## CALENDAR

07

## DALH0USIE COLLEGE

## UNIVERSITY,

HALIFAX, NOVA SCOTIA.

SESSION 1875-6.

## HALIFAX :

Printed for the University, by Nova Scotia Printing Company. 1875.


## CONTENTS.

PAGE
University Calendar ..... 5
Governors and Senate.. ..... 6
Faculty of Arts ..... 6
Faculty of Arts - Winter Session ..... 7
Admission of Students ..... 7
Matriculation Examination ..... 8
Course of Study for B. A. ..... 8
Honour Courses ..... 9
Summer Session ..... 10
Fees ..... 10
Graduation in Arts ..... 10
Regulations for Examinations ..... 11
Scholarships ..... 12
Prizes, Certificates of Merit, and Medals ..... 12
Attendance and Conduct ..... 14
The Library ..... 14
Alumni Association ..... 15
Course of Instruction ..... 16
Courses of Study for Honours ..... 18
Degrees Conferred, 1875 ..... 21
General List of Scholarships, Special Prizes, Medals, \&c. ..... 22
Medals, Prizes and Certificates of Merit awarded... ..... 24
Examinations 1874-75 ..... 26
Graduates and Undergraduates of the University and General Students in Arts ..... 29

# Univensity Calendar, 1875-76. 

1875. 

Oct.

Nov. 1.

|  | 8. |
| ---: | ---: |
|  | 10. |
|  | 11. |
| Dec. |  |
|  | 7. |
|  | 22. |

1876. 

Jan.
4.
5.
16.
21.

Feb.
March 1.
7.
18.
21.

April
31.

7
12
20.
21.

May

June
6.
21.
23.
26.
27.

Tu.
Fr.
W.

Th. Examinations in Greek and Mathematical Physics, 4th year, 9 A. M Honour Classics, Extra Greek, 1st and 2nd years, 3 P. M.
Fr.
Mo.

Fr.
Sat.

## Mo.

W.

Results of Examinations declared.
Meeting of Convocation, $10.30 \mathrm{~A} . \mathrm{M}$.

## Summer Session, 1876.

Mo.
Tu.

Tu.
Tu. Foundation Ston
Tu. Foundation Stone of College laid,


Matriculation Examinations (English) continued; Supplementary Examinations, at 10 o'clock, A. M.
Meeting of Senate at 10 o'clock, A. M. Matriculation, Registration and Library Tickets issued at 11 A. M.
Arts Classes opened; Class Tickets issued. Entrance Examinations in Ancient History and Geography for Second and Third Years, at 3 o'clock, P. M.
Anniversary of opening of the College in 1863.
Final Matriculation and Supplementary Examinations at P. M.
Meeting of Senate at 1 o'clock, P. M.
Meeting of Senate at 1 o'clock, P. M.
Christmas Vacation begins.
Class Lectures resumed. Meeting of Senate at 1 P. M.
Supplementary Examinations in Ancient History and Geography at 3 P. M.
College established in 1823.
Meeting of Board of Governors.
Meeting of Senate at 11 o'clock, P. M.
Ash Wednesday. No Lectures.
Meeting of Senate at 1 o'clock, P. M.
Last day for receiving Essays for "Laurie" Prize.
George Ramsay, Earl of Dalhousie, Founder of the College, died in 1838.
Last day for receiving M. A. Theses.
Meeting of Senate at 1 o'clock, P. M.
Last day of Class Lectures. Last day for returning Library Books.
Examinations in Latin, 9 A. M. Honour Examinations in Classics, English, Mathematics, and Extra Latin, 1st and 2nd years, 3 P. M.

Examinations
Examinations in Logic and Metaphysics, 9 A. M.
Examinations in Mathematics and Mathematical Physics, 3rd year ; Honour Classics, Honour Mathematics, Honour English, 9 A. M. Examinations in Mathematics and Honour Examinations continued, 3 P. M.
Examinations in Ethics and Experimental Physics, 9 A. M. Honour Classics, 3 P. M.
Examinations in Rhetoric and History, 9 A. M.
Examinations in Chemistry, Honour Classies, Rhetoric and His-
tory, 9 A. M.
Examinations in French and German, Extra Mathematics, 2nd year, 9 A . M.
Competition for "Young" Prize, 10 A. M.
Meeting of Senate, 10 A. M.

Suwmer Session opens. Registration at $100^{\prime}$ clock, A.M. Meeting of Senate at 11 e'clock, A.M.

Foundation Stone of College laid, 1820
Meeting of Senate, at 1 o clock, P. M.
Accession of Queen Victoria.
Halifax settled, 1749. No Lectures.
Lectures close.
Examinations.
Examinations. Session ends.

## Dalhousie College and Univensity.

## BOARD OF GOVERNORS.

Hon. Sir William Young, Knight, Chief Justice of Nova Scotia, Chairman. Hon. Charles Tupper, C. Bi, M. D., M. P.
Hon, J. W. Ritohie, Judge of Supreme Court of Nova Scotia.
Hon. S. L. Shannon, Q, C.
Rev. George, M. Grant, M. A.
James F. Avert, Esq., M. D.
Charles Robson, Esq.
Alexander Forrest, Esq. M. D.
Rev. G. W. Hill, M. A.
George Thomson, EsQ., Secretary and Treasurer.

## SENATE OF THE UNIVERSITY.

Very Rev. James Ross, D. D., Principal.
Rey. William Lyall, LL. D.
Charles Macdonald, M. A., Secretary of Senate. John Johnson, M. A.
George Lawson, Ph. D., Lila. D.
James Demikl, M. A.

## FACULTY OF ARTS.

Very Rev. Principal Ross, D. D., Professor of Ethies and Political Economy.
Rev. William Lyali, LL. D., Professor of Logic and Melaphysies.
Charles Macdonald, M. A., Professor of Mathematics:
John Johnson, M. A., Professor of Classics.
George Lawson, Ph. D., LI.. D., Professor of Chemistry and Mineralogy, James DeMrile, M. A., Professor of History and Rhetoric.
James Liechti, Esq., Tutor in Modern Languages.

> Janitor-Jorn Walson.

## farulty of grts.

## § I.-WINTET SESSION.

The Winter Session of 1875-76 will commence on Wednesday, Oct. 27th, 1875, and end on Wednesday, April 26th, 1876.

## § II-ADMISSION OF STUDENTM.

Students may enter the College,

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

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

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

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

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

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

## § III.-MATRICULATION TXAMINATIONS.

FOR THE FIRST YEAR. (Four Years' Course.)
The Subjects of Examination for entrance into the First Year of the Course are :-
I. In Classios.-Latin Grammar, Greek Grammar, one Latin, one Greek Author.
Latin.-Cæsar, one book ; Virgil, one book ; Cicero, two Orations ; Horace, one book of Odes.
Greek.-Xenophon, one book; Homer, one book; Lucian's Select Dialogues ; New Testament, one Gospel.
The Books in which Candidates for Professors' Scholarships will be examined, will be prescribed from year to year. For Session 1875-76, they are in Latin, Cemar's Commentaries, Book V.; in Greek, Xenophon's Anabasis, Book I.
II. In Mathematios.-Arithmetic ; Euclid's Elements of Geometry, Book I.; Algebra, to the end of Fractions.
III. In English.-Grammar ; History of England ; Geography ; Composition.
Special stress will be laid upon accuracy in Latin and Greek Grammar.
for the second year. (Three Years' Course.)
In order to Matriculate for the Three Years' Course, a Student must pass an Examination,-

1. In the Classics of the first year as specified in § XIV, or their equivalents.
2. In the Mathematics of the first year as specified in § XIV.
3. In English Grammar, English History, Geography and Composition.
4. In Roman History and Ancient Geography, as specified in § XIV.

## §IV.-COURSE OF STUDY.

COURSE FOR DEGREE OF B. A.
First Year.-(1) Latin. (2) Greek. (3) Mathematics. (4) English Language and Rhetoric.

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

For First or Second Class in Rhetoric extra work is required.
Second Year.-(1) Latin. (2) Greek. (3) Mathematics. (4) Chemistry. (5) Logic and Psychology.

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

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

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

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

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

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

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

## § $\overline{\text {. }}$ - HONOUR COURSES.

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

Honour Courses are provided in the following groups of subjects :-(1) Classics ; (2) Mathematics and Physics ; (3) Mental and Moral Philosophy ; (4) History, Political Economy, and English Literature and Language. Instruction of an advanced kind is provided in these subjects during the third and fourth years of the Curriculum.

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

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

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

A Student of the Third Year, for Honours, (see § XV),-
In Classics, may omit the Mathematical Physics of the year ;
In Mathematics and Physics, in Mental and Moral Philosophy, in History, Political Economy, \&c., may omit the sixth subject of the Ordinary Course, (see § IV).

