.
Nunes, John	Valleyfield, P. E. I.
O'Brien, F. W.	Noel, Easts.
Pearson, H. E.	Ligonery.
Purvis, Arch. R.	Pictou.
Shannon, James N.	Halifax.
Stewart, James M.	Whycomeah.
Sutherland, James C.	Pictou.

GENERAL STUDENTS.

NAME.	RESIDENCE.	CLASSES ATTENDED.
Book, Hy. W. C.	Halifax.	Mathematics, French.
Brockfield, Walter B.	"	Latin, Math., French.
Cameron, John Hy.	Antigonish Co.	Classics, Math., Rhetoric.
Corndin, Herman F.	Halifax.	Chemistry, Pract. Chem.
Cummings, R. F. A.	Antigonish.	Classics, Math., Rhetoric.
Jack, Andrew McK.	Halifax.	Latin, Math., Rhetoric.
Grimes, George A.	Sutherlandshire, G. B.	Classics, Math., Rhetoric.
Hill, Philip C.	Halifax.	Latin, Math., French.
Kennedy, Evan	Port Phillip.	Latin, Math., Rhetoric.
Lawson, Bruce	Halifax.	Classics, Mathematics.
McBain, James Wm.	Pictou.	Classics, Math., Rhetoric.
*McLeod, John S.	Antigonish.	Classics, Chemistry, Math.
McLennan, Rev. H.	Ligonery.	Mathematics, German.
McLean, Charles	High Bank, P. E. I.	Classics, Math., Rhetoric.
McKenzie, Duncan	Loch Lomond.	Classics.
McKnight, Sam. Jas.	Dartmouth.	Classics, Rhetoric.
Murray, Thomas	Burgoyne, P. E. I.	Classics, Rhetoric.
Piddico, Colin	Truro.	Classics, Rhetoric.
Read, Barten S.	Miramichi.	Math., Rhetoric, Chemistry.
Smith, James C.	Halifax.	Classics, Mathematics.
Smith, Wm. A.	"	Classics, Mathematics.
Stairs, George	"	Rhetoric, French.
Sutherland, Daniel	Cumberland.	Classics, Math., Rhetoric.
Twining, Russell	Halifax.	Math., Rhetoric, French.
West, Francis	"	Lat., Math., Rhet., French.
Undergraduates in Arts		55
General Students in Arts		24
Total in Arts		80
Students in Medicine		26
Total number of Students in the University		106

Faculty of Medicine.

VANI REV. JAMES ROSS, D.D.,

Principal (ex-officio.)

WILLIAM J. ALMON, M.D.,

*Executive Professor of Obstetrics and the Diseases of Women and Children, and President of the Faculty.*ALEXANDER P. REID, M.D., L.R.C.S., EDIN., L.C.P. & S. CANADA, &
HUGH A. GORDON, M.D., M.R.C.S., EDIN., L.C.P. & S. CANADA,*Professors of the Principles and Practice of Medicine and Clinical Medicine.*

WILLIAM E. SLAYTER, M.D., M.R.C.S.I., F.R.C.P., EDIN., & C.

Professor of Obstetrics and the Diseases of Women and Children and Clinical Surgery.

EDWARD FAERRELL, M.D.,

ARCHIBALD LAWSON, M.D., L.R.C.S., ENGLAND,

Professors of Principles and Practice of Surgery and Clinical Surgery.

GEORGE LAWSON, Ph. D., LL. D.,

Professor of Chemistry, Clinical Toxicology and Botany.

ALFRED H. WOODILL, M.D.,

Professor of Materia Medica and Therapeutics.

JOHN SOMMERS, M.D.,

Professor of Physiology.

GEORGE L. SINCLAIR, M.D.,

Professor of Anatomy.

J. B. DEWOLF, M.D., EDIN., L.R.C.S., EDIN.,

*Professor of Medical Jurisprudence.*DR. A. P. REID, *Dean of Faculty.*DR. H. A. GORDON, *Secretary.*

W. Y. FULLERTON, M.D.,

E. S. BLANCHARD, M.D.,

Demonstrators of Anatomy.

JAMES JOHN WILSON.

Faculty of Medicine.

THE PRINCIPAL, (*ex officio*.)

Professors.....	ALMON, LAWSON, REID, FARRELL, WOODHILL, BLATTEN, SODERBERG, GORDON, DEWOLF, A. LAWRENCE, J. W. Y. FLEMMING, M.D., E. B. BRANCOIANI, M.D., N. J. ALMON, M.D., A. P. REID, M.D., H. A. GORDON, M.D.
Demonstrators.....	
President of the Faculty.....	
Dean.....	
Registrar.....	

The Seventh Session of the Medical Faculty of Dalhousie College and University will be opened on Tuesday, the 21st of October, 1873, with a general introductory lecture. The regular lectures will commence on Wednesday the 22nd of October, and will be continued during the six months following.

The class tickets for the various courses are accepted as qualifying candidates for examination before the Royal College of Surgeons, London, the Universities of Edinburgh, McGill, Montreal, Harvard, Boston, and the New York Schools of Medicine.

Registration is necessary every Session—it is required upon entrance, or as soon afterwards as possible, and always before any class tickets are procured. The time fixed for closing the Register is annually on the thirtieth of November. Class tickets are payable in advance and will not be issued after the Register is closed.

In order to meet the requirements of the recent Medical Act of Nova Scotia, and the General Council of Medical Education and Registration of Great Britain, and also those of the Royal College of Surgeons of England and Edinburgh, the Student must pass his Matriculation examination prior to the commencement of his Medical studies. Students wishing to pass this examination may do so at any time by giving two weeks notice to the Secretary of the Provincial Medical Board, Dr. T. R. Almon, or to the Secretary of the Medical Faculty.

While the University regulations permit a student to graduate after three years attendance upon Lectures, provided he furnish proof that he has studied one year before attending Lectures, with a private practitioner, yet he is recommended to devote four years to systematic instruction, as less time is scarcely sufficient in which to acquire a fair knowledge of the many subjects which compose the curriculum.

With regard to the examination, students are requested to turn to section 10, Article 4, of the "Qualifications and Studies of Students and Graduates for the Medical Degree," in a succeeding part of this announcement.

The division of the examination into primary and final adopted by the McGill University, Montreal, and found to be most advantageous to students, will be adopted by this Faculty also; and it is hoped that the greater number of third year students will avail themselves of this arrangement.

Students of Dentistry will find it of advantage to attend the lectures on Chemistry, Anatomy, and Practical Anatomy.

To intending Druggists' Assistants, the lectures on Chemistry and Materia Medica will be of great practical assistance.

Students of Law will find that it is desirable to attend the lectures on Medical Jurisprudence by Dr. DeWolf and Dr. Lawson—the subjects of Insanity, Law as related to Medicine, and Toxicology, being fully explained.

For additional information apply to the Dean of the Faculty of Medicine, A. P. Reid, M.D., 98 Argyle Street, Halifax, N. S.

Course of Instruction in the Faculty of Medicine.

(The Lectures will be delivered in the University Building)

I—MEDICINE.

Prof. BIRD and GORDON, Physicians to City Hospital and City Dispensary.

Divided into Principles and Practice. This course will be illustrated by coloured plates and morbid preparations—special attention will be directed to diseases of the Heart and Lungs, and to their physical diagnosis, which will be illustrated by the numerous cases in the City Hospital, under the immediate instruction of the Professor, and to which cases every student may have direct access, thus enabling him to obtain a practical knowledge of this part of the profession.

Class Books—Tanner, Flint, Watson, Barlow, Reynolds, Niemeyr.

II—SURGERY.

Prof. FARELL and LAWSON, Surgeons to City Hospital & City Dispensary.

Divided into Principles and Practice, including Surgical Anatomy and Operative Surgery, exhibited on the subject. The various surgical instruments and apparatus will be shown, and their uses and applications illustrated.

Class Books—Druitt, Erichsen, Gross, Holmes.

III—OBSTETRICS.

Prof. SLAYTER, Surgeon to City Hospital.

Including Diseases of Women and Children, illustrated by plates, manikins, etc. Every facility will be given to senior students for attending midwifery cases at the Almshouse and Dispensary, under the direction of the medical officers.

The Emeritus Professor, Dr. Almon, will also give a number of practical lectures.

Class Books—Balford, Tyler Smith, Cassan, Scanzoni on Diseases of Women, West on Children.

IV—CHEMISTRY.

Prof. LAWSON.

This course will be illustrated by diagrams, tables, apparatus, preparations, and demonstrations on the black-board.—Experiments daily.

Class Book—Fowles' Manual.

PRACTICAL CHEMISTRY.

There will be a separate class for Practical Chemistry specially suited to the requirements of Medical Students.

Laboratory Books—Fresenius's Qualitative, Bowman's Med. Ch.

V—INSTITUTES OF MEDICINE.

Prof. SORRELL, Physician to City Dispensary.

This course will embrace the principles of Human Physiology, Histology, and the use of the Microscope.

Class Books—Daltor, Carpenter, Todd and Bowman, Kirk and Pugs, and Flint.

VI—MATERIA MEDICA.

Prof. WOODILL, Physician to City Dispensary.

This course will be illustrated by specimens of medicinal plants and samples of the various drugs, chemicals, etc.

Class Books—Parina by Farr, Stille, Nelligan, Dispensatories.

VII—ANATOMY.

Prof. SINGLAR, Surgeon to City Dispensary.

This course will be illustrated by the fresh subjects—dried preparations—including skeletons, etc., and life-size coloured plates. Every facility will be afforded to students to become practically acquainted with Anatomy under the Professor and Demonstrators.

PRACTICAL ANATOMY.

W. V. FELLETON, M.D.

E. S. BLANCHARD, M.D.

Rooms open from 4 to 6, and from 8 to 10, p. m.

Class Books—Gray, Wilson, Sharpey & Quain, Ellis's Dissector.

VIII—MEDICAL JURISPRUDENCE.

Prof. DEWOLF, Superintendent of the Hospital for Insane.

Prof. GEORGE LAWSON.

This course includes Toxicology, the method of testing for poisons, Insanity, and public Hygiene.

Prof. DEWOLF will have ample opportunities for instructing his class in the important subject of Psychological Medicine.

Prof. LAWSON will lecture on the subject of Chemical Toxicology.

Class Books—Taylor's Jurisprudence, Guy's Forensic Medicine.

IX—CLINICAL MEDICINE

Prof. REID.

X—CLINICAL SURGERY.

Prof. PARKER.

Taught by lectures and tutorially at the bed-side by the Physicians and Surgeons at the Provincial and City Hospital, and City Dispensary, at which institutions ample material is afforded for both classes. The students being individually trained at the bed-side, both in Diagnostic and Treatment.

XI—BOTANY.

Prof. LAWSON.

Students are required to attend one course of three months on this subject. The national Orders containing Medicinal and Poisonous Plants, will be illustrated as fully as possible.

Prizes.

THE DR. AVERY PRIZES.

These are offered by James F. Avery, M. D., to encourage the study of Anatomy. There are two prizes of \$10 each. Particulars given at the commencement of the Session.

THE W. E. NEAL PRIZE.

A Prize of \$20 is offered by W. H. Neal, Esq., to the student passing the best primary or final examination for the Degree of M. D.

Hospitals, etc.

THE PROVINCIAL AND CITY HOSPITAL is visited daily at 12 M., by the Medical Officers; and the CITY ALMS HOUSE containing from 200 to 400 inmates, many of whom are in the Hospital Wards, will be available to students without fee. The best opportunities are here presented for clinical instruction, midwifery practice and treatment of diseases, likewise for the observation of pathological appearances, which will be demonstrated by post-mortem examinations. There is a Hospital fee of \$1 for certificate of attendance.

THE HALIFAX DISPENSARY is carried on after the model of the DeMill Dispensary, New York, being divided into three departments, viz: (1) *Surgical*, including the Eye and Ear. (2) *Medical*, including the Heart and Lungs. (3) *Diseases of Women and Children*. Here the student can have the advantage of becoming practically acquainted with the less severe forms of disease, and will have the privilege of seeing patients with the visiting physicians, and have opportunities for Obstetric practice.

Past Session.

PRIZES.

Mr. W. H. NEAL'S Prize for best primary examination for the degree M. D., C. M.:—Donald A. Campbell, Truro.

Senior Class—Donald Chisholm, Long Point, 1st prize.

Robinson Cox, Stewiacke 2nd prize.

Junior Class—John Stewart, Whycomagh, 1st prize.

Robt. J. Blanchard, Truro, 2nd prize.

Dr. J. E. AVERY—Prizes for Clinical Reports of Cases:—
Clinical Medicine—W. S. Mair. Clinical Medicine—D. R. C. McKay.

Prof. SLATER'S Prizes in Obstetrics:—A. W. H. Lindsay /
Halifax; James A. Meek, Cornwallis.

Extracts from the Regulations.

COURSES OF LECTURES, FEES, &c.

1st.—Each Professor shall deliver at least five lectures during the week, except in the classes of Clinical Medicine and Clinical Surgery, in each of which only two Lectures shall be required; and in that of Medical Jurisprudence, if extended through six months, in which case three lectures a week will suffice.

2nd.—Each Lecture shall be of one hour's duration.

3rd.—Every Professor shall occasionally examine his class upon the subjects treated in his preceding Lectures; and every such examination shall be considered a Lecture.

4th.—A roll of the names of the Students attending each class shall be called from time to time.

5th.—All tickets which have not a Certificate of attendance attached, shall be rejected when presented as testimonials previous to examination, unless the omission shall be satisfactorily accounted for.

6th.—The fee for each class shall be \$12, with the following exceptions: For each of those of Medical Jurisprudence, Practical Anatomy, Practical Chemistry, and Botany, \$6; for Clinical Medicine and Clinical Surgery, each \$6. The class fees are *payable in advance*, to the Registrar, who will furnish all tickets.

7th.—Any student, after having paid the fees, and attended two courses of any class, shall be entitled to a perpetual ticket for that class.

8th.—The courses of all the Classes, except Practical Chemistry, Botany and Medical Jurisprudence, shall be of six months' duration; the Classes of Practical Chemistry and Botany, of three months' duration; and that of Medical Jurisprudence, either of three months' duration, in which case five Lectures a week shall be given, or of six months' duration, in which case only three Lectures a week shall be required.

9th.—The courses shall commence on the third Tuesday in October, and with the exception of a vacation at Christmas, shall continue till the 31st. of April.

10th.—The Matriculation or Preliminary Examination is similar to that required by McGill University, Montreal: the Medical Act of Nova Scotia; adopted under the Medical Act for Ontario, and recommended by the "Council of Medical Education and Registration" of Great Britain. The requirements are: **COMPULSORY**—English Language, including Grammar and Composition; Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations; Geometry, first two books of Euclid; Latin, Translation and Grammar; and one of the following **PERSONAL** Subjects—Greek, French, German, Natural

Philosophy, including Mechanics, Hydrostatics, and Pneumatics. Students may attend the classes without passing this examination.

Graduates in arts of recognized Universities are not required to submit to the matriculation examination.

Qualifications and Studies of Students and Candidates for the Medical Degree.

1st.—All Students desirous of attending the Medical Lectures shall, at the commencement of each Session, send their names and residences in the Registrar of the Medical Faculty, and procure from the Registrar a ticket of Matriculation, for which each Student will pay a fee of \$2.

2nd.—The said Register shall be closed on the 30th day of November in each year, and no tickets obtained from many of the Professors shall be received without previous registration.

3d.—No one shall be admitted to the Degree of Doctor of Medicine and Master of Surgery, who shall not have attended Lectures for a period of at least four years subsequently to the date of passing his Matriculation examination in this University, or some other University, College, or School of Medicine, approved by this University; (a certificate from his tutor or tutors that the applicant has been one year studying Medicine in the office of one or more registered Medical Practitioners, will be received in lieu of one of the four years of study—but in any case three years additional study either in this or some other approved school of Medicine will be required.)

4th.—Candidates for the final Examination shall furnish Testimonials of attendance on the following branches of Medical Education, viz.:

Anatomy,
Chemistry,
Materia Medica and Pharmacy,
Physiology,
Principles and Practice of Surgery,
Obstetrics and Diseases of Women and
Children,
Principles and Practice of Medicine,
Practical Anatomy,
Clinical Medicine,
Clinical Surgery,

Of which two courses will be required, each of six months' duration.

Medical Jurisprudence,
Botany,
Practical Chemistry

Of which one course will be required, each of three months' duration.

Provided, however, that Testimonials equivalent to, though not precisely the same as those above stated, may be presented and accepted.

5th.—The Candidate must also give proof by ticket of having attended during twelve months the practice of the Provincial and City Hospital, or that of some other Hospital, approved by this University; and also a certificate of having six months practice in dispensing drugs.

6th.—He must also give proof by ticket of having attended for at least six months the practice of a Lying-in-Hospital, approved of by the University, or of having attended at least six cases of accouchment; also a certificate from a registered Medical Practitioner, of "Proficiency in the Practice of Vaccination."

7th.—No one shall be permitted to become a Candidate for examination, or shall receive a degree, who shall not have attended at least One Session of this University, and have obtained from it the tickets for one full Course of all the branches included in its curriculum.

8th.—Courses of less length than the above will only be received for the time over which they have extended.

9th.—Every Candidate for the degree must on or before the 15th day of March, present to the Dean of the Medical Faculty testimonials of his qualifications entitling him to examination, and also a Thesis or inaugural dissertation, written by himself, on some subject connected with Medical or Surgical Science. He must at the same time deliver to the Dean of the Faculty the following Certificate:

HALIFAX, _____ 18

I, the undersigned, being desirous of obtaining the Degree of Doctor of Medicine and Master of Surgery, do hereby declare that I have attained the age of twenty-one years, (or if the case be otherwise, that I shall have attained the age of twenty-one years before the next graduation day. [Signed.] A. R.

10th.—The trials to be undergone by the Candidate shall be:

(1.) The private examination of his Thesis as evidence both of Medical and general acquirement, followed [if approved] by its public defence.

(2.) A general written and oral examination on all the branches of Medical and Surgical Science.

(3.) The Clinical Professors shall conduct the examinations of their classes at the bedside, submitting to them cases for diagnosis and treatment in the wards of the Hospital; they shall also, in estimating the standard of members of their classes and the number of marks to be awarded, take into account the regularity of their attendance and the diligence and care they have evinced in reporting cases.

These examinations will be divided into primary and final, the former comprehending the branches of General Anatomy, Chemistry, Materia Medica, Physiology, and Botany or Zoology; the latter, those of Practice of Medicine, Surgery, Surgical

Anatomy, Obstetrics and Medical Jurisprudence. It will be optional with the student to present himself for the primary examination at the end of the third session or the third year.

11th.—The following Oath or affirmation, will be exacted from the Candidate before receiving his Degree:

SPONSIO ACCADEMICA.

In Facultate Medicinae Universitatis Dalhousianae—

Ego, A—— B——; Doctoratus in Arte Medica titulo jam donandus, Sancto coram Deo cordium scrutatore, spondeo, me in omnibus vixi salutem, perseverantem, tum porro artem medicam, caute, case et probe exercitaturum; et, quoad in me est, omnia ad aegrotorum corporum salutem conducenda, cum fide procuraturum; que denique, inseri medendum, visa vel audita sere convensit, non sine gravi causa vulgaturum. Ita puerum vixi spondenti adsi: Nunquam.

12th.—The Fee for the Degree of Doctor of Medicine and Master of Surgery shall be twenty dollars, to be paid by the candidate before examination, together with a Registration Fee of one dollar.

N. B.—Board may be obtained at from \$12 to \$15 per month.

Graduates and Students.

GRADUATES OF 1871 AND 1872.

NAME.	RESIDENCE.	THESES.
ROBERT BUTCHLAND,	River John, Pictou Co.	The Pox Canada.
CHAS. H. E. DEWOLF,	Dorchester, N. S.	Surgical Anæsthesia.
CHAS. W. HILTY,	Bridgeport, Annapolis, N. S.	Amicriusibus.
Wm. McKAY,	Richmond, C. E., N. S.	Orbita Dropsy.
ELIZAB. McMILLAN,	Pictou Co., N. S.	Alcohol.

The following gentlemen passed the primary examination, which includes Anatomy, Chemistry, Materia Medica, Institutes of Medicine and Botany :

A. W. H. LINDSAY, Halifax.
HUNTER E. MCKAY, Truro.
WILLIAM S. MUIR, Truro.
DONALD CHURTON, Long Point.
DONALD A. CAMPBELL, Truro.

STUDENTS OF 1872-73.

BROWN, W. F.	Monquodolot
Boss, All.	P. E. Island.
Blairhard, R. L.	Truro.
Balson, G. A.	Annapolis.
Bushman, J. L.	Cape Breton.
Banks, J. A.	Winnit.
Campbell, D. A.	Truro.
Cox Robinson,	Saxwich.
Chisholm, Donald.	Long Point.
Giles, Alexander.	Cape Breton.
Lindsay, Valentin A.	Bay deChaleur.
Linton, Muger.	Truro.
Lindsay, A. W. H.	Halifax.
McMillan, Hugh.	Halifax.
MURRY, J. H.	Morganish.
MAR, W. S.	Truro.
McLEOD, M. C.	Marquise.
MILNE, S. S.	Annapolis.
Milbrantse, Fred.	West Indies.
MORSE, Edmund.	Leedsbury.
Meek, Jas. A.	Cornwallis.
McDonald, John.	Whyacumish.
McKay, D. R. C.	Truro.
RYAN, THOS. P.	Halifax.
Stuart, Arthur.	Cornwallis.
Stewart, John.	Whyacumish.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

WEDNESDAY, APRIL 30, 9 A.M. TO 1 P.M.

LATIN.—FIRST YEAR.

CICERO: FIRST ORATION AGAINST CATILINE.
VIRGIL: AENEID, BOOK X.

PROFESSOR JOHNSON, M.A. *Examinee.*

1. Translate:

6. Quamdiu mihi consili designato, Catilina, insidiatos es, non publico me proscilium sed privata dilectio defendi. Quam proximo comitio consularibus me consilium in campo et competitorum meo inserebatur voluisti, compressi tuos nefarios conatus anteaquam praesidio et copis, nullo tumultu publice concitato; denique, quotiescumque me petisti, per me tibi ostendi, quamquam videbam perniciem meam cum magna calamitate republicae esse conjunctam. Nunc jam aperte republicam universam petis: templa deorum immortalium, sacra urbis, vitam omnium civium, Italiam denique totam ad exitium et vastationem vocas. Quare quoniam id, quod est primum et quod hujus imperii disciplinaeque majorem programam sed facere non debet, factum id quod est quod est avertendum laetitia et ad communem salutem urbis. Nam si te inserebatur, residet in republica reliqua conjurationum monas. Sin tu, quod se famulatum hortor, exieris, exhaerietur ex urbe tuorum consilium et perniciosa sententia republicae.

4. Tum breviter supra adpecta convexa proutur:
Alna parvis Idea deus, cui Dindyma cordi
Turigenaeque sales bijugae ad fereas leones,
Tu mihi rane pugnae princeps, in fere propinquas
Angerium, Phrygiaeque adas pedo, diva, secundo.
Tantum effatus. Et ineros recolita maelet
Matura jam hae dies, nocturnae figurant:
Principio sociis efficit, signa secunantur,
Ampic antosque agunt arnis, pugnacum parcat eo.
Jaque in conspectu Tescoro lulel et sua castra,
Stans celsa in puppi, clipeum cum deinde sinistra
Emulit ardorem.

6. Haec ubi lieta dedit, caelo se protinus alto
Midi, agens hincem nimbo succinea per auras,
Hincemque aciem et Laurentia castra petivit.
Tum dea sube cava tenacem sate viribus umbram
In faciem Aeneas—visu mirabile monstrum—
Dardaniis ornat telis, clipeoque jectoque
Dicenti adsimulat capella, dat inmensa verba:
Dat sine mento somnum, pressuraeque effingit cunctis:
Morte obita quales fama est vellare figuras,
Atq; quae sopores deludant somnia secus.

GRAMMAR.

(N. B.—Questions marked thus * are intended only for Students seeking a First or Second Class.)

* 1. Write down the Acc. and Abl. of these words and mark the quantity of all the syllables in the Abl. *pallus, mare, lingua, turbo, vir, princeps, delens, aliquid, ambo,ambo, cibus, press, es, infelix, aether.*

* 2. Decline: *Alecie, diciose, Pallas (m.), verberibus, Achilli, sculis, Idea.*

3. Compare: *Deius, palcher, vetus, dives, deterior, primum, dexter, fragi, alacer, magnificus.*

* 4. Some adjectives are compared by *major* and *maxime*, and some do not admit of comparison; give them.

5. Write in classical Latin: 111, 111 $\frac{1}{4}$, 10, 300th, March 17th.

6. a. Name the Voice, Mood and Tense of the following verbal forms and give their principal parts: *pergit, patiare, morens, matris, javit, stridentem, taedet, hauriant, scindens, parent, pater, auster, filites.*

b. Give the 2nd Sing. Present in all Tenses and Voices of these verbs, (marking quantities): *ortifico, sero, sic, audeo, adeo.*

* 7. Write down the parts of the following verbs that are found: *alo, inquam, indit, effatus, edis, salvare.*

8. Scan the first five lines of the first passages from Virgil, and give the rules for the quantities of syllables in the second and third lines.

9. Of what rules of syntax are these sentences examples:

- (Mecentius) Aere caput fulgens.*
- Dissensum agri qui fuit Ausonidum.*
- Lecti juvenes . . . ibant Sabado Trojas.*
- Soculis edict, signa sequantur.*
- Troicis rugavit Amycils.*
- Nes aliquid Rutulos contra javisse ne'andem est!*

* 10. Translate these sentences and explain some peculiar grammatical constructions therein:

- Multi propeque civitatis Roma non tam ad conservandam quam totorum consiliaeum reprimendorum causa profuerunt.*
- Dicti . . . eadem te optatissimo consilio in a. d. V. Kal. Nov.*
- Unum hoc, per, si qua res victis venia hostibus, oro.*

11. Write a short account of Catiline's conspiracy, with dates; or, give a sketch of Virgil's life and works.

12. Translate into Latin. By a right of my own, I ask of you this kindness.—All things which are the property of a woman become the property of her husband.—It is foolish to remember those things, on account of which you forget yourself.—Theodolius Superbus was the second and last of the Roman kings.—He is to be considered free who is the slave of no baseness.—The towers are higher by ten feet each than the walls.—Augustus was born in the consulship of Cicero, and in the same consulship the conspiracy of Catiline broke out.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

WEDNESDAY, APRIL 16, 3 P. M. TO 5 P. M.

LATIN AND GREEK.—FIRST YEAR.

ADDITIONAL PAPER FOR FIRST AND SECOND CLASS.

CICERO: DE AMICITIA.—DEMOSTHENES: FIRST OLYNTHIAC.

PROFESSOR JOHNSON, M. A. Examiner.