A Student of the Fourth Year studying for Honours,
In Classics, may omit Mathematical Physics, and either Ethics and Political Economy or History ;

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

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

## 

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

Classes will be opened for instruetion in the following subr jects :

Classics.
Theory of Equations. Applied Logic.

Optics. Chemistry.
History of English Literature.
Modern Languages.

## 

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

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

Mathematical and Experimental Physics constitute a separate class.

General Students pay a fee for every class they attend.
Practical Chemistry, three months' course (optional), fee, six dollars. Students taking this class are required to provide their own materials. The use of the larger articles of apparatus will be given in the Laberatory free of expense.

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

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

Matrioulation 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, whe talke the ordinary B.
A. Course in Arts, are as follows :-

Classes of First Year, with Library and Matriculation Feo...\$21 00
$\begin{array}{ll}\text { " Second Year, with Library Fee............................ } 2500 \\ \text { " } & 1300 \\ \text { " Third } \\ \text { " } \\ \text { Fourth } & \text { " }\end{array}$

## § VITE-GRADVATION.

## DEGPEE OF B. A.

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

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

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

## DEGREE OF M. A.

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

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

## § TX-REGULATIONT FOR EXAMTNATLONS.

1. If an Undergraduate absent himself from any University Examination, except for such cause as may be held good by the Senate, he will lose his year.
2. If an Undergraduate fail to pass in any subject at the Sessional Examinations, he will be allowed a Supplementary Examination on the first Thursday of the following Winter Session, or of a subsequent Winter Session by the permission of the Senate, on giving notice to the Secretary of the Senate at or before the opening of the Winter Session; but failure in more than two subjects will involve the loss of the year. N. B.-In the application of this, Rule, Mathematics will be reckoned as two subjects, and tatin and Greek each as one subject.
3. In all cases, a Student who presents himself for Supplementary Examination on any day except that specified in the Rule, will be required to pay an extra fee of two dollars.
4. Undergraduates of the Second and Third Years who fail to present themselves for the Entrance Examinations. in History and Ancient Geography on the day named in the Calendar, mays on payment of a fine of tro dollars, have another day appointed them for such Examinations.
5. Students are forbidden to bring any book or manuseript into the Examination Hall, unless by direction of the Examiner, or to give or receive assistance, or to hold any communication at the Examinations. If a Student violate this rule, he will lose his Sessional Examinations for the year ; and it shall be at the discretion of the Senate whether he be allowed Supplementary Examinations.
6. Students who pass the Examinations in the several subjects of their respective years, are arranged in three classes, First Class, Second Class, and Pass, according to the merit of their answers in these suhjects.

## §

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

## § XI-PRIZES, CERITFICATES OF MERIT, AND MEDALS.

## The University Prizes.

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

## The St. Andrew's Prize.

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

## Young Prizes.

Two Elocution Prizes of $\$ 20$ and $\$ 10$ respectively, are this year offered by the Hon. Sir Wm. Young, Knt., Chief Justice of Nova Scotia, and are open for competition to all Arts Students. These prizes will be competed for at the close of the Winter Session. A Student to whom one of these Prizes has been awarded is disqualified for subsequent competition.

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

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

## The Waverly Prize.

This Prize, of the value of $\$ 60$, has been founded by an unknown Benefactor, whose object in so doing is to encourage the studies of the Curriculum, especially Mathematics. It will be awarded to the Undergraduate of the Third Year who makes the highest total of marks at the Sessional Examinations, the
numbers being reekoned according to the following seale: Natural Philosophy, 200; Pure Mathematics, 100; Classics, 200 ; Chemistry, 150 , Metaphysies, 150.

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

## The Alumni Association Prizes.

The Alumni Association of this University, with judicious liberality, have this year provided Two Prizes of $\$ 35$ each for Students of the First and Third Years. These Prizes will be awarded to the two Students of these years who obtain the highest total of marks at the Sessional Examinations.

## North British Society Bursary.

A Bursary of the annual value of $\$ 60$, has been founded in connection with Dalhousie College by the North British Society of Halifax, to be competed for at the 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 his Undergraduate Course. Candidates must be Undergraduates who have completed two years of the Curriculum, and must be eligible at the proper age to be Members of the North British Society. The next competition will take place in April, 1876, at the Sessional Examinations. In awarding this Prize, Classies, Mathematics, and Chemistry will be reckoned each 150 ; Logic, 100.

## Melbourna Prize

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

## Governor General's Medals,

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

## CERTIFICATES OF MERIT.

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

## § KIT.ATGTRNDANCT AND CONDUOT.

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. Gotrns 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 Stridents will be carefully noted.
4. Professors yiill mark the presence or absence of Students immediately before commencing the work of the class, and will note as absen't those who enter thereafter, unless satisfactory reasons be assigned.
5. Absence without sufficient excuse, or lateness, or inattention or disorder in the Class Room, if persisted in after due admonition by the Professor or the discipline proper to the class, will be reported to the Senate.
6. The amount of absence which shall disqualify for the keeping of a Session will be determined by the Senate.
7. Injuries to the building or furniture will be repaired at the expense of the person or persons by whom they have been caused ; and such other penalty will be imposed as the Senate may think proper.
8. While in the College, or going to or from it, Students must conduct themselves in an orderly manner. Any Professor observing any improper conduct in a Student will admonish him, and, if necessary, report to the Principal.
9. When a Student is brought before the Senate and convicted of a violation of any of these rules, the Senate may reprimand privately or in the presence of the Students, or report to the parents or grardians, or disqualify for competing for Prizes or Certificates of Merit, or report to the Governors for suspension or expulsion.
10. Students not residing with parents or guardians must report to the Principal their places of residence within one week after their entering College, and the Principal may disallow such residence if he see good cause. Any change of residence must also be reported.
11. It is expected that every Student will attend Divine worship regularly, in one of the city churches or chapels.

## § XIII.-THE LEBRARY.

The Library consists of a careful selection of the most useful books in each department of study embraced in the University course. There are likewise a few works in general literature. The Library embraces in all upwards of 1600 voltumes. All Students are entitled to the use of the Books, on payment of the annual fee of one dollar.

## §

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

Hitherto the only assistance they liave lent the University has been the furnishing of Prizes for competition to Undergraduates at the Sessional Examinations, (see § XI.), but it is expected that the time is not distant when the Association shall have developed into an important adjunct to the University. Next year a Bill to incorporate the Association will be introduced into the Provincial Parliament. The present Executive Committee are meantime empowered to take such other steps as shall seem fitted to promote the purposes of the Association.

Undergraduates of more than two yeats' staniding, and General Students who have attended Classes for át least two years, are qualified for admission to the Association; and it is hoped that before long every Graduate at least will have been emrolled in the List of Members.

The annual meeting of the Association takes place on the evening of Convocation day, at the close of the Winter Session.

Office-bearers for the present year:

$$
\begin{aligned}
& \text { President.....................D. C. Fraser, B. A. } \\
& \text { Vice-President ...............L. H. Jordan, B. A. } \\
& \text { Secretary.....................J. M. Oxiex, B. A. } \\
& \text { Treasurer ......................Jis. Forrest, M. A. } \\
& \text { C. D. MoDonald, B. A. To compose the Exeeutive } \\
& \text { Hugh MoKenzie, M. A. Committee together with } \\
& \text { Roberi Sedgrwick, B. A. ) the officers. }
\end{aligned}
$$

# § XV.-ORDINART COURSE FOR B. A. <br> LATIN AND GREEK. 

FIRST YEAR.
Eatin.-Cicero : First Oration against Catiline.
*Third Oration against Catiline.
Virgil : Aeneid, Book V.
Greek.-Lucian : Timon.

* The Dream.

Composition.-Principia Latina, Part IV.
SECOND YEAR.
Latin. -Livy : Book I., chaps. 1-30. * Book I., chaps. 30-60. Horace : Odes, Book I.
Greek.-Herodotus : Book I., secs. 95-141. * Book II., secs. 1-34.
Homer : Odyssey, Book IX.
Composirion.-Principia Latina, Part IV. Initia Greca, Part IIL.

## THIRD AND FOUBTH YEARS.

Latin.-Tacitus: Agricola; Germania.
Juvenal : Satires VII., VIII., XIV.
Greek. -Demosthenes : Olynthiacs, II., III., Philippic, IV. Composition.-Principia Latina, Part V. Initia Greca, Part III.
Philology.-Outlines of Comparative Philology.
At the Sessional Examinations of the Third and Fourth Years, passages taken from books not read in the Course will be set for translation.

## + ANCIENT HISTORY AND GEOGRAPHY.

Second Year.-History of Rome, to B. C. 31. Geography, Italia, Sicilia, Gallia, Britannia.
Third Year.-History of Greece to the Roman Conquest. Geography of Graecia, Africa, Asia.
Books recommended: Liddell's History of Rome; Smith's History of Greese ; Pillan's Classical Geography.

## MATHEMATICS AND PHYSICS.

## FIRST YEAR.

Arithmetic.-Revision of the Theory of Proportion, Vulgar and Decimal Fractions.

Alaebra.-Common Measure, Involution, Evolution, the Arithmetical Extraction of Roots, Fractions, Equations of the First and Second Degrees, 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 Trigononetry.-Solution of Plane Triangles.

## SECONT YEAR.

Geometry.-Sixth Book of Euclid finished ; Geometrical Exereises 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 ; Mensuration of Heights and Distances; Elementary Problems in Navigation; Use of Logarithms.

Algebra.-Simple Indeterminate Equations; Binomial Theorem ; Properties of Logarithms; Compound Interest; Annuities.

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## EXTRA.

Geometry.- 21 Propositions of the Eleventh Book of Euclid; Geometrical Exercises.

Trigonometry.-Extension of Ordinary Course.
Algebra.-Permutations, Combinations, Probabilities, Life Assurance, Investigation of Binomial Theorem and Theory of Logarithms, Indeterminate Coefficients, Higher Equations with Horner's Method of Solution.

EXPERIMENTAL PHYSICS.
(Third Year.)-Text Book : Ganot's Physics.
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 ; Phear's Hydrostatics (or Galbraith and Haughton's.)

## ETHICS.

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

POLITICAL EOONOMY.
(Fourth Year.)-Text Books: Mill's Political Economy ; Senior's Political Economy.

## LOGIC AND PSYCHOLOGY.

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

## METAPHYSICS AND ESTHETICS.

(Third Year.)-Text Books : Sir William Hamilton's Lectures on Metaphysics. Mansel's Metaphysics. Lewes' Biogragraphical History of Philosophy. Cousin on The Beantiful. Alison's Essays on the Nature and Princi ples 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 OHEMISTRY.
Macadam's Practical Chemistry ; Fresenius's Qualitative and Quantitative Analysis.

## RHETORIC. <br> FIRST YEAR.

Rhetoric.-Text Books: Quintilian's Institutes of Oratory. Whately's Flements of Rhetoric. Campbell's Philosophy of Rhetoric. Essays and exercises on the principles of Whetoric, weekly.

Elocution. - Exercises every week aiter the Christmas holidays. Books recommended: Porter's Analysis of the principles of Rhetorical delivery. Russell's Elocution. Sargent's Standard Speaker. Dominion Elocutionist. Nova Scotia Readers No, 6 and No. 7.

## 18

## ENGLISH LANGUAGE.

## FIRST YEAR

Anglo-Saxon.-Text Books : Comparative Grammar of the Anglo-Saxon Language, F. A. Marsh, LL.D. Anglo-Saxon Reader, by F. A. Marsh, LL.D.

English.-Text Books: Specimens of Early English, by R. Morris, LL.D., and W. W. Skeat, M. A. Part Second. The Philology of the English Tongue, by John Earle, M. A.

HISTORY.

## FOURTH YEAR,

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

## EXTRA,

History of Germany. Constitutional History.
FOURTH YEAR.
Text Books: Stubbs' Constitutional History. Hallam's Constitutional History.

## MODERN LANGUAGES.

French.-(Third Year.)-Pujol's Grammar, (first part.)-Scribe"s "Valérie."

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

French. - (Fourth Year.)-Pujol's Grammar-(fourth part)-Molière's "Le Bourgeois Gentilhomme."

Grrman. - (Fourth Year:) -Otto's German Conversation Grammar.Adler's Reader.-Schiller's "Wilhelm Tell" continued.

## 

CLASSIOS.
[The following Course, in addition to the Ordinary, is prescribed for Classical Honours in the fourth year.]
Latin. - Plautus: Miles Gleriosus.
Terence: Heautontimorumenos.
Virgil : Georgics, Books I., IV. Horace: Epistles, Books I., II.; Ars Poetica. Juvenal : Satires, III., X., XIII. Cicero: Tusculan Questions, Book I. Tacitus: Annals, Book I.
Greek.- Eschylus : Prometheus Vinctus. Sophocles : ©dipus Rex. Homer: Iliad XVIII., XXIV. Thucydides: Book II. Plato: Phædo. Demosthenes: De Corona.
Compostrion.-Latin Prose.
Literature.-Müller and Donaldson's History of Ancient Greek Literature; Roman Classical Literature (Brown's) ; Theatre of the Greeks (Donaldson's.)
Philology.-Müller's Science of Language, Vols. I., II. ; Clark's Comparative Philology ; Donaldson's Varronianus, chaps. VI., VII., VIII., IX., XI., XIV. ; Donaldson's Cratylus, Book I., chap. 5, Book III., chap. 2, Book IV., chap. 4; Lewis's Essay on the Romance Languages.

## MATHEMATIOS AND MATHEMATICAL PHYSIOS.

Trigonometry-DeMoivre's Theorem and Angular Analysis. Spherical Trigonometry, with application to Astronomy.

Analymical Geometry-The Straight Line, the Circle, Parabola, Ellipse, Hyperbola, The Locus of the General Equation of the Second Degree between two Variables.

Differential Caloulus-Differentiation; Theorems of Leibnitz, Maclaurin, and Taylor ; Maxima and Minima of Functions of One Variable; Expansion of Functions of Two Variables ; Maxima and Minima of such Functions; Radius of Cuvature, Osculating Uircle; Envelopes; the tracing of Curves by means of their Equations.

Integral Calculus-Integration of Simple Forms ; Integration by Parts, and Formulæ of Reduction. Integration by Substitution, \&c. Applications to determine Lengths of Curves, Surfaces, Volumes, \&cc. ; Differential Aquations, (selected course,) Application to Physical Investigations: e. g., Centre of Gravity, Attraction, Central Forces, \&c.

## bOOKS RECOMMENDED-(In order of Preference.)

> Todhunter's Spherical Trigonometry.
> Todhunter's Plane Trigonometry, or Colenso's (2nd part.)
> Todhunter's, Puckle's, or Salmon's Conic Sections.
> Hall's, Hind's, or Todhunter's Differential and Integral Calculus.
> Todhunter's or Young's Theory of Equations.
> Boole's Differential Equations.

EXPERIMENTAL PHYSICS
Heat a Mode of Motion, by Tyndall.
EOptics, 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 11., III., IV. Mill's Logic, I., II.

## METAPHYSICS AND ESTHETICS.

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

## ETHIOS.

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

Smith's Theory of Moral Sentiments.
Thompson's Christian Theism.
Aristotle's Ethios, Book I., III., VI., X., (in English.)

HISTORY, ENGLISH LANGUAGE AND LITERATURE, AND POLITICAL ECONOMY.

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

## ENGLISH LANGUAGE.

ANGLO SAXON.
Thorpe's Analecta Anglo-Saxonica.
Poems of Beowulf, the Scop or Gleeman's tale, and the Fight at Finnes-burg-Benjamin Thorpe.

Life of St. Guthlac-Charles Wycliffe Goodwin, M. A.
King Alfred's Anglo-Saxon Version of Orosius-Rev. Dr. Bosworth.
ENGLISH.
Specimens of Early English-Morris \& Skeat, part first.
Specimens of English Literature - W. W. Skeat, M. A.
The Vision of William concerning Piers the Plowman, by Willian Laug-land-W. W. Skeat, M. A.

Chaucer, Part First:-The Prologue, The Knighte's Tale, The Nonne
Preste's Tale, Edited by R. Morris, Editor for the E. E. T. S. Part Second :
The Prioresses' Tale, etc., edited by Rev. W. W. Skeat, M. A.
Spenser's Faery Queene, Books First and Second, by G. W. Kitchin, M.A. Shakespeare's Select Plays, edited by W. G. Clark, M. A., and W. Aldis Wright, M. A. I. The Merchant of Venice ; II. Richard the Second ; III. Macbeth; IV. Hamlet ; V. The Tempest.

Bacon, Advancement of Learning-W. Aldis Wright, M. A.
Milton, Poems-R. C. Browne, M. A.
Dryden, Selections by W. D. Cliristie, M. A.
Pope, Essay on Man, Satires, and Epistles, by Mark Pattison, B. D.

## 젱grex Confexted, dpxit, 1875.

MASTER OF ARTS.<br>Hugh McKenzie, B. A. Ephratm Scott, B. A.

## BACHELOR OF ARTS.

James Fitzpatrick, Louis H. Jordan, Alexander McLeod, George McMillan, Heotor M. Stramberg.