1. Translate the following passages:

a. Non quibusdam, quos audio sapientes habitos in Græcia, placuisse opinor mirabilia quædam: (sed nihil est, quod illi non persequantur suis argutis) parim flagentes esse nimis amicitias, ne necesse sit usam sollicitam esse pro pleribus; satis superque esse serum cuique rerum; alienis nimis implicari molestum esse; commodissimum esse, quam laxissimas habentis habere amicitias: quas vel adducas, quam velis, vel remittas. Caput enim esse ad beate vivendum securitatem; ipsa frui non possit amicitia, si tanquam parturiet unus pro pleribus. Alios autem dicere alunt multo etiam infamissimos, (quem locum brevior peroratrix ponit ante:) præsidii adiumentique causa, non benevolentia; neque caritatis, amicitias esse expectandas. Itaque, ut quisque minimum firmitatis habeat minimasque virtutem, ita amicitias appetere maxime. Ex eo ferti, ut muliercule magis amicitiarum præsidia querant, quam viri, et inopes, quam opulenti, et castissimos, quam bestias.

b. Sed maximas est in amicitia, superiorum parvem esse inferiori: sæpe enim excellentia quædam sunt, qualis erat Scipias in nostro, ut ita dicam, grege. Namquam se ille Philo, namquam Hærodo, namquam Mummio anteposuit, namquam inferioris ordinis amicis. Q, vero Maximum fratrem, egregium virum, omnino sibi nequaquam parvas, quod is annoset ætate, tanquam superiorum colobat suosque omnes per se esse ampliores volebat. Quod faciendum imitandumque est omnibus: ut, si quam præstantius virtutis, ingenii, fortasse consecuti sunt, important ea suis commanentibus cum proximis; ut, si parentibus nati sint humilibus, si propinquos habent imbecilliores vel mitto vel fortasse, eosque aspeant opes, eisque lesori sint et dignitati: ut in fabulis, qui aliquando propter ignorantem stirpis et generis in famulata fuerint, quom cogniti sunt, et aut deorum aut regum filii laventi, retinent tamen caritatem in pastores, quos patres multos annos esse dixerant. Quod multe profecto magis in veris patribus certisque faciendum. Fractus enim ingenii et virtutis omnisque præstantie tunc maximas capitur, quum in proximum quemque conferitur.

2. Account for the moods and cases of the following words:

persequatur, cuique, rerum, adducas, habent,—
omnibus, commanentibus, animo, honest.

3. Translate the following passages in the First Olynthiac:

a. § 2, 3.

b. § 26, 27. (Ed. Teubner.)

4. Parse the verbs in § 27.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

FRIDAY, APRIL 18TH—9 A.M. TO 1 P.M.

GREEK—FIRST YEAR.

LUCIAN'S CHARON.

1. Translate:

(a) XAF. Καὶ ἀποπέμθη, ὃ Ἴβρις, δι' ἑσέως ἀναβήσθαι ἄριστος τῶ Ἠλέω, ἢ τῶ Ὀσσοῦ; EPM. Ἄπειρ! ὦ τίς ἄν, ὃ Χάρων; ἢ ἄλλοις ἔσθις ἄγνοῦσάμενος εἶπας τοῖς ἑσπερίων ἰατροῖσι, καὶ ταῖσι θεοῖς ἐπιβόησας; XAF. Οὐκ ἄλλο, εὖ κέρως δυνάμι μου δεικνύς τὰς τῶν μετὰ τὸν ἕρπον ἔχων. EPM. Εἰκότως ἰδοῦναι γὰρ εἶ, ὃ Χάρων, καὶ ἄφρατα πικρῶς; ἢ δὲ γυνώσκεις ὄψων ἀπὸ θεοῦ στυγίῳ αἰτίῳ ἔσθι ἄριστον ἰατροῖσι τῶν αἰσάντων, οἷον ἰατρίῃ συντίθει τὰ ἔργα καὶ θάνατον, εἰ σοι ταῦτα πικρῶτα αἶμα δυνά, τῶ Ἄρταρα ἀποδέξαι αἰδῶσι, ἢ τῶν πάλαι αἰτίῳ, τίς ἄν ἔσθις, ἔσθῃς ἔσθι; ἄφρατα; Ἀποτίεις δὲ ἴσως καὶ τοῖς ἑσπὶ ἀδελφοῖς πέρι, τῶ Ἠρακλῆος, ὃς θεοφύλαξ τῶν αἰτίῳ ἰατροῖσι τῶν Ἄρταρα, καὶ ἀνακρίσας πέρι ἄλλων τῶν ἔσθῃς, ἐπιτίθει ἰατροῖσι τῶ φερτίῳ; XAF. Ἀποῖα καὶ ταῖσιν εἰ δὲ ἀποθῆ ἔσθι, εὖ ἄν, ὃ Θεός, καὶ οἱ μετὰ τὸν εἶδη. EPM. Ἀναβήσθαι, ὃ Χάρων, ἢ τίσιν γὰρ ἔσθις ἐσπὶ ἰατροῖσι ἰατρίῳτα ἴα.

(b) XAF. Ὅτι εἶν ἰατροῖσι ἀποπέμθη τοῖς ἰατροῖσι, καὶ χρίσας πέρι; οἱ δὲ καὶ ταῖσι εἰσάσας πέρι τῶν χρίσας, καὶ τῶν τῶν ἰατροῖσι, αἰσάντων τῶ τῶν εὖ πικρῶς δύνανται εἶπας, καὶ εἰς τὰ ἰατροῖσι εἶπας καὶ μετὰ τῶν, ὃς γυνώσκεις, ἰατροῖσι; EPM. Οὐκ αἶμα, ὃ ταῖσι, τῶ ταῖσι ἐσπὶ τῶν ἰατροῖσι ἀποπέμθη. Ἐ εἰς τῶν ἰατροῖσι ἀποπέμθη; εἰσάσας ἰατροῖσι μόν, ὃς αἶμα π, ταῖσι εἰσάσας τῶ αἰσάντων, καὶ τῶν αἰσάντων, τίσιν δὲ ἀπὸ τῶν ἰατροῖσι εὖ μετὰ τῶν. XAF. Βούλομαι εἶν ἰατροῖσι, ἢ ἰατροῖσι, ἢ εὖ πικρῶς εἰσάσας; αἰσάντων γυνώσκεις εἰς σοι ἰατροῖσι ταῖσι, ὃς γυνώσκεις μετὰ τῶν αἰσάντων. ἄφρατα, εἰ δὲ αἶμα, εἰ δὲ αἶμα; ἢ εἰ ἀποπέμθη ἰατροῖσι ἰατροῖσι ταῖσι.

2. In what part of the verb are the following forms found, and what are their Present tenses?—*ιστάμεθα*, *ἔσθῃς*, *ἔσθῃς*, *εἶδόν*, *διεβήκατο*, *ἰατρίῳ*, *ἔσθ*, *μετὰ τῶν*, *ἀνακρίσας*, *εἰσάσας*.

3. Give some account of Lucian's life and works.

GRAMMAR

1. What forms do the following combinations assume, (a) in nouns:—*αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*. (b) in verbs:—*αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*?

2. Write the Sing. and Dat. Pl. of *γυνώσκεις*, *ἴσθῃς*, *ἔσθῃς*, *εἶδόν*, *ταφῆσαι* *Κλυθῶ*, *εἶπας*, *εἶπας*, *εἶπας*.

3. Give the Acc. Sing. and Nom. Pl. of *ταῖσι*, *ἀποθῆ*, *αἶμα*, ὃς (3), *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*.

4. Compare these Adjectives and Adverbs: *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*.

5. Write down any augmented form you know of each of the following verbs: *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*.

6. Form the Perf. Infin. Act. of *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*.

7. Give one example of *Alte Indication*, *Alte Future*, *Alte Aorist Optative*, *Imis III Pl. Perfect Indic. Passive*.

8. Write down Indic. III Sing. of the Fut. and Perf. Act., I Aorist and Part. Passive of *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*.

9. Form the II Aor. Infin. Act. of *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*.

10. What are the roots of *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*, *αἶμα*? Mention Latin words derived from some of these roots.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

TUESDAY, APRIL 22, 2 A. M. TO 1 P. M.

MATHEMATICS.—FIRST YEAR.

GEOMETRY.

PROFESSOR C. MACDONALD, M.A. *Examiner.*

1. If a straight line fall upon two parallels, the alternate angles equal, the exterior angle equal to the interior opposite angle on the same side, and the two interior angles on the same side together equal to two right angles.

Give a form of the axiom respecting parallel lines different from that which you have employed.

2. Describe a parallelogram equal to a given triangle and having one of its angles equal to a given rectilinear angle.

3. If a straight line be divided into two parts, the rectangles contained by the whole and each of the parts are together equal to the square of the whole line. (By the division of the straight line only, if you can.)

4. From C the vertex of a triangle ABC, CD is drawn perpendicular to the base AB: prove that AC^2 is less than $AB^2 + BC^2$ by 2 AB. CD.

5. Prove the 6th and 10th Propositions of the Second Book by algebra, and show how each is proved by the Proposition that precedes it.

6. One circumference of a circle cannot cut another in more than two points.

7. The straight line drawn at right angles to the diameter of a circle from its extremity, falls without the circle; and no straight line can be drawn from the extremity between that line and the diameter so as not to cut the circle.

8. The angle in a semicircle is a right angle; the angle in a segment greater than a semicircle is less than a right angle, and, in a segment less than a semicircle, greater than a right angle.

9. If AB, the side of a regular Hexagon inscribed in a circle, be divided in C, so that $AB \cdot BC = AC^2$, AC is the side of the regular Decagon inscribed in the same circle.

10. Make a triangle equal in area to any given four-sided figure. Apply generally the result of this Problem.

11. The sum of the squares of the sides of a trapezium is equal to the sum of the squares of its diagonals with 4 times the square of the line joining their middle points.

12. Q is the centre of a circle, and QE part of the radius: find that point in the circumference at which QE subtends the greatest angle.

13. The regular Hexagon is double the equilateral triangle inscribed in the same circle.

14. Show how to describe a regular polygon of n sides upon a given straight line; it being granted that an angle of $\frac{360^\circ}{n}$ can be accurately found.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

THURSDAY, APRIL 22^d P. M. 10 30 P. M.

MATHEMATICS—FIRST YEAR.

ALGEBRA.

PROFESSOR C. MACDONALD, M.A. *Examiner.*

1. If the numerator and denominator of a Vulgar Fraction have a common measure, the Fraction may be reduced to lower terms, e.g. $\frac{12}{18}$; prove this. Prove also the rule for the Multiplication of Fractions by operating on an example, e.g. $\frac{2}{3} \times \frac{4}{5}$.
2. Multiply $\frac{1}{2}x + y - (x + 2y)$ by $\frac{1}{3}x - 2y - (2x - 3y)$, and divide $a^2y^2 - b(a^2 + b)y + a^2b$ by $ay - b$.
3. Find the greatest common measure of $6x^3 + 11x^2 - 31x + 14$ and $4x^2 - 47x + 7$; and show that if p measures a and b , it measures also $a \pm b$.
4. Find the cube of $\frac{2}{3}x^2y^3z^4$, and then write the result with positive exponents. Also write down from your knowledge of factors the equivalent of $\frac{a^2 - b^2}{a^4 - b^4}$.
5. Rationalize the denominator of $\frac{11}{3\sqrt{2} - 17}$, and find the square root of $22 - 4\sqrt{10}$.
6. Solve the equations $7x - 2y = 14 + \frac{x}{2}$ and $7y - 2x = 32 + \frac{y}{3}$.
7. Solve, by inspection of coefficients, the equation $x^3 + 9x + 20 = 0$; and, by completing the square, $x^2 + 2x - 6 = |x^2 + 3x$.
8. Given $x + y = 7$, and $x^2 + y^2 = 91$: to find x and y .
9. If a and b be the roots of the equation, $x^2 + px + q = 0$, prove $\left(1 + \frac{b}{a}\right) + \left(1 + \frac{a}{b}\right) = \frac{p^2}{q}$.
10. A certain boat's crew pulls 9 strokes to 8 of another boat's crew; but 79 strokes of the latter are equal to 96 of the former. Which of the two crews is the faster, and what stroke could they give the other in a mile race, so as to come in equal?
11. Taking the usual notation, find the sum of n terms of a Geometrical series, $r < 1$: if the series be infinite, deduce the limit of its sum; and apply the result to the interminate decimal, $\overline{35}$.
12. If any term of an infinite Geometric series, $r < 1$, be $\frac{m}{n}$ times the sum of all that follow, $r = \frac{m}{m+n}$.
13. Prove, by algebra, that the Geometric mean is greater than the Harmonic mean between a and b , and that, if of the quantities a, b, c , any two are greater than the third, then $2(a + b + c + bc) > a^2 + b^2 + c^2$.
14. Three times a certain number increased by 7 is not less than 24; also, 4 times the same number diminished by 5 is not less than 31. Find the number.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

MONDAY, APRIL 21, 9 A. M. TO 1 P. M.

RHETORIC.

PROFESSOR DEWILL, M. A. *Examinee.*

1. Enumerate the chief writers on the subject of Rhetoric, and state the characteristics of each. Define Rhetoric and state the general divisions of the subject.
2. Give examples of good and faulty use of new words. What is meant by Provincialisms? Define Unity, and show how it is most frequently violated.
3. Define Rhetorical Harmony. What are the most frequent violations of Elegance in words? Give examples of resemblance between sound and sense.
4. Define Anaphora and Parallel, and point out their respective importances in literature. Define and illustrate Irony, Sarcasm, Epitaph Allegory, Fable, Parable.
5. Explain the province of Rhetoric in reference to Argument. Explain Argument from Cause to Effect. Define and illustrate Verbal Abuse. In Argument from Testimony what things are to be considered?
6. Mention the chief sources of the objective Sublime. Explain what is meant by the Classical and the Romantic in literature.
7. There are various kinds of Description. Explain Concurrent Streams, Retrospect, and Summary, in Narrative. In Exposition explain Example, Illustration, Definition. Define Debate. Give brief outline of the arguments used by Riches and Demosthenes.
8. What are the earliest traces of the Teutonic race in Britain? Give examples of Greek words and terminations in the English language. Give Professor Marsh's estimate of the proportion of Saxon to Latin words in English writings.
9. There were two classes of declensions in Anglo-Saxon, of which traces remain in English. Account for the forms He, His, Him, Her, It. Write out inflections of *sece* that. Explain the article *a* — *an*.
10. Account for the various forms which enter into the conjugation of the English verb *to Be*. Explain the force of the suffixes in the following words — *hostlers, wocom, confest, childsool, drucked, knowledge, womes, karked.*

DALHOUSIE COLLEGE AND UNIVERSITY,

HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

WEDNESDAY, APRIL 16, P. A. M. TO P. M.

LATIN.—SECOND YEAR.

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

PROFESSOR JOHNSON, M. A. *Examines.*

1. Translate:

a. Ad hoc audientia eum, circumfusa paulatim multitudinis, permixta sensit aucti populi concitium, rupto primæ consensio facta, pressuram responsam daretur, arguitur auribusque oratio ex publico privatorum in forum collata in lectum ad id raptim fatur. conspiciens, eodem plerique amant ipsi præcipuerunt. Quoniam ex patre se trepidatio totam urbem pervasisset, alius insuper tumultus ex arce audivit. Terris diu quassata procedit: perque ruituræ ejus soboro Pacorum impetu facta quæ signum imperatorii dedisset audientia stationibus custodibusque solitis hostium esse urium, non concipiendum in tali occasione ratus Hinnibal totis viribus aggressus urbem munito cepit, fidem dato, ad omnes suberes inarbitrarentur. Quod imperium crudelis, eccitiam prope necessarium cogitatio ipso evocata est. Cui cæcis parvi putine ex la, qui aut incedit cum conjugibus ac liberis domos super se ipsos ceterentaverunt, aut armati nullam sane firmam pugnam, quam morientes fecerunt.

b. Solvitur arctis hinc gratia vico et Favoni,
Trachurque siveat machine curatis.

Ac neque jura statibus gaudet pecunia, aut arator igni;
Nec præta rancæ alibiunt putris.

Jan Cytherea chorus ducit Venas, imminente Luna:
Juncatque Nymphe Gratias deoatæ

Altæno terram quatant pede; Æm graves Cyclopum
Vulcanus ardens lra effluens.

Nunc dicit aut stridit silicium equat impellit myrto,
Aut fere, terras quem ferant solute.

Nunc et in anubris Favos dexta lumine lucis,
Ses poscat agna, sive malit hæc.

Pallida moes æquo pelat pede pauperum tabernas
Regemque totos. O hæcæ Sexti.

Vitis summa levis spes, nas vetat inchoare longam.
Jam se perunt mox fulmineque Massæ,

Et demum exilis Fluteia, quo simul maris,
Nec regna vini sortire talis.

Nec tamen Lyciolum mirabile, quo calet juventas
Nunc amnis et mox virgines tepunt.

2. Translate into Latin:—

When P. Scipio had thus spoken, he sent Jugurtha away with a letter which he was to give Mithras. In contents were as follows: "The bravery of your Jugurtha in the war with Numantia was by far the greatest; which I well know I'm pleased to you. He is dead so on account of the war; we will strive to the utmost of our power, that he may be so also to the Senate and the Roman people. I congratulate you indeed by reason of our friendship: you have a man worthy of yourself and his grandfather Masinissa.

3. Point out the principal and subordinate clauses in the sentence beginning "perque ruituræ," and explain why different constructions are

found after "signum dedit" and "signo dato." Give the rules for the construction of "cum enim parvi putine."

4. Explain the allusions in the following passages:

a. Quid late, et maxime
Filiæ dicunt Theidæ sub hericæis Trejus
Favos.

b. Nec regna vini sortire talis.

c. Massæsi cæcis alio.

d. Vix Hægæam se trifidam
Pegam expedit Chimeræ.

5. Write short notes on the situation of Syria, Dacia, Tempe, Cyclades, Corinth, Arceceum, Hydrunt. What epithets are applied to them by Horace?

6. Scan the first four lines of the second extract: and give a scheme of the Æolic stanza.

7. How is the date of Horace's birth fixed? Describe briefly the chief incidents in his life.

8. (a.) Write down the Acc. and Abl. Sing. and Gen. Pl. (if these cases are used) of—*primores, vultus, liberis, senex, putera, vice, mox, Hæcæ, domus.* (b.) Decline: *heros, Ulysses, Tempe, Anio, pelagus, Prometheus.*

9. Give the principal parts of: *quatant, urit, dæcet, poscat, sortire, amittit, morlet, pacat, pectat, fidit, inicat, amens, roinet, cotegat, deænat, placemat.*

10. What particles are used in asking direct and indirect questions? Distinguish their use. When is *et* followed by the *Inf.* and when by the *Subj.*? Translate into Latin in all possible ways: The Ambassadors came to beg for peace.

11. Turn into *æolic verse*: *Fluereant (Alpe) alvices Tyrenæ jugis, Nullas profecto terras caelum contingere, nec insuperabiles humano generi esse. Alpe quidem habitat, colit, gignere, alere dominantes pervias parvis esse, curatissimas in vitiis nos ipsos, quos erant, legatos nos penitus suble me clauso Alpe transgressos.*

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

FRIDAY, APRIL 18TH:—9 A.M. TO 1 P.M.

GREEK—SECOND YEAR

HERODOTUS: B. I., §§ 95-130. HOMER, ILLAD, B. X.

1. Translate:—

(a) Ἐπεί τε δὲ, τῆ ἄρα γενεῆς γενεῆς τὸ δαιμόνιον παρέθηκεν αἰ τὸ ἄλλο
λατρίωνος καὶ δ' Ἀργείων, οὗτοι μὲν ἄλλοι καὶ αὐτῷ Ἀστυγίῃ παρεθέσαντο
ἡμίονοι ἐπιπέλοι μολόων κύνων, Ἀργείων δὲ τοὺ παῖδας τοῦ ἑωυτοῦ τῶν
αἰετῶν τε καὶ ἄρτων χοίρων τε καὶ κύνων εἰ ἄλλα πάντα ταῦτα δὲ χοίροι
ἕκαστα ἐστὶ καὶ αἰετὸν κατακαλιέμενον· ὃς δὲ τῷ Ἀστυγίῃ ἰδόντι εἰς Ἰσρα τῆς
λαφῆς, Ἀστυγίῃ ἀπέρι μιν εἰ φησὶν τε τῆ θύκῃ; παρήκον δὲ Ἀστυγίῃ καὶ
αἰετα φέροντα παρήκον, οὗτοι γενεῆσιν, ἦν ἀπὸ τῶν τοῦ αἰετοῦ κατακαλιέμενον
λατρίων καὶ τὰς χελίας καὶ τοὺς πόδας, Ἀστυγίῃ δὲ ἔδιδον προσηύχοντες
ἀποκαλιέμενον τε καὶ λαλοῦν τὰ βελόων αἰετῶν· παθόμενος δὲ δ' Ἀστυγίῃ καὶ
ἀποκαλιέμενον ἄρ τοῦ παῖδος τε λατρίων, ἦν δὲ αἰετὶ Ἰφιδάμῃ ἕκαστα τε
ἑωυτοῦ γαστῆρ· ἕρπον δὲ αἰετῶν δ' Ἀστυγίῃ, εἰ γαστῆρ ὄνει ἔργων κύνων
βελόων; ὃ δὲ καὶ γενεῆσιν ἕκαστα καὶ ἄρτων εἶναι τοῦ ἄν βασιλέως Ἰσρα,
οὕτως τε ἀμφοτέρων, καὶ ἀνατῆλον τὰ λατῶν τῶν κύνων, ἦν ἕκ τῶ αἰετῶ
αἰετῶν δὲ Ἰφιδάμῃ, ὃς ἐπὶ ἑστίων, ἔδιδον ἕκαστα τὰ πάντα.

(b) Δαιμόνων αὐτῷ ἕρπον βορῆ ἀγαθῆς ἀστυγίῃ
"εὐκλείης νῦν καὶ ἑμῶν, Διὸς τέκος· Ἀστυγίῃ.
στυγίῃ μιν, ὃς ὄνει παρὰ δὲ ἕρπον γαστῆρ δὲ
τε θύκῃ, ἕκ τε πρὸ Ἀστυγίῃ ἕρπον γαστῆρ ἕρπον,
τοῖς δ' ἕρπον ἕρπον γαστῆρ ἕρπον Ἀστυγίῃ,
αἰετῶν δὲ μολόων μῖνον ἕρπον κατῆρπον
αἰετῶν· ἀπὸ ἕρπον μολόων μῖνον ἕρπον ἕρπον
αἰετῶν, ἕρπον ἕρπον, ἕκ τῶ ἕρπον ἕρπον.
ἕρπον μιν ἕρπον ἕρπον καὶ με φέροντες.
καὶ δ' ἐπὶ ἕρπον ἕρπον ἕρπον, ἕρπον ἕρπον,
ἕρπον ἕρπον, ἕρπον καὶ ἕρπον ἕρπον ἕρπον
ἕρπον τῶ ἕρπον ἕρπον ἕρπον ἕρπον."
ἕρπον ἕρπον ἕρπον Διὸς κατῆρπον ἕρπον,
αἰ δ' ἕρπον ἕρπον Διὸς κατῆρπον ἕρπον,
ἕρπον ἕρπον ἕρπον ἕρπον καὶ ἕρπον ἕρπον,
ἕρπον ἕρπον, ἕρπον ἕρπον, ἕρπον καὶ ἕρπον ἕρπον.

2. What are the Attic forms corresponding to δας, τῶν, ἑῶν, ἑῶν, καί,
ἀν, ἐί, αἰ, αἰδέσθαι, ἴδω, ἴδω, ἴδω?

3. Write down the Attic and Epic forms of the Gen. Sing. and Dat. Pl. of βασιλεύς, τοῖσδε, οὖν, ἰστέον, πέλιος, ἄφρη, εἶσα, ἄρα, παῖδες, ἐγὼ.

4. Compare πρότερον, μέλα, αἰθέρας, ἄρρη, ἰστέον, ἰγθύς, φίλος, ταχέως.

5. Form the Iterative Imp. of ἰστέον: the Ionic II S. Imp. Ind. of γράσκω, ἔρδωμαι, ἰστέον, εἶμι: the Epic II Aor. of πέλιος, ἄφρη, ἰγθύς: the Epic Inf. of εἶμι, εἶμι.

6. Parse, giving their principal tenses: μετόθεν, ὀπίθην, βελόων, πεποῦσθαι, ἀκαλίθ, στυγίῃ, ἕρπον, εἶσα, κατακαλιέμενον.

7. What is the force of the Article in Homer? What is its use in Attic Greek? When is it employed with nouns of individuals? Distinguish τῶν κύνων—τῶν ἕρπον. ἕρπον—δὲ ἄλλοι: αἰετῶν—αὐτῶν τῶ βασιλέως—τῶ αἰετῶ βασιλέως.

8. What relations does the Accusative express in Greek? Give one example of each. What verbs are regularly followed by two Accusatives?

9. What adjectives and adverbs are followed by the Genitive? Distinguish the meanings of the cases employed to express relations of time.

10. Translate into Greek:—
The barbarians ravaged Aetion, and after this laid siege to many cities of Greece.
They came straight towards the city without the knowledge of their parents.
Homer is justly named the king of poets.
The king having no confidence in his numbers did not remain there many days.
Neither good nor bad men escape the notice of the Gods.
When Piræetes died, Cyaxares, the son of Phraortes who was the son of Deioces, received the kingdom.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

TUESDAY, APRIL 22ND, 9 A. M. TO 1 P. M.

MATHEMATICS.—SECOND YEAR.

GEOMETRY AND MENSTRUATION.

PROFESSOR C. MACDONALD, M.A. Examiner.

1. If the vertical angle of a triangle be bisected by a straight line which meets the base, the segments of the base shall have to one another the same ratio that the sides of the triangle have; and conversely.
2. Find a third proportional to two given straight lines.
3. Similar polygons may be divided into the same number of similar triangles, having the same ratio to one another that the polygons have; and the polygons have to one another the duplicate ratio of their homologous sides.
4. From C, the vertex of the triangle A B C, C D is drawn perpendicular to the base: prove $AB : BC + CA :: BC - CA : BD - DA$.
5. From P, a given point, a line P Q is drawn cutting a line X Y, given in position, in the point Q, so that $BQ = 2PR$: find the locus of Q.
6. Construct a triangle equiangular to a given triangle, and having the sum of its sides equal to given line.
7. The diagonals of a parallelogram, intersecting at angle 60° , are 15 and 18 feet respectively. Find the area.
8. What will it cost to cover a hemispherical dome of 28 feet radius with sheet lead at 15d per yard?
9. Find the surface, not including the base, of a square pyramid, each side of base being 12 ft, and altitude 6 ft.
10. In Books of Mensuration there are usually given Tables of the Areas of Regular Polygons. Give and prove the Rule for the use of such Tables.
11. The Moon's apparent semidiameter being $15'$ and her distance being about 60 times the Earth's radius: find her diameter.
12. A cylinder weighs twice as much as a cone of the same material, and the radius of its base = $\frac{1}{2}$ that of the cone. Shew that the height of the cone = $\frac{2}{3}$ that of the cylinder.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1878.

TUESDAY, APRIL 22ND, 7 P. M. TO 530 P. M.

MATHEMATICS.—SECOND YEAR.

TRIGONOMETRY AND ALGEBRA.

PROFESSOR C. MACDONALD, M.A. Examiner.