DOOTOR IN MEDICINE AND MASTER IN SURGERT.
J. L. Bethune,
A. W. H. Lindsay,

Casimir Robert.

# Gotwat catcals, der. 

## SOHOLARSHIPS.

1866-Arthur P. Silver, Halifax Grammar School; A. W. H. Lindsay, Pictou Academy.

1867 -James G. McGregor, Private Study ; James M. Inglis, Prince of Wales College, Charlottetown, P. E. I.

1868-Alex. W. Pollok; W. P. Archibald, Halifax Schools.
1869 - Charles D. MacDonald, Pictou Academy ; Bruce A. Lawson, Henry Macdonald, Halifax Schools.

1870 - Andrew C. Herdman, Pictou Academy ; Alexander C. Patterson, Fort Massey Academy.

1871-William Brownrigg, Pictou Academy ; George McMillan, Private Study.

1872-Francis H. Bell, Private Study; Frederick W. O'Brien, Pictou Academy.

1873 -James McLean, Private Study ; John Wuddell, Pictou Academy.
1874 -John L. George, Pictou Academy ; John Stewart.

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

## THE YOUNG PRIZES.

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

## ROY PRIZES.

F'or Elocution.-1868-1. Alex. G. Russell; 2. James G. McGregor. 1869 -1. Albert R.Quinn ; 2. William M. Doull.

## NORTH BRITISH SOCIETY BURSARY.

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

## LAURIE PRIZE.

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

## 23

## ST. ANDREW'S PRIZE.

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

ALUMNI PRIZES.
1873-James M. Stewart. 1874-1. James McLean ; 2. John H. Sinclair. 1875-1. J. H. Cameron, Private Study ; 2. Robt. H. Humphrey, Halifax Grammar School.
" UNKNOWN" PRIZE.
1875-James McLean.
WAVERLY PRIZE.
1873-Willirm Beairsto, William B. Ross, equal. 1874-James Fitzpatrick. 1875-James MeLean.

## MELBOURNE PRIZES.

1875-1. John W. MreLeod ; 2. James Mr. Stewart.

## GOVERNOR GENERAL'S MEDALS.

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

#  1875. 

## 



UNIVERSITY PRIZES.
FOURTH YEAR.


THIRD YEAR.


SECOND YEAR.


## OBRIIFICATES OF GENERAL MERIT.

First Class:-Fourth Year-L. H. Jordan, G. MeMillan. Third Year-J. W. McLeod, J. M. Stewart, F. H. Bell. Second Year-J. McLean, J. Waddell. First Year-J. H. Cameron.

Second Class-Fourth Yeur:-Alex. McLeod. Third Year-Burgess McKittrick. Second Year-J. McD. Scott, H. H. Hamilton. First Year-R. H. Humphrey.

## SPECIAL PRIZ포

The Sir Wm. Young Prize of $\$ 20$ for Elocution, was won by Samuel J. McKnight.

The St. Andrew's Prize, for the best Examination in the Classics of the Second Year, was won by James McLean.

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

The Waverly Prize of $\$ 60$, for highest total of marks made at the Examinations of the Second Year, was won by James McLean.

The Alumni Association Prizes of $\$ 30$ and $\$ 20$, for highest total of marks made at the Examinations of the First Year, were won by, 1. J. H. Cameron ; 2. Robt. H. Humphrey.

The Unknown Benefactor's Prize of \$30, for highest total of marks made at the Examinations by an Unciergraduate of any year, was won by James McLean.

The Col. Laurie Prize of \$20, for best Essay on "Our Lake an Diver Fisheries," was mon by Alexander H. McLeod.

## ©xamitutions, 1874-5.

## SCHOLAASSHTP ㅍBNMTNAMTONT, OCT. 1874.

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

John Lyall George, Pictou Academy. John Stewart.

## UNIVERSLTY BXAMMIATIONS.

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

## SUPPLEMENTARY EXAMINATIONS, OCT. 1874.

Second Year.-Mathematies : J. S. Morton, J. N. Shannon. Chemistry : F. H. Bell.

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

Third Year.-Class 1-F. H. Bell, (John Munro, J. M. Stewart,) equal. Class 2-J. N. Shannon, Wm. A. Mills, J. W. McLeod. Passed-G. H. Fulton, J. S. Morton.

Seoond Year.-Class 1-J. McLean, H. H. Hamilton. Class 2-J. C. Sutherland. Passed-H. McCully, (Wm. A. Mason, John Waddel,) equal. R. E. Chambers, (J. H. Sinclair, Stanley McCurdy,) equal. W. R. Grant, John M. Scott, A. Rogers.

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

Thirn Year. - Wm. Brownrigg, B. McKittrick, A. McLean, J. A. McLean. Second Year.-G. A. Laird, A. A. McKenzie, J. S. Murray, C. Pitblado.

## SESSIONAL EXAMINATIONS, 1875.

(The names of the Students are arranged alphabetically.)
Fourth Year.-(Final Examination for Degree of B. A.) -James Fitzpatrick, Louis H. Jordan, Alex. H. McLeod, George McMillan, Hector M. Stramberg.
Third Year.-Francis H. Bell, Wm. Brownrigg, Burgess MeKittrick, James A. McLean, J. W. McLeod, W. A. Mills, J. Munro, J. N. Shannon, J. M. Stewart.

Second Year.-R. E. Chambers, H. H. Hamilton, George A. Laird, Wm. A. Mason, H. McCully, A. A. McKenzie, J. McLean, John S. Murray, J. McD. Scott, J. H. Sinclair, J. C. Sutherland, A. Rogers, J. Waddell.

First Year.-J. A. Cairns, J. H. Cameron, H. Chambers, J. L. George, R. H. Humphrey, W. T. Kennedy, J. R. Law, S. J. MeKnight, Rod. C. McRae, Wm. Miller, C. H. Mitchell, G. W. Munro, E. L. Newcomb, R. D. Ross, J. Stewart, A. Whitman.

## CLASS ㄸรT

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

## LATIN.

Fourth Year. - Class 1.-George McMillan. Class 2.-Louis Jordan, Alex. McLieod. Passed.-James Fitzpatrick, Hector M. Stramberg.
Third Year.-Class 1.-J. W. McLeod, F. H. Bell. Class 2.-J. McG. Stewart, B. McKittrick. Passed-J. Mumro, Wm. Brownrigg, Wm. A. Mills, J. S. Morton, G. L. Gordon, J. N. Shannon, J. A. McLean, G. H. Fulton.

Second Year.-Class 1.-James McLean, A. A. McKenzie. Class 2.-J. McD. Scott, J. Waddell, H. McCully. Passed.-G. A. Laird, Colin Pitblado, H. H. Hamilton, R. E. Chambers, S. McCurdy, J. H. Sinclair,.. Anderson Rogers, J. S. Murray, W. R. Grant, Isaac Archibald, F. W. Archibald, William A. Mason, J. C. Sutherland, J. McKenzie.
First Year. -Class 1.-J. L. George, Wm. Miller, Class 2.-R. Humphrey, J. H. Cameron, Robert D. Ross, G. W. Munro. Passed.-H. Chambers, E. L. Newcomb, S. J. McKnight, J. R. Law, A. Whitman, W. T. Kennedy, J. Stewart, J. A. Cairns, W. T. Montgomery, R. C. McRae, F. G. Smith, Ch. Mitchell.

## GREEK.

Fourth Year.-(Final Examination for Degree of B. A.)-Class 1.-G. McMillan. Class 2.-A. McLeod. Passed.-H. Stramberg.
Third Year.-Class 1.-J. W. McLeod, F. H. Bell, J. M. Stewart. Class 2.-B. McKittrick. Passed.-Wm. Brownrigg, J. N. Shannon, J. Munro, A. McLean, J. A. McLean.
Second Year.-Class 1.-J. McLean, H. McCully, A. A. McKenzie, J. Waddell. Class 2.-J. McD. Scott. Passed.-G. A. Laird, J. S. Murray, J. H. Sinclair, C. Pitblado, (W. R. Grant, H. H. Hamilton, S. MeCurdy,) equal. R. E. Chambers, Wm. A. Mason, J. McKenzie, A. Rogers, J. C. Sutherland.
First Year.-Class 1.-J. L. George, Robert H. Humphrey. Class 2.W. Miller, J. H. Cameron, G. W. Munro, J. Stewart. Passed. E. L. Newcomb, J. R. Law, S. J. McKnight, J. A. Cairns, H. Chambers, A. Whitman, R. D. Ross, R. C. McRae, W. T. Kennedy, F. Smith, Ch. Mitchell.

## NATURAL PHILOSOPHY.

Fourth Year.-Class 1.-Louis H. Jordan. Class 2.-James Fitzpatrick.
Third Year.-Class 1.-John W. McLeod, James M. Stewart. Class 2.Burgess McKittrick, George L. Gordon, William A. Mills, Geo. Fulton. Passed.-William Brownrigg, James A. McLean, John Munro, Joseph S. Morton.

Passed in Experimental Physics, Francis H. Bell, James N. Shannon.

## MATHEMATICS.

First Year. - Class 1.-John H. Cameron. Class 2.-Rhoderic C. Macrae, John R. K. Law, Robert D. Ross, Howard Chambers, Alfred Whitman, Robert H. Humphrey. Passed.-William T. Kennedy, Edmund L. Newcomb, John S. Cairns, John Stewart, Ralph M. Hunt, William Miller, John R. Fitzpatrick, William T. Montgomery, John L. George, George W. Munro, Charles H. Mitchell, S. John McKnight.
SECOND Year.-Class 1.-James McLean, Howard H. Hamilton, John Waddell, John M. Scott. Class 2. - None. Passed.-George A. Laird, Archibald A. McKenzie, Robert E. Chambers, Fredk. W. Archibald, Harry McCully, Stanley McCurdy, John H. Sinclair, Isaac L. Archibald, Anderson Rogers, James C. Sutherland, William R. Grant, John S. Murray, Colin Pitblado, William A. Mason.

## METAPHYSICS AND ESTHETICS.

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

## LOGIC AND PSYCHOLOGY.

Sedond Year.-Class 1.-J. McLean, J. H. Sinclair. Class 2.-A. A. McKenzie, F. W. Archibald, I. L. Archibald, J. Waddell, H. H. Hamilton, J. McD. Scott. Passed.-G. A. Laird, Colin Pitblado, Stanley McCurdy, R. E. Chambers, H. McCully, A. Rogers, J. S. Murray, J. C. Sutherland, Wm. A. Mason.

## ETHICS AND POLITICAL ECONOMY.

Fourth Year.-Class 1.-Alexander McLeod, James Fitzpatrick, Louis H. Jordan, Hector M. Stramberg, George McMillan. Class 2.-Andrew Gray.

## CHEMISTRY (SENIOR).

Third Year. - Class 1.-George Lawson Gordon, G. H. Fuiton. Passed.J. S. Morton.

## CHEMISTRY (JUNIOR).

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

## HISTORY.

Fourth Year.-Class 1.-L. H. Jordan, G. McMillan. Class 2.-H. M. Stramberg, A. W. McLeod, James Fitzpatrick.

## CONSTITUTIONAL HISTORY.

L. H. Jordan, H. M. Stramberg, A. W. McLeod, Geo. MeMillan.

## RHETORIC.

Eirst Year.-Class 1.-John H. Cameron, John Stewart, W. T. Kennedy. Class 2.-Robert D. Ross, R. H. Humphrey, Geo. W. Munro, Wm. M. Fraser, Wm. Miller, John A. Cairns, Rhod. C. McRae. Passed.(arranged alphabetically) - H. Chambers, J. L. George, Ralph M. Hunt, J. R. Law, S. J. Macknight, C. H. Mitchell, W. T. Montgomery, E. L. Newcomb, W. P. Scott, F. G. Smith, Alfred Whitman.

## MODERN LANGUAGES.

fRENOH.
Fourth Year.-Class 1.-I. H. Jordan, Geo. McMillan. Class 2.-A. H. McLeod. Passed.-James Fitzpatrick, John T. Ross, H. M. Stramberg. Third Year.-Class 1.-Burgess McKittrick, James M. Stewart, Francis H. Bell, John W. McLeod. Class 2.-James N. Shannon. Passed.-W. A. Mills, Alex. McLean, John Munro, James A. McLean, Joseph S. Morton, W. H. Brownrigs, George Fulton.

GERMAN.
Third Year.-Class 1.-Francis H. Bell. Class 2,-George L. Gordon.

## Cxaduates and studergraduates of the quiversity, and Cbucral students in sets.

## GRADUATES.

## MASTERS OF ARTS.

1869. 

| .... .... Cornwallis. |  |
| :---: | :---: |
|  | McNaughton, SamuelMacDonald, John H. . . . . . . . . . . . . . . . . Kentville. |
|  |  |
|  | 1871. |
|  |  |
|  |  |
|  |  |

1872. 


1874.


DOCTORS OF MEDICLNE AND MASTERS OF SURGERY.
1872.

1874.

1875.

| Bethune, J. L. <br> Lindsay, A. W. H. Muir, W. S. <br> Casimir, Robert. |  |
| :---: | :---: |
|  |  |
|  |  |
|  |  |

## BACHELORS OF ARTS.

1866. 


1867.

1868.



1871:

| Bayne, Ernest S. <br> McGregor, James G. <br> Russel, Alex. G. |
| :---: |
|  |  |
|  |  |

1872. 



## 1873.



## 1874.



1875
Fitzpatrick, James . .. .... ...... Roger's Hill, Pictotis
 MeMillan, George............... Scotch Hill, Pictou.
Stramberg, Hector M.... .......... Cape John, Pictou.

## URDERGADTATTTE, 1874-5.

FOURTH YEAR,



## SECOND YEAR



FIRST YEAR.


GENERAL STUDENTM.

NAME.
Carew, George O'B. Chisholm, Murdoch Chisholm, Wm. P. Corbett, Thomas Doull, Walter S., B.A. Fielding, George H. Fitzpatrick, John R. Forbes, James A. Fraser, Wm. M. Fraser, Wm. R. Gray, Andrew Grant, Joseph Gordon, George L. Gundry, Arthur W. Hunt, Ralph M. Johnson, Wilbert Mahon, Alex. W. MeGregor, Murdoch McKenzie, Duncan McKenzie, Dun. Blair McLean, Eben. McMillan, Angus MeMillan, Alex. H. Moseley, Fred. Moore, Wm. B. Oxley, Jas. M., B.A. Ross, John T. Smith, John Therpe, Edward Underwood, James Whittear, Wm. S.

RESIDENCE.
New Glasgow. Loch Lomond. Lower Onslow. Gay's River. Halifax.
Noel, Hants.
Roger's Hill, Pictou. Dalhcusie, Pictou. Dartmouth. Mount Thom, Pictor. Salt Springs, Pictou. East River, Pictou.
Sutherlandshire, G. B. Halifax.
Dartmouth.
Bass River, Colchester. Onslow.
Lake Ainslie, C. B. Loch Lomond.
Barney's River, Pictou. East River, Pictou. St. Ann's, C. B. Lake Ainslie, C. B. Dartmouth.
Kentville.
Halifax.
Earlton, Colchester. Belfast, P. E. I.
Cornwallis.
Windsor.
Upper Rawdon, Hants.

CLASSES ATTENDED.
Latin, Math., Chemistry. Classics, Math., Metaph. Classics, Math., Rhetoric. Class., Math., Log., Chem. Rhetoric, French.
Rhetoric.
Classics, Math., Rhetoric. Class., Math., Log., Chem.
Rhetoric, Ohemistry. Classics, Math., Rhetoric. Classics, Metaph., Ethics. Class., Math., Log., Chem. Lat., N. Phil., Met., Chem. Mathematics, Rhetoric. Classics, Math., Rhetoric. Classics, Math., Rhetoric. Latin, Math., Rhetoric. Greek, Rhetoric, Logic. Classics, Math., Metaph. Rhetoric.
Class., Math., Log., Chem. Classics, Math., Rhetoric.
Latin, Math., Rhetoric.
Rhetoric.
Latin, Rhetoric.
Rhetoric, French.
French.
Class., Math., Log, Chem.
Mathematics, Rhetoric.
Classics, Math, Rhetoric.
Classics, Math., Logic.

# DALHOUSIE COLLEGE AND UNIVERSITY, 

## HALIFAX.

SESSIONAL EXAMINATIONS, 1875.<br>Wednesday, April 14.<br>LATIN.--FIRST YEAR.

## CICERO: THIRD ORATION AGAINST CATILINE. VIRGIL: AENEID, BOOK XII.

Professor Johnson, M. A............................Eraminer.