1. Find the arithmetical values of \sin , \cos , &c., of 45° .
2. Write down the values of the six circular functions of the following angles; 60° , 90° , 180° .
3. Prove $\sin(180^\circ - A) = \sin A$, $\cos(180^\circ - A) = -\cos A$; prove also $\sin(90^\circ + A) = \cos A$, $\cos(90^\circ + A) = -\sin A$.
4. Assuming the values of $\sin 2A$ and $\cos 2A$ in terms of A , find the values of $\sin 3A$, and $\cos 3A$.
5. Given the two sides, a and b , of a triangle ABC , right angled at C : show how the angles and hypotenuse are found.
6. Explain the use and derivation of the formula
$$\log \tan \frac{1}{2} A = \frac{1}{2} \left\{ 29 + \log (s - b) + \log (s - c) - \left[\log s + \log (s - a) \right] \right\}$$
7. Prove the formula, $\cos \frac{S}{s}$ and $R = \frac{abc}{4S}$, explaining the symbols used.
8. Given "Lat: and Long: from," the ship's course, and the distance run: find "Lat: and Long: in:" by the method of *mid-latitude*.
9. Expand $(1 - x)^{\frac{1}{2}}$ by the Binomial Theorem: and hence find the cube root of 62, approximately.
10. The number 3256 is in the septenary scale ($r=7$): find the equivalent number in the duodecimal scale ($r=12$). Show also that any number can be expressed by the sum of a series of integer powers of the number 2.
11. Prove the formula in Compound Interest, A (the amount) $= PR^t$, and adapt it to the case of half-yearly payments, writing the logarithmic equation in each case.
12. The number of combinations of 2s things, 3 together, is 24 times as great as that of the combination of s things, 4 together: find s .
13. Some persons have thought that, in playing games of chance for money stakes "Martingale" is a sure method to win. Exhibit the conclusion of this opinion.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

SATURDAY, APRIL 26, 3 P. M. TO 6 P. M.

SECOND YEAR—EXTRA.

PROFESSOR C. MACDONALD, M.A. Examiner.

1. If a solid angle be contained by three plane angles, any two of these together shall be greater than the third.
2. Through a given line which meets a given plane, to draw a plane making the least possible angle with that plane.
3. Find in Circular measure the dip of the horizon for an elevation of 40 feet above the level of the sea; show how this can be reduced to Gradual measure. In what way does the dip of the horizon affect the apparent altitude of a heavenly body observed at sea?
4. If $x = a$ and $y = b$, are simultaneous integer values of x and y in the equation, $ax + by = c$; then all the integer values of x and y are expressed by the formula $x = a - bt, y = a + at$, where t is any integer whatever.

5. Show that
$$2 \log x = \log (x+1) + \log (x-1) + 2M \left(\frac{1}{2x^2-1} + \frac{1}{2(x^2-1)} + \&c. \right)$$
 to any base, if M be the modulus for that base.

6. O is the centre of the circle described about the triangle ABC , and OA meets BC in D ; prove $D O \cos (B - C) = A O \cos A$.
7. If two circles, radii a and b , touch each other externally, and r be the angle between the two common tangents, prove

$$\sin r = \frac{4(a-b)\sqrt{ab}}{(a+b)^2}$$

8. The area of a regular polygon of $2n$ sides inscribed in a circle is a mean proportional between the areas of the regular polygons of n sides, inscribed in, and circumscribed about, the same circle.
9. Show how to find the present value of an annuity, payable so long as either of two persons, aged a and b years respectively, shall live.
10. Four cards are drawn by chance from a pack of cards (52, of which 16 are court cards). Show that the odds are nearly 4:1 that one at least is a court card.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

JUNIOR CHEMISTRY CLASS.—SECOND YEAR OF ARTS COURSE.

FRIDAY, APRIL 25TH, 1873, 9 A. M. TO 1 P. M.

PROFESSOR LAWSON.....Examiner.

1. One atom of Bismuth is said to be equivalent to three atoms of Sodium, and one atom of Calcium to two atoms of Sodium. Explain the meaning of these statements.
2. Describe how you would prepare Iodine from Potassic Iodide, and explain your process by means of symbols. Describe properties of Iodine by which you could distinguish this element from Bromine.
3. Why is our atmosphere considered to be a mechanical mixture of Oxygen and Nitrogen, and not a chemical compound of these two gases? Describe experiments which you would make in order to show the presence of Oxygen and Carbonic Acid, respectively, in Common Air.
4. Describe how you would prepare Nitrate of Silver. Why is Silver called a Monovalent metal? How would you detect Silver in an aqueous solution.
5. How would you ascertain whether a white crystalline substance is Boenic Acid?
6. What evidence is there tending to show that the salts of Ammonia contain the radical Ammonium?
7. Explain the chemical analogies subsisting between Phosphoretted Hydrogen Gas and Ammonia.
8. A piece of bread is suspected to contain Sulphate of Copper. How would you test the bread for this impurity?
9. How would you prepare Chlorine? and how do you explain your process? If one bottle contained Chlorine gas and another Bromine vapour, how could you distinguish the two substances from each other? Why can Chlorine not exist free in nature?
10. Explain, by means of symbols, the formation of Nitric Acid from Saltpetre and common Sulphuric Acid. You prepare Hydrogen by the action of Zinc upon dilute Sulphuric Acid: why cannot Hydrogen be prepared by the action of Zinc upon dilute Nitric Acid? Explain what happens when Concentrated Nitric Acid is placed in contact with a solution of Potassic Hydrate.
11. Explain what is meant by the term "Molecular weight." One molecule of Ammonia consisting of one atom of Nitrogen and three atoms of Hydrogen, what is the molecular weight of Ammonia?

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

WEDNESDAY, APRIL 16, 9 A.M. TO 1 P.M.

LATIN—THIRD YEAR.

HORACE: SATIRES. BOOK I. 3, 4, 5, 9.—TERENCE: ANDRIA.

PROFESSOR JOHNSON, M.A. Examinor.

I. Translate:

Primum ego me horum doleris quibus esse poetas,
Excusam nomen. Neque enim concludere vorum
Dixerit esse satis, neque si quis scribit, ut nos
Seruati propitiam, hunc poete esse poetam.
Ingulatum cui sit, cui mens detinetur, atque os
Magna conasteram, dei nominis bajus loquor.
Hic quo quidam comedia nosse verena
Erat, quiescere; quod acer spiritus in vis
Ere verbis, nec totus licet; nihil quod pede certo
Diffari conuenit, sed me necesse.— At pater arbiter
Sacer, quod iudicatis neque huiusmodi ausus
Filiis exorem graui cum dote reuocat.
Ehnius et, magnum quod dedecus, ambages ante
Noctem cum furtibus. Numquid Pompeius tuta
Audiret ludum, potes si vixeret? Ergo
Non satis est parvi verum perhibere verba,
Quam si dissolvas, quibus stannochlor sodum
Qua personam pectus patet. Hic, ego quae nunc,
Olia cum scripsit facilius, triplice si
Terrepta cuncta modesto, et quod pater ostendit verbarum est
Puericis factis, praeposuit utilia prima,
Non, ut si solvas, Postquam discouita tura
Bell' ferratus postes portaque retrahit,
Iuuenis istum disiecit morsa potest.

A. *My.* Nihilne esse propitiam enipiam? *Di.* vestram filium:
Suntam bonum esse heri pateri hunc Pamphilem,
Amicum, amatorem, virum in quocum loco
Paratum: verum ex se tunc misera quem cepit
Dolerem: felle hic sicut mull est, quare ille boni
Sed Deus exi. Mi haec quid istuc obscuro est?
Quis potes puerum? *Da.* Mysi nunc opus est tra
Mili ad hanc rem exprobrata memoratone asuta.
My. Quisnam incipit? *Da.* Accipe a me hanc oculi,
Alcme ante nostram puerum appon. *My.* Obsecro
Huius? *Da.* Ex ira hinc sume verbenas tibi
Atque sui subditerna. *My.* Quamobrem ille toto non facti?
Da. Quis si forte opus sit ad heram iurandum nihil
Non apponit ut liquore possim. *My.* Intelligo:
Nunc sume collige in se istuc iurandi uale?
Da. Move facis te, ut quid agam porro intelligas.
Pr. Jupiter. *My.* Quis est? *Da.* Sponsa pater interuenit.
Requid quod condium pelum inceneram.
My. Nescio quid carcer. *Da.* Ego quoque hinc ad dextera
Vestris me assidulo: tu ut subteritas
Destitit obsequio opus sit uerbis vilo.
My. Ego quid agas tibi intelligo: sed si quid est
Quid mea opus esse vobis, aut tu plus vides,
Mancos, ne quid vestrum auocet commedum.

2. Translate into Latin—

When Caesar after landing his army and choosing a proper position for his camp learned from the prisoners in what places the enemy's forces had escaped, leaving two cohorts at the sea-side and three hundred cavalry to protect the vessels, he set out against the enemy in the third watch. Having ascended by night about twelve miles, he came in sight of the enemy's forces. They advanced to the river with their horsemen and chariots, and from the higher ground began to check our soldiers and to engage in battle.

3. a. Fill up the ellipsis in the sentence beginning "Hic, ego quae nunc" (1. a.), and point out the principal and subordinate clauses.

b. When is the construction "Hic quo propitiam" (1. 5.) employed, and how may the same idea be otherwise expressed.

c. Explain the construction of "idem" "mull," "homo," "a sicte opus sit ad heram iurandum nihil Non apponit?" what other reading has been suggested in this clause?

4. a. Decline: *Chrysis, Chryses, ille, eujus, actu, verboribus.*

b. Name the following verbal forms and give their principal parts:—*perpeti, reperi, arresi, excessi, resisti, resistenti, parando, opperiri, iactui, enici.*

5. a. Derive: *repas, repas, comedia, nihil, cido, personatus, imo, exasor, spectamus, sobrius, nego, nos, sedulo, integer.*

b. What words in Greek are cognate with these:—*nates, ingenium, nomen, vilo, pater, animas, tui, subterita.*

c. Give the corresponding Greek for:—*de her, ille is item, tpe so-manibus pueri:—pateris forte, fere caparo.*

6. Distinguish meters from identical accents, and give the rules for the former in Latin. What difficulty may we conceive Terence to have labour of under in his verse? What metres are employed in the *Andria*? Scan the first five lines of the second extract.

7. What testimony have we from ancient writers to show that Latin was not pronounced as spelt? How does the verse of Terence confirm that testimony? Prove that nouns in French are derived from the Accusative case in Latin.

8. How do the Prologues of Terence differ from those of Plautus? Name his plays and their originals, and give their dates. Write a short sketch of his life.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

TUESDAY, APRIL 22ND, 9 A. M. TO 12 O'CLOCK.

MATHEMATICAL PHYSICS.—THIRD YEAR.

PROFESSOR C. MACDONALD, M.A. Examiner.

1. Assuming the usual notation, prove $P^2 = Q^2 + 2PQ \cos(\angle Q)$.
2. Show how to resolve a force into components at right angles to each other; and hence show that a force has no efficacy in a direction at right angles to itself.
3. A BOD is a parallelogram, O the intersection of the diagonals. Cut out the triangle AOB, and find the centre of gravity of the remainder. What is its perpendicular distance from CD?
4. Given a lever 12 inches long, 11 lbs. weight; and at its ends weights of 10 and 4 lbs. Place a knife-edge fulcrum so that there may be equilibrium.
5. What must be the initial velocity of a body that it may ascend, in vacuo, 300 ft., and what its velocity when it has risen 100 ft.?
6. Given an inclined plane of length l , height h ; find the time a body takes from rest to slide from top to bottom; (1) neglecting friction, (2) the coefficient of relative friction being μ .
7. Prove that in a circular orbit, centrifugal force = $\frac{v^2}{r} = \frac{4\pi^2}{T^2} r$. A body, weight W , is supported against the inside of a rough cylindrical shell, which is then set rapidly spinning on its axis, and the support being withdrawn it does not fall. Find the least velocity.
8. Prove that, for the simple pendulum, the square of the number of oscillations in a given time is inversely proportional to its length.
9. A body, dropped on a plane rough, and falls again, &c. Given the coefficient of relative elasticity = e , find the whole space described.
10. In oblique impact, prove $v^2 = V^2 \sin^2 i + e^2 \cos^2 i$ and show that $\tan i' = e \tan i$.
11. The content of the receiver of an air-pump is 100 inches, of the barrel 20 inches. When the barometer stands 30 inches, find the height of the mercurial gauge in the pump after 4 strokes of the piston.
12. Define metacentre, and consider the equilibrium of a floating body.
13. A body projected from a point in a horizontal plane, when it reaches its greatest height, strikes and coheres with an equal body that has been at rest but is free to move. Find the horizontal range.
14. Prove Legendre's Theorem: F forces in equilibrium acting at a point be represented in magnitude and direction by lines drawn from that point, the point is the centre of gravity of a system of equal particles placed at the extremities of these lines.
15. The velocity with which a body should be projected down an inclined plane so as to run down the whole plane in the time it would fall down its height = $\sqrt{\frac{2}{3} \frac{h^2 - h^2}{l}}$ (h the length, h the height of plane).
16. The centre of pressure of a triangular flap, open downwards and water reaching the upper edge, is at half the depth of the apex.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

MONDAY, APRIL 21, 10 A.M. TO 1 P.M.

EXPERIMENTAL PHYSICS.—THIRD YEAR.

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

1. What is the meaning of the term *Law* in Physical Science?
2. What advantages accrue from an acquaintance with Physical laws? By what methods can the investigation of these laws be most successfully prosecuted?
3. Explain the difference between proximate and ultimate causes. Give examples.
4. Enumerate the essential properties of Matter.
5. Define *elasticity*. Describe the apparatus by which this property of matter may be experimentally illustrated.
6. What is Force? Explain the phrases "Composition of Forces" and "Resolution of Forces."
7. For what purposes are levers of the third kind especially adapted? Give examples.
8. What circumstances affect the sensibility of a balance?
9. Describe the Gyroscope. Account for its rotation round the point of support. Why does not the unsupported wheel fall?
10. Illustrate by a diagram the length of a wave, its depth and height, and its phase of elevation and depression.
 1. How can we ascertain the specific gravity of a body which floats on water?
 2. Describe the apparatus and explain the experiment by which the upward pressure of atmospheric air is exhibited.
 3. What is a Barometer? Explain the principle on which it acts. How does it indicate approaching changes of weather?

FOURTH YEAR.