1. Translate:
a. Nam, ut illa omittam, visas nocturno tempore $a b$ occidente faces ardoremque cæli, ut fulminum jactus, ut terre motus ceteraque, qua tam multa, nobis consulibus, facta sunt, ut hæc, quæ nunc fiumt, canere dii immortales viderentur; hoc certe, Quirites, quod sum dicturus, neque pretermittendum, neque relinquendum est. Nam profecto memoria tenetis, Cotta et Torquato consulihus, complures in Capitolio res de calo esse percussas : quam et simulacra deorum immortalium depulsa sunt, et statuæ veterum hominum dejectæ, et legum æra liquefacta, tactus est etiam ille, qui hane urbem condidit, Romulus ; quem inauratum in Capitolio parvum atque lactentem, uheribus lupinis inhiantem, fuisse meministis. Quo quidem tempore quum haruspices ex tota Etruria convenissent, cædes atque incendia et legum interitum et bellum civile ac domesticum et totius Urbis atque imperii occasum appropinquare dixerunt, nisi dii immortales, omni ratione placati, sno numine prope fata ipsa flexissent. Itaque illorum responsis tunc et lu!li derem per dies farri sunt, neque res ulla, quæ ad placandos deos pertineret, pratermissa est, iidemqne jusserunt, simulacrum Jovis farere majus et in excelso collocare et contra atque ante fuerat, ad orientem convertere : ac se sperare dixerunt, si illud signum, quod videtis, solis ortum et forum curiamque conspiceret, fore, ut ea consilia, quæ clam essent inita contra salutem Urbis atque imperii, illustrarentur, ut a senatu populoque Romano perspici possent. Atque illud ita collocandum consules illi locaverunt. Sed tanta fuit operis tarditas, ut neque a superioribus consulibus, neque a nobis ante hodiernum diem collocaretur.
b. Turnus ad hæc:
" $O$ soror, et dudum agnovi, quum prima per artem
Foedera turbâsti, teque bæe in bella dedisti;
Et nunc nequiequam fallis dea : sed quis Olympo
Demissam tantos voluit te ferre labores?
An fratris miseri letum ut crudele videres?
Nam quid ago ? aut quæ jam spondet Fortuna salutem ?
Vidi oculos ante ipse meos, me voce vocantem,
Murranum, quo non superat mihi carior alter,
Oppetere ingentem, atque ingenti vulnere victum.
Occidit infelix, ne nostrum dedecus Ufens
Aspicerer: Teucri potiuntar corpore et armis.

> Exscindine domos (id rebus defuit unum)
> Perpetiar? dextrâ nec Drancis dicta refellam?
> Terga dabo, et Turnum fugientem hæc terra videbit?
> Usque adeone mori miserum est? vos, o mihi Manes
> Este boni; quoniam Superis aversa voluntas:
> Sancta ad vos anima, atque istius inscia culpæ, Descendam, magnorum haud unquam indignus avorum."
2. Show how the clauses of the sentence 'ac se sperare . . . ' (1 a) are connected, and name each.
3. Give the rules for the cases of: 'motus,' 'nobis consulibus,' 'quem inauratum,' ' ratione,' - Olym po,' ' quo,' 'corpore,' 'culpæ,' 'avorum.'
4. Decline the following words, marking the quantities of increments: cælo, sicis, complures, seges, trabibus, virum.
5. What forms in the other degrees of comparison correspond to: proximis, magis, facilem, acerrimē, veterem, prior, fortissimě.
6. Name the parts of the verb to which these forms belong, mark quantities, and give principal parts:
cie, impertitur, metire, locarim, stridens, aperto, figit, rìdere, incubuit, licere.
7. Scan the last three lines, giving rules for final syllables.
8. What verbs govern the genitive? What verbs are followed by two accusatives? How are relations of place expressed?
9. Write a short sketch of Cicero's life.
10. Translate into Latin: Pisistratus conquered that country for himself, not for his native land.-Attalus, King of Asia, gave his kingdom to the Romans as a gift.-1 hope that you will come to me in a few days, and bring with you the books for which I asked you.-He says that he sold the horse for very little.-L. Sextius was made Consul in the three hundred and eighty-eighth year after the foundation of Rome.

## Additional for First and Second Class.

## CICERO: FOURTH ORATION AGAINST CATLIINE.

1. Translate chap. 5.
2. What nouns of the fourth declension are feminine? What words form the ablative (1) in $i$, (2) in $i$ or $e$. Give exceptions to rules.
3. Some adjectives do not admit of comparison ; some are compared by means of adverbs. Give them.
4. Write in Latin : $\frac{1}{2},=\frac{3}{4},-\frac{5}{7},-18,999$.
5. Distinguish : ědat, ēdat,-rēfert, rěfert,-occǐdi, occīdi,-ōs, ŏs,mănibus, mānibus,-sōlo, sŏlo. Consulere me, mihi,-temperare aliquid, alicui rei,-diligens patriam, patriæ.
6. What are the forms used in prose for the following :
a. Ne me lacrimis . . . prosequere.
b. (Sceptrum) patribus dedit gestare Latinis.
c. Juturnam misero, fateor, succurrere fratri, Suasi.
d. Hæс eadem, Aenea, Terram, Mare, Sidera juro.
e. Præterea regina tui fidissima.

# DALHOUSIE COLLEGE AND UNIVERSITY, 

## HALIFAX.

SESSIUNAL EXAMINATIONS, 1875.

Tuesday, April 13 th,
GREEK.

## FIRST YEAR.

LUUIAN - SELEUT DIALOGUES, $10-19$.
Professor Johnson,
Examiner

## 1. Translate:-

























2. Decline throughout the following words:-îßpls, $\pi o u ̃ s, ~ \tau o ̀ ~ \gamma e ́ v o c ̧, ~$

3. Give the forms in the other degrees of comparison corresponding

4. Write the nom. and acc. sing., and nom. and gen. pl. of:-



6. Write down the 3 rd sing. perf. imperative pass. of:一кодi\} $\}$,

7. Shew in a tabular form all the moods of the peculiar tenses in the active voice of $\delta i \delta \omega \mu \tau$, $i \eta \mu$.


9. Give some account of the circumstances or persons mentioned in




## ADDITIONAL FOR FIRST AND SECOND CLASS.

DEMOSTHENES: FIRST OLYNTHIAC.

1. Translate secs. 17, 18, 19. Edit. Bekh.
2. Explain the Syntax of the following clauses:-(a) Tò $\mu \grave{\varepsilon} v$ oiv

3. Decline $\sigma \phi \dot{\sigma}$, òvet $\rho a ́ \tau \omega v, ~ \gamma v v \dot{\eta}, ~ \ddot{\eta} \rho \omega \varsigma$.
4. Indicate 1978 (1) by letters, (2) by words.
5. What verbs in $-\varepsilon \omega$ form the future in $-\varepsilon \sigma \omega$ ? Give two examples of (1) Attic reduplication, (2) Attic pres. opt., (3) Syncopated perf. infin. act.
6. Name the tense, mood and voice of these verbal forms, and give


7. Compare the personal terminations in the sing. number of the pres. and imperf, indic. act. of the 2nd Conjugation in Greek with those in Latin, so as to shew their original identity.

# DALHOUSIE COLLEGE AND UNIVERSITY, 

HALIFAX.

# SESSIONAL EXAMINATIONS, 1875 , 

MOnday, April 19,9 А. м. то 1 р. м.

MATHEMATICS -FIRST YEAR,


#### Abstract

GEOMETRX,

Professor Macdonald................................ ExamŻner.


1. At a given point in a given straight line, to make an angle equal to a given rectilineal angle.
2. If a straight line be bisected and produced to any point, the rectangle contained by the whole line thus produced and the part produced, together with the square of half the line bisected, is equal to the square of the line made up of the half and the part produced. (By the division of the straight line only, if you can.)
3. BCD is a triangle, obtuse-angled at C , and BF is drawn perpendicular to $\mathrm{D} C$ prodaced: prove $\mathrm{BD} \mathrm{D}^{2}=\mathrm{BC}+\mathrm{C}^{2}+\mathrm{D}^{2}+2 \mathrm{DC}$. C F.
4. One circle eannot tonch another internally in more than one point.
5. The angles in the same segment of a circle dre equal to one another.
6. In equal cireles, equal chords cut off equal ares, the greater equal to the greater, and the less equal to the less.
7. Upon a given straight line to describe a segment of a circle which shall contain an angle equal to a given rectilineal angle.
8. If two chords in a circle cat one another, the reetangle contained by

- the segments of the one is equal to that contained by the segments of the other. Prove this for the case where one of the chords passes through the centre, cutting the other obliguely.

9. In a given eircle, inscribe a siangle equiangular to a given triangle,
10. Enumerate the regilar polygons, up to those of 60 sides, which Euclid's Fourth Book enables you to describe in or about a miven civele.
11. Generalise some of the Propositions of the Second Book of Enclid in the same way as you wozld the 7 th and 8 th of the Third Book.
12. Through a given point draw a straight line, making equal angles with two given straight lizes.
13. If straight dines be drawn from the nngles of a triangle to the middle points of the opposite sides, the sum of the squares of the eides: the sum of the squares of these lines : $: 4: 3$.
14. The radius of the cscele inscribed in ar equilateral triangle is equal to one-third of the perpendieular drawn from any angle to the opposite side.
15. Describe a circle of given radius, passing through a given point ad touching a given line.

# DALHOUSIE COLLEGE AND UNIVERSITY, 

HALIFAX.

SESSIONAL EXAMINATIONS, 1875.

Monday, April 19, 3 p. m. To 6 p. M.<br>MATHEMATICS-FIRST YEAR.

## ALGEBRA.

Professor Macdonald. . . . . . . . . . . . . . . . . . . . . . . . Examiner.

1. Reduce to Decimals the fractions $\frac{1}{4}, \frac{5}{6}, \frac{43}{66}$, shewing by your method the reason of the common Rule for the purpose. State the comparative advantages of Vulgar and of Decimal Fractions in numerical calculations.
2. Shew that the value of a Bill discounted at the Bank is less than the true value calculated on the strict method of Interest.
3. Find the least common multiple of $x-y, x+y, x^{3}+y^{3}, x^{3}-y^{3}$ : and the greatest common measure of $6 x^{3}+11 x^{2}-31 x+14$, and $4 x^{4}-47 x^{2}+7 x$.
4. Shew that $\frac{x^{2}}{a-\sqrt{a^{2}-x^{2}}}-\frac{x^{2}}{a+\sqrt{a^{2}-x^{2}}}=2 \sqrt{a^{2}-x^{2}}$ : and divide $1-\frac{2 a b}{a^{2}+b^{2}}$ by $\frac{a^{3}-b^{3}}{a-b}-3 a b$.
5. Extract the square root of $10 \frac{1}{2}-2 \sqrt{5}$, and expand $\left(1-\frac{x}{2}\right)^{4}$ by the Binomial Theorem.
6. Solve the simultaneous equations, $3 x-2 y=6,3 y-2 z=5$, and $3 z-2 x=-2$.
7. Given $x^{2}+p x+q=0$ : prove the sum of the roots $=-p$, and their product $=q$; and solve, by inspection, $x^{2}+5 x+6=0, x^{2}-$ $5 x+6=0$, and $x^{2}+5 x-6=0$
8. Given $x+y=7$ and $x^{4}+y^{4}=641$ : to find the real values of $x$ and $y$.
9. Solve by completing the square $2 x^{2}=5 x+63$.
10. A cistern can be filled with water by two pipes, by the one of which it would by filled two hours sooner than by the other : also both together fill it in $1 \frac{7}{8}$ hours. Find the time each pipe takes to fill the cistern.
11. The third term of an Arithmetical Progression is 4, and the eighth is $6 \frac{1}{2}$ : find the series.
12. Shew that when $r$ is less than 1 , the limit of the sum of a Geometrical series is $\frac{a}{1-r}$ : and apply the formula to find the value of the circulating decimal which is equal to $\frac{5}{37}$.
13. If $a: b:: c: d$, prove $\frac{m a \pm n b}{p a \pm q b}=\frac{m c \pm n d}{p c \pm q d}$
14. Find the sum of $2 n+1$ terms of the series, $1-3+5-7+\& c$.
15. Prove $(a+b)(b+c)(c+a)>8 a b c$.

# DALHOUSIE COLLEGE AND UNIVERSITY, 

## HALIFAX.

## SESSIONAL EXAMINATIONS, 1875.

Wednesdat, ApRil 21st.

ANGLO-SAXON-FIRST YEAR.
Professor DeMill, M. A.................Examiner.

## 1. Translate:

Ongan tha Augustinus mid his munucum to geefenlaecenne thaera apostola lif, mid singalum gebedum, and waeccan, and faestenum Gode theowigende, and lifes word tham the hi mihton bodigende, ealle middan eardlice thing, swa swa aelfremede, forhogigende, tha thing ana the hi to bigleofan behofedon underfonde, be tham the hi taehton selfe lybbende, and for thaere sothfaestnesse the hi bodedon, gearowe waeron ehtnesse to tholigenne, and deathe sweltan, gif hi thorfton. Hwaet tha gelyfdon forwel manige, and on Godes naman gefullode wurdon, wundrigende thaere bilewitnesse heora unscaeththigan lifes, and swetnesse heora heofonlican lare.
2. Parse-Ongan, geefanlaecenne, waeccan, underfonde, taehton, thaere.
3. Write out the cases of the adjective-blind.
4. Define, and illustrate from words in the above passage-ablaut, assibilation, syncope.
5. Give the modern forms of as many of the above words as possible, and explain the nature of the euphonic changes that may have taken place.
6. Write out the parts of any one of the following verbs:-wesan, mugan, cunnan, sculan.
7. Translate :

On hwael hreopon here fugolas hilde graedige ; hraefen gol deawig-fethere ofer driht-neum, won wael-ceasega. Wulfas sungon atol aefen-leod aetes on wenan, carleason deor, cwyld-rof beodan on lathra last leod-maegnes fyl, hreopon mearc-weardas middum nithum :

- fleah faege gast, focewaes gehaeged.

Hwilum of tham werode wlance thegnas maeton mil-pathas meara bogum.
8. Explain the versification.
9. Parse-Hreopon, wael ceasega, sungon, beodan, maeton, bogum.
10. Give examples from words in the above passage of aphaeresis, apocope, elision.
11. Explain the construction of hilde, deor, lathra, fleah.
12. State the chief differences between Auglo Saxon and Modern English in inflection and composition.

# DALHOUSIE COLLEGE AND UNIVERSITY, 

HALIFAX.

## SESSIONAL EXAMINATIONS, 1875.

Welnesday, April 21.

## RHETORIC.

Professor DeMili, M. A.......................Examiner.
(Not more than one question is to be answered out of each group.)

1. Explain the ancient and modern views of Rhetoric. What are the ends of composition? Explain the nature of style.
2. The relations of Idiom and Grammar to one another. Define and illustrate Precision. Explain the following terms, Conciseness, Diffuseness, Digression.
3. Under what circumstances is Rhetoric associated with the Fine Arts. Define and illustrate Euphony, Elegance. Explain rhythm in prose composition.
4. Show the importance of Antithesis in style and literature. The "quid" and "quale" in epithets. Hyperbaton.
5. What are Figures of speech? Define and illustrate Tropes. Explain "Illustrative Style," "Epigrammatic Style."
6. Explain Aristotles three divisions of oratory. There are two kinds of Invention. The Enthymeme.
7. Explain and illustrate the Status. Explain classification in exposition. Write out an analysis of a portion of any work, e. g., Bacon's Advancement of Learning, Book 2.
8. Define Taxis and enumerate its chief modes. Explain the difference between the Scenic and Dramatic Taxis. Give Quintilian's summary of things to be observed in the exordium.
9. There are two leading theories as to the nature of the Beautiful. Define and illustrate Wit and Humor. Fxplain Paronomasia.
10. Criticise the following passage :-

The Method discernible in Voltaire, and this on all subjects whatever, is a purely business Method. The order that arises from it is not Beauty, but at best, Regularity. His objects do not lie round him in pictorial, not always in scientific grouping; but rather in commodious rows, where each may be seen and come at, like goods in a well-kept ware-house. We might say there is not the deep natural symmetry of a forest oak, but the simple artificial symmetry of a parlor chandelier. Compare, for example, the plan of the Henriade to that of our so barbarous Hamlet. The plan of the former is a geometrical diagram by Fermat; that of the latter a cartoon by Raphael. The Henriade, as we see it completed, is a polished, square-built Tuileries ; Hamlet is a mysterious, star-paved Valhalla, and dwelling of the gods.

## DALHOUSIE COLLEGE AND UNIVERSITY,

HALIFAX.

## SESSIONAL EXAMINATIONS, 1875.

## Wicdnesday, April 21.

$\qquad$
ENGLISH LANGUAGE.

Professor DeMill, M A......................Examiner.
(Not more than six questions are to be answered.)

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

# DALHOUSIE COLLEGE AND UNIVERSITY, 

## HALIFAX.

SESSIONAL EXAMINATIONS, 1875.<br>Wednesday, April 14.<br>LATIN. - SECOND YEAR.

LIVY: BOOK I. OHAPS. 1-30.-HORACE : ODES, BOOK IV.
Professor Johnson, M.A Examiner.