1. What is Magnetism? Describe a bar magnet. What are consequent poles? How is the intensity of the magnetic force measured?
2. Explain the action of the dipping needle. What is its direction on the magnetic pole? On the magnetic equator?
3. What is magnetic variation? State the changes which this variation undergoes.
4. Explain the object and construction of the *Astatic needle*.
5. Describe Oersted's fundamental experiment in Voltaic Electricity.
6. Give Volta's contact hypothesis, and the hypothesis by which it has been very generally superseded.
7. Explain the construction of the zinc and copper battery. What are its defects? Describe Daniell's battery. What are its advantages?
8. What is an electrical circuit? An indefinite current? An open current?
9. How is the intensity of the electromotive force determined?
10. Explain the nature of external and internal resistances. Under what circumstances may the former be considered as nil?
11. Describe the Galvanometer,—the Multiplier. What is a *shunt*?
12. What is *Induction*? Under what circumstances is it developed?
13. Describe a simple magneto-electric machine.
14. To what department of Voltaic electricity has Hancock devoted special attention? State the general results.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

THURSDAY, APRIL 24, 9 A. M., NO. 1 P. M.

METAPHYSICAL AND ESTHETICS.

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

1. To what principle of our nature may be owing the first promptings of philosophic speculation?
2. To what issues may the first questions of philosophy—viz. that regarding the origin of things, be legitimately prosecuted?
3. In what way did Hincoc philosophy, and Greek speculation, respectively, transgress the boundaries of legitimate thought?
4. When led up to a first principle of existence, are we called upon to determine its nature, as regards *essence*; and yet can we refuse to concede to it the attributes of intelligence and activity?
5. Was philosophic first recognized and articulately announced, the principle of a Divine Intelligence?
6. How does the element of *nally causa*, and affect the question regarding the primal *causa*?
7. How did the Eleatics divide upon the matter of unity, and what psychological question was raised in this connection? How did the Eleatic thus provide the problems, and lay down the conditions, of future speculation?
8. Show how modern speculation is reverting to the position of Eleatic thought, and how modern savans, reviving the very questions raised by the Eleatics, and in virtue of those very questions, yet take rank with the Ionics rather than the Eleatics.
9. How may Philosophic Scepticism be shown to be the result of attempting to determine the nature of being as such, and, since we know nothing beyond the attributes of being, denying all being? Illustrate this in the history of the Ancient Sceptics, the New Academicians, and Modern Scepticism.
10. What are attributes, divorced from a substratum, and have we not to review the very questions with respect to them, which the Sceptic repudiate regarding being in such?
11. Show the importance of determinate principles on such subjects, especially with a view to modern opinion.
12. Regarding the nature of what Being, especially, are such questions discussed; but what other issues as well are involved in the discussion?
13. Show how the question of Perception is essentially an Ontological one, or involves an Ontological element. Give some account of this question.
14. Point out the Ontological element involved also in the question of Realism and Nominalism, or Conceptualism. What is the aspect of this question at the present day?
15. Classify the Emotions. Give the analysis of the elevated States, showing how Wonder, Astonishment, Admiration, and the Ethetic feeling, belong to these States.
16. Give Alison's theory of the Beautiful and Sublime, and show its accord with the theories of Burke and Cousin.
17. Classify the Desires, and show what regulative principle may be recognized among the desires themselves.
18. Besides this regulative principle, what higher principle of our nature do we recognize? What is the grand peculiarity of Conscience? In what respects is Butler's account of this principle defective?
19. What is pre-eminently the Active Power? Distinguish it from the Passional States.
20. Is the Will free, and how free?

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1875.

FRIDAY, APRIL 25, 9 A. M. TO 1 P. M.

SENIOR CHEMISTRY CLASS.—THIRD YEAR OF ARTS COURSE.

PROFESSOR LAWSON.....*Examiner.*

1. Describe and explain the preparation of Prussic Acid and of Potassic Cyanide, respectively, from Potassic Ferrocyanide. How would you detect the Iron of the last named compound?
2. Explain the conditions under which Vinous Fermentation takes place, and describe briefly the chief non-gaseous products formed in the process.
3. Sodium introduced into the flame of a Bunsen burner produces the well-known yellow line in the spectrum of the flame. If, however, the yellow light is made to pass through Sodium vapour before it can reach the prism, no yellow line is seen. Explain fully the cause of this result, and apply your explanation to other similar examples.
4. A liquid contains Potassic Chloride, Bromide, and Iodide, in solution. Explain how you would recognize these substances and effect their separation.
5. A piece of Iron Pyrites contains Iron, Sulphur, Arsenic, Antimony, and Gold. Describe how you would detect these several elements, and determine them quantitatively.
6. Describe and explain the preparation of Sodiac Carbonate from Cryolite [or from Sea Salt].
7. How do you account for the presence of Sulphuretted Hydrogen in spring water which percolates a soil rich in organic remains and sulphates, such as is found on the western coast of Norway?
8. What would happen if a mixture of Calcic Carbonate and Feldspar was exposed to a white heat?
9. Cannel coal is considered to be the product of decomposition of vegetable matter. Contrast the composition of coal with that of cellulose; and explain how you consider that the former has been produced from the latter. Support your view by the description of suitable experiments.
10. Describe the preparation and explain the constitution of Chloral. Express in symbols the decomposition of the Hydrate of Chloral under the influence of caustic alkalies.
11. Give a statement of the principle or principles of Classification of Organic Compounds.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1872.

WEDNESDAY, APRIL 23.

FRENCH.—THIRD YEAR.

JAMES LEDOUX, Req. *Examineur.*

TRADUCTION I. "L'assassin," by Balzac.

Seo article depuis l'heure où son lever jusqu'à ses accès de toux le soir, dit-on souvient à la régularité d'un pendule. C'était, en quelque sorte, un homme moelleux que le sommeil ramenait. Si vous touchiez une clopette dissimulée sur un papier, il s'éveilla et fit le mort; de même cet homme s'interrogeait au milieu de son discours et se taisait au passage d'une voiture, afin de ne pas fouler sa voix. A l'imitation de Escamoteur, il descendait le mouvement vite, et concevait tous les sentiments humains dans le mot.

II. "Le Suicide," by Rousseau.

Tu comptes les maux de l'humanité et tu dis: La vie est un mal. Mais regarde, cherche dans l'ordre des choses et tu y trouveras quelques biens qui se valent point moins de maux. Est-ce come à dire qu'il n'y ait aucun bien dans l'univers? et peux-tu confondre ce qui est mal par sa nature avec ce qui ne souffre le mal que par accident? La vie possible de l'homme n'est rien et se regardé qu'un corps dont il sem blerait délégué; mais sa vie active et morale, qui doit influer sur tout son être, consiste dans l'exercice de sa volonté.

III. "Les précepteurs," by Senbe.

Ledou (parle à la cantonade).—Non; je vous remercie, je n'ai point de mille té de valise, je n'ai point à me charger en voyage. . . . (pens) Allons Ledou, de l'entreferie j'ai fait de vous dans ma vie, je feras bien le savant. . . D'ailleurs, j'ai les premières notions; je possède je puis le dire, une certaine érudition d'antichambre, quand ce ne serait que les romans que je lisais autour du poêle lorsque j'étais laquais; . . j'ai une excellente posture et on fait de dissertation crier fort et long-temps, voilà tout ce qu'il faut.

1. *Subjunctive.* Il Explains fully, giving exs., the agreement of past part. of *avoir* and *être* with verbs. There is a class of verbs the past part. of which are always *invariable*; illustrate. Mention a peculiarity of *être* with verbs. Translate: We are thought of by our friends. The ship-wreck is commented upon.

2. *Il* I have just read an account of it." There are certain infinitival tenses; mention them with an ex. for each. Explain the use of the Infinitive.

3. *Il ne faut le croire. Il faut se le croire.* Do you find any difference between these two sentences? Explain the position of the *pron.*, and state the exception.

4. Show by exs. the difference between *qui est-ce qui* and *qu'est-ce qui*, *qui est-ce que* and *qu'est-ce que*. In what cases is *est-ce que* to be used?

5. How do you express *when* when at the beginning of a sentence, when followed by a noun, when preceded by a preposition. Write an ex. for each form.

6. *Should, would, could* are differently expressed in French. Give illustrations.

7. *Si, aussi, tant, autant.* Mention the parts of speech with which the first two, and those with which the last two are connected. In what case

can *tant* and *autant* alone be used? If the verb separates the *subj.* from the *obj.* is substituted by *what*? Ex: So prompt is death in filing these pieces.

8. The conjunction *whether* is differently expressed in the following sentences; He does not know whether he will go to England or not. Whether I read or write I doubt whether all will be successful. *As . . . so* has two forms. Give examples.

9. Name the principal conjunctives; mention some requiring the *Infinitive*, and some others governing the *Subjunctive*. Write exs. ex: *de crainte que, de crainte de, à moins que* (with the verb in the *Infinitive*.)

10. When is the *relative form* to be used? Another form might be substituted for the *relative*.

11. Write correctly the following sentences, and state whence consist the mistakes: On ne cesse pas de parler du désastre. La femme du prince qui vient de mourir était très-beaucoup respecté. Il faut s'ôt on tard le faire. Que ne le disiez-vous pas. Bien de personnes ont péri en l'eau. Qui me l'aurait hier dit! Quel que vous faites vous serez maqué.

Translate into French: "Excuse me I was, but I am no longer, and I shall never more return. Thousands of beings have had me in their power but without taking advantage of it. To some I was a friend, to others an enemy; some I have exalted, others I have humbled; to some I have given unalloyed happiness, to others remorseless misery. If thou dost remember who is the one thou hast met, and art left within a short space of time, thou wilt know also of whom thou hast taken leave for ever."

DALHOUSIE COLLEGE AND UNIVERSITY,

HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

WEDNESDAY, APRIL 23.

GERMAN.—THIRD YEAR.

JAMES LACHRY, Esq. *Examiner.*

THEMATIC I. From "Schiller," *Kampf mit den Teufeln*.

Doch streng' blickt ihr Farni ihn an
Und spricht: "Du hast es Heil' geübt
Der Math ist's, der dem Ritter ehret,
Da hast den Krieger, Götter beweiht!
Doch sprach! Was ist die erste Pflicht
Des Ritters, der für Christen steht,
Sich schändelst mit des Kreuzes Zeichen?
Und Alle rings herum erbleichen.
Doch er, mit offen Anstand, spricht,
Indem er sich erwidern solget:
Gemein ist alle eure Furcht,
Die ihr des Schmeckes würdig seiget."

II. From *Goethe's Gedichte*, by "Jahoba."

Ich wand' auf das Fennländische bogens, in das Innere geführt, mit Speer und Trank reichlich besetzt und endlich in ein Berggebäude, hoch wie ein Berg und gewandig genug, um noch drei Andere, wie' es nöthig gewesen, aufzunehmen. Da war es mir furwahr, als wär' ich in die Zeit entrückt, wo die Hängedier an der Straße saßen, und wenn ein Wanderer vorüberzog, ob verwehrt mit eisernen Ketten um ihr Dach einlöcher und an ihnen Horne bewehrten, ohne auch nur zu fragen, wo er herkäme, was er für Geschäfte treibe und wie lange er zu wohnen gedenke.

1. Explain in full the Syntax of the word *an* [1. 1st line]. Give two examples in illustration of other forms of its construction. Write the past part and the first pers. Indef. Pres. of: absolution, student, forsaken, essen, than, husband. The Captain was condemned to pay a fine.

2. What part of speech is *ist*? (1. 1st line.) How does it affect the verb? Mention other words which have a similar influence upon the verb. It was after three o'clock when the steamer struck, (struck, E.) Invert the propos. of this sentence and explain construction.

3. *Auf des Fennländische* (I). Account for its form. Mention a few participles in *at*. Give the Part. and Noun. of: *der äussere*; *der innere*; *der vordere*. Illustrate the use of: *der stehende* and *an stehende*. Compare: *hoch*, *blau*, *viel*, *nied*, *bold*, *gern*, *schick*.

4. Decline *ist* full, (Sing. and Plur.); *beruhiger Mann*; *jede* feminine Fern. (for the Plur. of this sent. prefix *alle*); *Kern* (singular Fern. such a celebrated master. (Nouns).

5. *Wen' er nicht gewohnt*. Write the same sent. with the Conj. *was* added. What would be its construction in the Condit. Mood? *Aufgenommen*: (I). Account for *zu*. When is it not used.

6. I thank you for it. The book in which you are reading. You are mistaken in this. Show how the preps. *in*, *which*, *where* and *that*, when connected with prepos. are to be rendered.

7. Write the various forms for *ob* in *there are*; show by ex. how they are to be applied. He is to learn German. Was soll das? What do you observe of the construction of these sentences?

8. Supply the following sent. and explain the three infinitives. Mehr Leute würden sich haben retten können. Name the uses of mood and

the nine regular verbs which change their root-voice in the Impf. and past part.

9. Form the genit. sing. and the plural, and give the meaning of the following nouns: *Baumstamm*, *Reisener*, *Fremdenstadt*, *Papier*, *Meer*, *Glock*, *Apfelbaum*. Write the sing. of: *Schäferschweine*, *Leute*, *Gebirgsbau*, *Feldwege*, *Mausen*, *Nachbars*.

10. *Wörter* is a very important part of speech in German. Explain fully. Translate: A French telegraph cable will be laid shortly. A house is being built. What has become of the ship?

11. Mention seven prepos. governing the Genit. the Dative, the Accus., and all those requiring two cases, giving one ex. for each of the first three cases, and two ex. for the last.

12. Translate into German: All men are alike before God. This man has lost both his children. Most of these people were saved. Tell him that he is wrong. The more one studies, the more he knows. Goethe was born in 1749. The 23rd of April, 1873. The Atlantic was so foggy Sunday with more than one thousand people on board, the greater part of whom found their death in the water. What a dreadful fact! Not one of over 3000 women could be saved. Is there anything more sad than this? Everybody thinks of it and speaks of it. What is to become of the poor people.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

WEDNESDAY, APRIL 16, 9 A.M. TO 1 P. M.

FINAL EXAMINATION FOR DEGREE OF B. A.

LATIN:—TACITUS: ANNALS, B. I.—JUVENAL: SATIRES, EL. X.
PROFESSOR JOHNSON, M. A. *Examiner.*

1. Translate:—

a. Apprehensar sibiulo minus corpes, jamque pectori raspe acceraverat, cum tandem perveniata vici Inceptum omnia. Tiliassus maula dicendi arte, nec per seditionem et turbas laudanda militem ad Casarum frenda, ali, neque veteris ad imperatoribus praesic neque pae a civo Agrate tam nova petivisse; et parum in tempore incipientis principis curas curam. Si tamen tenderet in pae tuncque quam in civitate quidem bellorum vicioris expensa averit, ear contra morem elapsi, overa fas discipline viti m-diktor? Cooverant legatos, neque coram manata daret. Aclamavere, in filius Blass tribuni legatione ex fungeret, petereque milibus mis-sionem ab selectu annis; cetera mandatoris, ubi prima provenisset. Profecti jussa, mediam omnes; sed sperbere milia, quod filius legati orator publice cause satis ostendit necessitas expressa quae per motum non obtinisset.

b. At Romae, nondam cognio qui fuiset exitis is Illyria, et legionem Germanicorum moti audito, irrepit, celsis incussio Tiberium, quod, dum patere et pobem, in aalka et inania, cunctatione fiva indidit, licentia et ferio milo, neque furum ad concitium nondam adulta necroditae occupit quae. In sumas et cypere magister imperatoris delatase cetera, ubi principum longi capiditia eundemque severitate et munificentiae summas vidissent. An Augustus fova actae totius in Germanias commere potuisse; Tiberium vigentis anni seleri in senax, verba patrum cavillatam? suis prosperum urbanas servit; nihilibus animis adhibentis sumana, ut fore paeon videt.

c. Urbs Pallao juveni non sufficit orbis:
Aeruat isle Ex angusto limbo exoril.
Ut Gyari clausas scopulis parvaque Scribo:
Quam tamen a sigillis manitae intraverit urbem,
Sarcophago ostentum erit. Mars sola facit
Quantalis siet hominem servosenti. Caudat olim
Vilitatis Athes, et quidquid Graecia exardax
Aulet in hieoria; et constratum clausus idem
Suppositumque rois solidibus saare; cretinas alio
Debeice aumer epotoque Harma Medo
Prendente, et tradidit exacta quae Sostratus ake.
Ile tamen quaks redit Salamiae velle.
In Cocnis aqae Eorum solitae servile sagillis
Ba-Barua, Anolis, rumpum hoc in carcere passos,
Issum campiditia qui vincerit Enneigaum?
Milina il sane quod non et stigmatu ligum
Credidit. Hae quicunam vellet covere deorum?
Sed qualis redit? Nempae una nave erantia
Flactibus, ac tarda per demas endera proca.
Hae talies oxtata exegit gloria poena.

2. Translate into Latin: On the taking of Syracuse, which Archimedes had long defended with his wonderful engines, Marcellus, the Roman gen-

eral, gave orders that no one should harm Archimedes. He, however,—while with his attention and eyes fixed on the ground he was drawing figures in the dust,—was asked by a Roman soldier, who with drawn sword had forced his way less the noise for the sake of making plunder, who he was. The only answer he returned was, "Don't spoil my circles." He was consequently put to death by the soldier, who did not know who he was.

3. Explain the grammatical construction of the words in Italics:

- Aut *Fabentarius* demas est *Fraxinea* parum
Quasi nunc terebin unum condidit in annum.
- Potrore *ex farvra* vivere et tres legiones misere in uram *opit-*
erunt.
- No homas quidem *invitent apulona.*
- Coepo iam *peotri* neque *acceraverit.*
- Nolum *reputo* qui *fuiset* cetera in Illyria.
- Aclamavere, ut filius . . . *legatione ex fungeret*; cetera *mandatoris.*

4. Translate the following sentences and write explanatory notes on the words in Italics:

- Im dicit *illustratum operum.*
- Nid quod populo et pelli *quadrupes* trices *suavesque*, paeori-
acua eshortum milibus singula mansum milia . . . ledit.
- Regiam summo rei paeo Germanicus, agendo *Gotharum* omni-
tam *lumenas.*
- De *Pylia*, magne si quidquam eredis *Homero*,
Exemplum vitae fuit *curiae* secundo
- Ceterum *conviva*; sequitur sua quaeque *colae.*

- Decline these nouns: *perthma*, *Lachria*, *carvae*, *sapelle*, *and*
elios, *genas*, *prorens*, *comision*, *verrex*.
- Give the principal parts of these verbal forms: *picxae*, *altum*,
litatum, *occidit*, *avertis*, *quae*, *disponit*, *fit*, *porrigat*.

5. Write in *entis* nets the passages indirectly reported in the first extract.

7. What was the real title of Augustus, and for what reasons did he choose it? What official title he combine in his own person and what powers did they confer on him?

8. Write a short account of Tacitus and his works.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1872.

THURSDAY, APRIL 11, 9 A. M. TO 1 P. M.

ETHICS AND POLITICAL ECONOMY.

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

State precisely what you understand by a principle of action. Give examples.

2. Explain the difference between *Will* and *Desire*.
3. Criticize the following statement: "We may will what we do not desire; nay, what we may have a strong aversion to."

4. Is the Deafe of Estem an original principle? Give your reasons. Illustrate its effects upon human improvement. How far is it commendable? When does it cease to be virtuous?

5. State the opinions of Libertarians and Necessitarians respecting the Freedom of the Will, pointing out carefully in what they agree and in what they differ. By what arguments do the Necessitarians endeavor to maintain their opinions? What objections are urged against them?

6. Is the belief in the connection between Cause and Effect intuitive, or the result of experience? Assign reasons.

7. How is the rectitude of an act determined? Account for the differences of Moral Judgments. Give a Definition of *Conscience*.

8. State briefly Smith's *Theory of Moral Sentiments*. Point out its defects.

9. What Ethical views place virtue in Relationship. Point out the defects of this theory.

10. Give Whewell's classification of the cardinal virtues.

11. In what does Dr. Chalmers assert that "the ancient and ablest thinkers in Moral Science place the primary fountain head of morality?"

12. Comment on the following maxim of Cicero: "With robbers we have no tie of common faith or obligation."

1. What is Political Economy? In what does it differ from Politics when the principles of these sciences conflict, which must yield?

2. By what means is Wealth accumulated?

3. What are the essential requisites of Production?

4. Mention circumstances which limit the extent to which the division of labor can be profitably introduced.

5. When is it profitable to produce an article and when to obtain it by purchase?

6. What service do merchants render to a community?

7. Why should I pay interest for the use of money?

8. Should the rate of interest be regulated by law? Assign reasons for your opinion.

9. Mention circumstances which affect the rate of wages.

10. Does utility or difficulty of attainment most extensively and frequently affect prices?

11. What circumstances modify principally the amount of rent paid for land.

12. What do you understand by "Profitable consumption"?

13. Is "Protection" a wise policy? Assign reasons;

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

TUESDAY, APRIL 22, A. M. TO 12 NOON.

FOURTH YEAR.—ASTRONOMY AND LIGHT.

PROFESSOR C. MACDONALD, M.A. *Examiner.*

1. State Kepler's three laws respecting planetary orbits, and prove that the areas swept over by the radius vector are proportional to the times of describing them.
2. Divide the planets into Interior and Exterior; and state characteristics common to each class.
3. Make a drawing to represent the celestial sphere in North Lat: so as to show the daily motion, (1) of stars that never set; (2) of stars that never rise; (3) of the sun at equinoxes and solstices, with the corresponding lengths of the day; (4) to show that the moon, about full, is longer above the horizon in winter than in summer.
4. Explain the phenomenon called the *precession of equinoxes*, and point out some of its effects.
5. What sources of evidence does Astronomy furnish respecting the velocity of light? Explain.
6. Why is a transit of Venus so important astronomically? Describe the nature of the observations.
7. Mention some methods of finding longitude at sea.
8. Given the *horizontal parallax* of sun or moon; find the parallax at any altitude.
9. Explain the *sidereal, solar, and lunar day*. (Draw a figure.)
10. Give shortly the argument from Spectrum Analysis as to the matter in and around the photosphere of the sun.
11. Give proof why, in Hadley's sextant, half degrees on the graduated limb are reckoned as whole ones.
12. From the formula $\frac{\sin i}{\sin r} = n$, find the limiting angle of emergence of a ray of light from a denser into a rarer medium. Suppose, the eye being under an expanse of still water, you look upwards; give some account of the appearance of things.

PROFESSOR WILLIAM LYALL, LL.D. Examiner.

1. What is the "Noetic" in Sir William Hamilton's division of "Pure Logic"? What does it correspond with in our course?
2. In Psychology, how did we regard mind, and what division did we propose of its phenomenal states?
3. To what modes of conceiving of mind, matter, space, time, power, are we reduced, if we derive all our ideas from experience?
4. What are the laws under which all thought is possible? How do we get the logical laws in these?
5. What are the practical processes of mind, and how do we distinguish them as such? Distinguish between classification and generalization, and give the true theory of reasoning.
6. How is inductive distinguished from deductive reasoning? Is there any true ground for this distinction, or how must all reasoning essentially be deductive? What is the peculiarity in the inductive process which has led to the distinction?
7. To what single principle may the laws of association be reduced?
8. How is memory to be regarded, and what is the peculiarity in imagination?
9. How is logic divided?
10. What are concepts?
11. How may the formation of concepts be supposed to take place? What, accordingly, is the comprehension, and what the extension of a concept? What is generalization, and what specification or determination?
12. Which of these allows of the definition of a concept, or is the concept itself? Which allows of the division of a concept, and on what principle, accordingly, do definition and division proceed?
13. What are the "five predicables" of Aristotle? A species, is the genus plus what?
14. Give the "categories" of Aristotle, and show how these may be vindicated as the highest classifications of thought. In what way does Sir Wm. Hamilton virtually include the "five predicables" without particularising them, and what is his objection to the categories?
15. What is the syllogistic process? State the laws of the extensive syllogism, and explain, or give the rationale of the several laws. Show how the laws of the intensive syllogism must be just the reverse of those of the extensive?
16. Into which of these forms of syllogism does a true reasoning process fall? What is the real nature of the intensive syllogism?
17. What are syllogisms in respect of their internal form or character, what of their extrinsic or external form?
18. Show how the fallacies are just a violation in some way of the laws of the syllogism. Show this both as regards the formal and the material fallacies—fallacies "in diction" and "extra dictionem."
19. What kind of fallacies are more properly extra-logical, and belong rather to the doctrine of method?
20. What is the object of a doctrine of method? How is the perfection of logical thought attained? Give the rules of definition, division, and probation respectively.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

WEDNESDAY, APRIL 23, 9 A. M. TO 1 P. M.

HONOUR MATHEMATICS.

TRIGONOMETRY AND CONIC SECTIONS.

PROFESSOR C. MACDONALD, M.A. Examiner.

- Given the right ascension and declination of two stars: to find their distance, and show it measured on a great circle.
- Prove the formula for "Spherical Excess," and shew its practical use in Geographical measurements.
- Prove $\cos x + \sqrt{-1} \sin x = \cos (-ix) + \sqrt{-1} \sin (-ix)$.
- Assuming Gregory's series for $\tan^{-1} x$, find Machin's series for calculating the value of π .
- Resolve $x^2 - 1 = 0$ into Quadratic factors, and find the three values of $(-1)^{\frac{1}{2}}$.
- Show that, if $\tan x = m \tan a$, and $n = \frac{a-1}{a+1}$, then

$$x = a + n \sin 2a + \frac{1}{2} n^2 \sin 4a + \frac{1}{4} n^3 \sin 6a + 5c$$
- The coordinates of a point are a and b . Find its distance from the line, $y = mx + c$.
- Find the equation to the tangent to the ellipse (centre, origin). If the tangent intersect the director in the axis of X, find the coordinates of the point of contact.
- Refer to the principal axes the curve, $11x^2 + 84xy - 24y = 0$. Show that the origin is already at the centre; and that when the origin and axes of a curve are changed, the degree of the curve is unchanged.
- The area of a parallelogram circumscribing an ellipse is constant.
- Find what the general equation $ax^2 + bx + cy^2 + dx + ey + f = 0$, becomes when the axes of X and Y are tangents to the curve. Find also the equation to the line bisecting all chords parallel to the axis of Y.
- Tangents to two concentric ellipses the direction of whose axes coincide, are drawn from P, and the chords of contact intersect in Q. Prove that if the locus of P be a straight line, that of Q will be a rectangular hyperbola.
- TP, TQ are tangents to a parabola, P and Q being points of contact: a third tangent cuts them in p and q respectively. Prove

$$\frac{T_p}{T_p + T_q} = \frac{T_q}{T_p + T_q} = 1$$
- In any conic section, whose latus rectum is l , if r and r_1 be focal distances at right angles, prove $\left(\frac{1}{r} - \frac{1}{l}\right)^2 + \left(\frac{1}{r_1} - \frac{1}{l}\right)^2$ invariable.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

FRIDAY, APRIL 25, 9 A. M. TO 1 P. M.

HONOUR MATHEMATICS.

DIFFERENTIAL AND INTEGRAL CALCULUS.

PROFESSOR C. MACDONALD, M.A. Examiner.

1. Prove that if $u = \log x$, $\frac{du}{dx} = \frac{1}{x}$; and differentiate $\frac{x \tan x}{x-1}$.
2. Prove, by Maclaurin's Theorem, Gregory's series for $\tan x$: show also that $e = 1 + x + \frac{x^2}{1 \cdot 2} + \frac{x^3}{1 \cdot 2 \cdot 3} + \dots$ &c.

If u be $f(x)$ be a maximum or a minimum, prove $\frac{du}{dx} = 0$; also that generally $\frac{d^2u}{dx^2}$ is negative in the former case, and positive in the latter. Why do you say "generally"?

4. Inscribe the greatest parallelogram in a given ellipse, and describe the least cone about a given sphere.
5. If $z = f(x, y)$, the variables being independent; show how the total successive differential coefficients may be found.
6. In $u = f(x, y, z)$ which contains n constants, explain the method by which the constants may be eliminated; and find in rectangular coördinates, an expression for the Radius of Curvature.
7. Prove the expressions for an area $\int y dx$; find the equivalent expression in polar coördinates; and find the area of the Cardioid, $r = a(1 + \cos \theta)$, between limits x and a .
8. Draw the curve, $xy = x^2 - 2ax^2$, finding the angle or angles at which it cuts the axis of X , greatest ordinate asymptotes if any, &c.
9. Find a formula of reduction for $\int \frac{x^m dx}{\sqrt{a^2 - x^2}}$ and $\int \sin mx \cos nx dx$.
10. Let a semi-ellipse spin about the major axis; find the Volume.
11. The moment of Inertia of a body with respect to an axis passing through its centre of gravity is less than with respect to any parallel axis; and if the moment of Inertia of a circular area revolving about a diameter be known $\left(\frac{\pi a^4}{4}\right)$, find the moment when it revolves round a tangent.
12. If a particle move under the force of gravity in a cycloid, its oscillations are isochronous, whatever the length of the path.
13. A and B are two equal centres of repulsive force varying as the distance inversely. A particle is placed at a distance c from the middle of the line AB ($= 2a$). Prove that the particle oscillates and find the time of an oscillation.

14. Prove that in any central orbit, $r = \frac{h}{p}$, p being the perpendicular or the tangent; prove also that if the orbit be a parabola, the force being in the focus, and PQ a focal chord, the sum of the squares of the velocities at P and Q is invariable.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1878.

THURSDAY, APRIL 24, 9 A. M. TO 1 P. M.

HISTORY.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1878.

THURSDAY, APRIL 24, 9 A. M. TO 1 P. M.

HISTORY.

PROFESSOR DeMILL, M. A. Examiner.

1. Divide History into periods from A. D. 476, and state the leading characteristics of each. Certain important results followed the transfer of power from Rome to Constantinople. Enumerate the chief Mohammedan Emperors and the founder of each.
2. Show the increase of the power of the English Parliament at the close of the reign of Edward III. Enumerate the chief constitutional reforms of the reign of William III.
3. Trace the rise of the Carolingians until A. D. 800. Compare the royal domains of France with the great fiefdoms in the early part of the twelfth century. Explain the nature of the French Parliaments.
4. Give an outline of German History under the Hohenstaufus. What were the chief results of the Peace of Westphalia? Show the effect of the rise of Prussia upon Germany.
5. Explain the Union of Calmar. Give an outline of the history of Ireland until the Union with Norway. Various expeditions were made to Vinland.
6. Give brief historical sketches of the following:—Poland from its origin to the dethronement of Boleslaus 2nd; Russia during the reign of Ivan the Great; Naples under the house of Aragon.
7. Successive stages may be noticed in the growth of the Papacy until Gregory VII. Explain the schism between the Greek and Latin Churches.
8. Explain briefly the rise of the Feudal System. There were two general classes of investiture. Explain the following terms,—Reliefs, Escheats, Aids.
9. Give a brief outline of the history of Scholasticism. Explain the terms trivium and quadrivium. Enumerate the chief philosophical systems of the 16th century.
10. Enumerate the different schools of painting, and mention the chief representative of each. Describe the condition of literature in the South of Europe in the 15th and 16th centuries. Give brief biographies of Tasso, Lope de Vega, Camoens.

DALHOUSIE COLLEGE AND UNIVERSITY,
HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

FRIDAY, APRIL 25TH, 1873, 9 A. M. TO 1 P. M.

FRENCH.—FOURTH YEAR.

JAMES LEICHT, ESQ. Examineur.

Thèmes: Extraits de "Misanthropie" (Molière) et "Athalie" (Racine.)

1. *Colloque.* Pe tu fuir-il pas bien que monseigneur eût dit?

A la comédie vous n'en en qu'il se dilate,

Et qu'il ne fasse pas déborder son bon flux?

L'écrit contractant qu'il a reçu des dieux?

Le sentiment d'autrui s'est juré pour lui plaines;

Et j'en prend toujours en main l'orgueil contraire,

Et j'en prendrais encore un peu de ce contraire.

Et l'un voudrait qu'il fût en l'air de quelques-uns.

L'honneur de contredire a pour lui tant de charmes.

Qu'il prend contre lui-même assez souvent les armes;

Et ses vains serments sont constants par lui,

Aussitôt qu'il les voit dans la bouche d'autrui.

2. *Atthalie.*

C'était pendant l'horreur d'un profond nuit;

Ma mère Jézabel devant moi vint me rendre;

Comme au jour de ce sort poétique sanglant;

Ses malheurs s'élevaient peints autour de moi;

Même elle avait encore cet ébat capiteux

Quand elle est venue à mourir son visage.

Pour réparer des ans l'irréparable outrage.

"Cranville" m'est-elle dit, "elle digna de moi;

Le cruel Dieu des Juifs l'apporta ainsi sur toi.

Je te plains de t'en voir des mains redoutables,

Ma fille." En achevant ces mots éperouvantes,

Sur son cou je mis ma main et je la baisai;

Et moi, je lui rendis les mains pour l'enlever.

Mais c'est à moi plus terrible qu'un horrible mélange

D'un et de chair meurtrie, et traités dans la fange,

Des limbeaux pâles ce sang, et des membres affreux

Que vos clésse dévants se disputaient entre eux.

Traduisez en Français "Contes d'un Grand-père" par Walter Scott.

Scotland, on the contrary, is full of hills, and huge moors and wildernesses, which bear no corn, and afford but little for flocks of sheep or herds of cattle. But the level ground that lies along the great rivers is more fertile, and it produces good crops. The rivers of Scotland are accounted to live more kindly in general than those of England. The cities and towns are fewer, smaller, and less full of inhabitants than in England. But as Scotland possesses great quantities of stone, the towns are commonly built of that material, which is more lasting, and has a greater effect to the eye than the bricks used in England.

(1.) Expliquez l'emploi de *Participe* dans les phrases suivantes: Man was born for society. Louis IX was a prince endowed with virtue. The Universe is full of the magnificence of the Almighty. Byron says of the Ocean, thus it is boundless, endless, and sublime. He is now without the rich funds who assisted him.

(2.) Faites l'analyse de ces phrases: L'été-on se? Parla-t-elle, on l'écoutait avec attention. Les conseils que me donna mon père qu'en? toujours guidé. . . C'est d'Angleterre que vient cette nouvelle. Ton argent, je ne le veux pas.

(3.) Les *formules de l'impératif* sont connues les phrases qui, plus on les célèbre, plus elles dément de l'écrire. Cette phrase est-elle correcte ou vicieuse? Pourquoi? Donnez en la correction.

(4.) "L'été on se mouvent, prenant son dièdre, Sur le front de vanquiper il le passé l'été-rose." (Voltaire)

De la construction de *supra* dans ces vers résulte une figure de syntaxe vicieuse. Expliquez et mentionnez la figure et pourquoi elle est vicieuse.

(5.) Que remarquez-vous à l'égard du *complément de verb* dans les vers suivants: Ne vous informez pas ce que je deviendrais. (Racine.) C'est à vous mon esprit à qui je veux parler. (Boileau.) Traduisez: A large number of vessels have entered or have left our port during the last fortnight. I know my advantages and make use of them. I hope to finish my labor soon, and to be able to return home.

(6.) Expliquez par des exemples l'accord du *participe présent*.

(7.) Le *participe passé* est-il variable ou invariable dans ces phrases? Pourquoi? I est arrivé de grands malheurs. La chose est telle que vous ne l'avez annoncée. Quant aux autres gens, plus j'en ai connus moins j'en ai oublié. Ecrivez un ex. avec un *participe passé d'un Verbe*, et un autre où le *part.* passé est *précédé de se* *per* *de*.

(8.) Travaillez avec "Cranville". Travaillez plus d'expressions *actives* le *composé*? La figure de syntaxe rencontrée dans cette phrase est-elle régulière ou vicieuse? La *voix* *passive* *est* *par* *l'obj.* *passif*. Expliquez la figure dans cette phrase.

(9.) Quelle est *l'origine* *appellée* *l'âge d'or* de la littérature française? Quelle est *l'influence* de "Molière" sur la littérature.

(10.) Nommez les principaux ouvrages de "Molière" et de "Racine." Quels sont leurs chefs-d'œuvre? Classifiez les tragédies de Racine et dites quel est le genre de poésie créé par lui.

(11.) Mettez en parallèle les deux poètes mentionnés. Sans quel rapport "Molière méritoit-il d'être placé au-dessus de "Racine"?"

(12.) Quel est le *nom* *particulier* de "Boileau" et quelle est sa doctrine littéraire? Par quels ouvrages s'est-il mis en réputation? Pourquoi l'a-t-on appelé le législateur de la Parodie? Est-ce qu'il méritait entièrement ce titre?

DALHOUSIE COLLEGE AND UNIVERSITY, HALIFAX.

SESSIONAL EXAMINATIONS, 1873.

FRIDAY, APRIL 25, 9 A. M. TO 1 P. M.

GERMAN.—FOURTH YEAR.

JAMES LIBERTI, ESQ. Examiner.

Translation: — "Wilhelm Tell," Act II., Scene 1, by Schiller.

I. *Atthausen*: Verlobtender, von sich Niemand Leiden zu Leiden, werd' ein Fürst
Ganz verführt, knecht,
Verachte dein Geburtland! Schätze dich Da du ein Selbstherr sein kannst und
Der auch trübsinnig Bitter deiner Väter! Fürst
Ist heissen Thronen wird da dich deroist Auf deinem eignen Erb und freien Boden
Beide setzen nach den ritzelichen Bergen, Ach, Ux! Uly! Heiße bei den Deinen?
Und dieses Besondere Melodie, Geh nicht nach Altdorf.—O, verlass'
Die du in stolzen Usharman verewhämlet, Die hell'ge Sache deines Vaterlands!
Ist Scherzesschönheit wird sie dich — Ich bin der Letzte meines Stammes—
ergetzen, (1) Name
Wenn sie dir anklingt auf der fremden Erde. [Schl
O, machig ist der Trieb des Vaterlands!
Die Sonne fälsche Welt ist nicht für dich! Das werden sie mir in das Grab mitgeben
Dort an dem stolzen Kaiserhof bleibst du Und muss ich danken bei dem letzten Hat
Dir ewig treu mit deinem treuen Herzen! Das du mein knecht! Auge nur erwart
Die Welt, es fordert andre Tugenden, Um hinzugeh' vor diesen neuen Lebel
Als du in diesen Thälern die erwerten. Und mein edeln Güter, die ich bei
—Geh hin, verkauf deine freie Seele, Von Gott erndig, von Oestrich zu e
singen!

II. *Atthaus*: Lern dieses Volk der Hirtin Das dir aus Liebe nur sich bereit will
kennen, Knabe! (lächeln) Das treulich zu dir stehen in Kass' und Th
Ich kenn's, ich hab' es ergetzt in Sch Das sei dein Stolz, der Alex rühme dir
Ich hab' es fichten sein bei Favenz. (1) Die angebornen Bande knüpfe fest,
Sie sollen kommen, uns die Joch aufzwingen. An's Vaterland an's theure, schloß die
Das wir uns schloßen sind sich zu erretten. Das haie fast rei, deinem gannem Herze
—O Herr Hölzer, welches Stammes du bist! Hier ist die starke Wurzel deiner K
Wir' nicht die ehre Glas und Hirtenscheu! Dort in der fremden Welt stohst du alle
Die echte Perle deines Werthes hin — Ein schwarzes Rob, das jede Stern
Das thaupt zu hüten eines freien Volks, kalcat.

Translate into German: . . . I was but too well assured, that Pythias would return; and that he would be more anxious to keep his promise than to save his life. Would to heaven that his relations and friends had detested him by force! He would then have lived for the combat and benefit of good men; and I should then have had the satisfaction of dying for him.

1. What is alluded to in the sentence: *Mit Scherzesschönheit*. . . . *fremden Erde*. Mention on the historical event, referred to in: *Ich hab' es fichten sehen bei Favenz* (*Favenna*).

2. Analyse the sentence: *Das Hölzer . . . Gann' mitgeben*. Give rules for construction of nouns, verbs (separable and inseparable), and adverbs of time. Write examples in illustration.

3. Explain the difference between *durcheinander* and *durcheinander*. When do such verbs assume the one and when the other form. Name all the words belonging to this class.

4. State, giving an ex. for each case, how *subordinat* and *subordinative* conjunctions affect the construction. Illustrate by short exs. the use of *man*, *even* and *als*. Not only men, but women also perished (*kaumen kas*). He has not yet arrived, but we expect him every moment. He would like to travel, but he has no money. *Bei* has three forms.

5. Give the idiom for: *Thausende, die price of which*. The house, from

the wishes of which. Men, all of whom. Both of them. No more than. All night.

6. The *negative* is used in English with an *accusative* after the verbs, to *excuse*, to *desire*, etc. What is the construction in German? The Captain knew the ship to be near the coast (*Küste*). God commands (*befiehlt*) men to love one another.

7. Illustrate the construction of the English *present participle*: when replacing a *relative pronoun*: when preceded by *prep.* (*on, upon, with, of*.) He was drowned without his making any efforts to save himself.

8. Which is the distinguishing feature of German literature? Classify Schiller's Dramas according to the different periods in which they were written. Which of his Dramas represents in a perfect form the fundamental idea of Schiller's views of life? What is this idea?

9. A certain distinction is made, even by Goethe himself, between the *Tragedies* and *Wilhelm Tell*. Give the reason why such a distinction cannot be fairly made. What is the particular merit of the *Drake of Meissen*? In what year were his two finest lyric Poems written; give their names.

10. Mention some of Goethe's works. His "*Frauen*" is a *psychological Drama*. Explain.