1. Translate:
a. Jam tum in Palatino monte Lupercal hoc fuisse ludicrum ferunt, et a Pallanteo urbe Arcadica Palatium, deinde Palatinum montem appellatum. ibi Evandrum, qui ex eo genere Arcadum multis ante tempestatibus tenuerit loca, solenne allatum ex Arcadia instituisse, ut nudi juvenes Lycæum Pana venerantes per lusum atque lasciviam currerent: (quem Romani deinde vocarunt Inuum). Huic deditis ludicro, quam solenne notum esset, insidiatos ob iram prædæ amissæ latrones, quum Romulus vi se defendisset, Remum cepisse; captum regi Amulio tradidisse, ultro accusantes. Crimini maxime dabant, in Numitoris agros ab his impetum fieri : inde eos, collecta juvenum manu, hostilem in modum predas agere. sic Numitori ad supplicium Remus deditur.
b. Ad hæc consultanda procurandaque multitudine omni a vi et armis conversa, et animi aliquid agendo occupati erant, et deorum assidua insidens cara, quum interesse rebus humanis coeleste numen videretur, ea pietate omnium pectora imbuerat, ut fides ac jusjurandum, proxime legum ac penarum metum, civitatem regerent. Et quum ipsi se homines in regis, velut unici exempli, mores formarent ; tum finitimi etiam populi, qui ante, castra, non urbem positam in medio, ad sollicitandam o:nnium pacem, crediderant, in eam verecundiam adducti sunt, ut eivitatem totam in cultum versam deorum violari ducerent nefas. Lacus erat, quem medium ex opaco speen fons perenni rigabat aqua. quo quia se persæpe Numa sine arbitris, velut ad congressum dex, inferebat, Camenis eum lueum sacravit; juod earum ibi concilia cum conjuge sua Egeria essent.
c.

> Est mihi nonum superantis annum Plenus Albani cadus; est in horto, Phylli, nectendis apium coronis ; Est hederae vis
> Multa, qua crines religata fulges;
> Ridet argento domus; ara castis
> Vincta verbenis avet immolato
> Spargier agno;
> Cuncta festinat manus, huc et illuc
> Cursitant mixtae pueris puellae;
> Sordidam flammae trepidant rotantes
> Vertice famum.

Ut tamen noris quibus advoceris Gaudiis, Idus tibi sunt agendae, Qui dies mensem Veneris marinae Findit Aprilem; Jure sollemnis mihi sanctiorque
Paene natali proprio, quod ex hac
Luce Maecenas meus adfluentes Ordinat annos.
2. Analyze the first sentence of the second extract so as to shew the connection of the clauses.
3. What is the force of 'hoc' in 'Lupercal hoc'? What change has been suggested in 'proxime . . . metum,' and why? 'Vertice' may be translated in two ways? Who were the Camenoe? What is the origin of the names 'Lupercal,' 'Lycæum,' 'Camenæ,' 'Idus'?
4. Account for (1) the cases of 'deditis,' 'crimini,' 'multitudine,' 'rebus,' 'coronis,' ' tibi '-(2) the moods and tenses of 'tenuerit,' 'currerent,' 'esset,' 'cepisse,' 'positam,' 'quia . . inferebat,' 'quod . . essent,' ' advoceris.'
5. Decline throughout : vate, Idus, cubili, boves, viris, Phylli, pubes, compede.
6. Parse, giving the principal parts : fervet, secto, merses, quateret, mereberis, spargier, ferito, defexit, peregerunt, orsi.
7. Scan the first stanza of extract $c$. Give the form of the Alcaic stanza.
8. In turning oratio recta into o. obliqua, how are the moods changed?
9. When may and when must the gerundive be used for the gerund? How is the lack of participles in Latin supplied?
10. Give some account of Livy's History. Why is the Regal Period considered unhistorical?
11. Translate into Latin:-Porsena, thinking it a great thing for the Tuscans that there should be a King at Rome, as well as one of his own nation, came to Rome with a hostile army. Never before had such great terror seized on the Senate; so strong at that time was the Clusine State, and so great was the renown of Porsena. And they feared not only the emeny but the very citizens, lest the Roman youth, struck with fear, having received the King into the city, should accept peace even along with slavery.

> Additional for First and Second Class.

## LIVY: BOOK I. CHAPS. 30 TO END.

1. Translate chap. 53.
2. Write in classical Latin : On the 28th of April, B. C. 101.
3. Supply proper cases to the following words, so as to make simple sentences : expers, utilis, subvenit, prope, imperatur, circumdo, opus est.
4. What verhs form the fut. particple from the pres. indic.?
5. Quote imitations of Greek syntax by Horace, and give the usual forms in prose.
6. Turn into oratio recta the passage 'Jam ab alienis . . . Latium,' chap. 53.
7. How may the story of Romulus and Remus be accounted for?

## DALHOUSIE COLLEGE AND UNIVERSITY,

## HALIFAX.

SESSIONAL EXAMINATIONS, 1875.
Tuesday, April 13th.

## GREEK.

## SECOND YEAR.

HERODOTUS: BOOK I, §§ 26-69-HOMER: ODYSNEY, BOOK IX.
Professor Johnson.
Examiner.

## 1. Translate:-
















(b) $\quad \Pi о \lambda \lambda \tilde{\jmath}$ dè $\rho \circ$ í̌५ $\pi \rho o ̀ s ~ \delta \partial \rho о \varsigma ~ \tau \rho \varepsilon ́ \pi \varepsilon ~ \pi i ́ o v a ~ \mu \tilde{\eta} \lambda a$




 А










2. Write all the cases, with contracted terminations, of:-\&ikóv, $\varepsilon$ हैטvтoṽ, $\sigma \tau a \sigma \iota \omega \tau \sigma v, ~ \grave{~} \sigma \tau \varepsilon o \varsigma, \pi v \vartheta \omega$.
3. What are Epic forms of (1) the dat. pl., (2) act. infinitive, (3), nd aor. indicative.
4. Parse these words, giving the nom. and gen. cases sing, in the

5. Parse the following Verbal forms, and give the chief tenses in
 $\dot{\varepsilon} \lambda \varepsilon ́ \gamma \mu \eta \nu, \dot{a} \phi \dot{v} \sigma \sigma \alpha \varsigma, \eta \not \mu \varepsilon \vartheta \alpha$.
6. Give examples of adverbial accusatives of (1) time, (2) manner.
7. What classes of verbs are followed by (1) the genitive, (2) two accusatives?
8. Translate into Greek:-The Lacedæmonians remained there many days, and ravaged the whole country. Those who managed the affairs of Greece in this war are worthy of great praise. When they heard this, the people of the city went down to the Piræus with all speed.
9. Write a short account of Herodotus.

## ADDITIONAL FOR FIRST AND SECOND CLASS.

HERODOTUS: BOOK II., SECS. 1-34.

1. Translate secs. 11, 22.
2. What are the equivalents in the Attic dialect of $:-\pi o \lambda \lambda \omega \omega$,
 accents).
3. Decline the following words in the Epic forms:-к $\lambda \varepsilon i \varsigma, \eta \ddot{\eta} \lambda \iota a$, vaũs, $\beta a \sigma \iota \lambda \varepsilon i ́ s$.
4. What verbs take a double augment ?
5. Parse (giving chief tenses) and accentuate:-ıঠрvто, $\pi \rho о \eta \delta \varepsilon a \tau o$, $\varepsilon \xi \varepsilon \lambda a \lambda a \mu \varepsilon \nu \alpha \varsigma, \kappa а т a \tau \mu \eta \vartheta \varepsilon \epsilon \sigma a \iota,-\eta \nu \omega \gamma \varepsilon a, \eta \varepsilon \iota \delta \eta$, єคХато, ঠaยи, катаঠขvтa.


6. Accentuate the following sentences, and translate them into

 алєєХоито.

# DALHOUSIE COLLEGE AND UNIVERSITY, HALIFAX. 

SESSIONAI EXAMINATIONS, 1875.<br>MONbAy, APRIL 19, 3 te 6e. M.<br>MATHEMATACS-SECONB YEAR.<br>TRIGOMOMETRY AND $\angle L G E B R A$.

Professor Macdonald........................... Examiner.

1. Explain what is meant by Circular Measure, distinguishing it from Gradnal Measure. Also, if the measure of an angle be 31416 , find the number of Degrees \&c. in it.
2. When a Trignometrical Function passes fhrough the extreme values, $\pm 0, \pm \infty$, 対 changes sign. Tlustrate fully.
3. Given a Table of Natural Sines and Cesines ; show how a lugrathmic Table may be constructed.
4. Given $\tan \mathrm{A}=\sqrt{3}:$ find the general valme of A .
5. In the triangle A B C, right angled at $C$, given $\{1\}$ a and $c,(2\}$ $a$ and $b$ : show how to find the other parts in each case.
6. Given the three sides of a triangle; there are two methods for finding the angles. Explain them.
7. Prove $\sin (A+B) \sin (A-B)=\sin ^{2} A-\sin ^{2} B:$ and also $\frac{\sin A+\sin 3 A}{\cos A+\cos 3 A}=\tan 2 A$.
8. Given $\mathrm{A}+\mathrm{B}+\mathrm{C}=90^{\circ}$ :

$$
\text { prove } \cot \mathrm{A}+\cot \mathrm{B}+\cot \mathrm{C}=\cot \mathrm{A} \cot \mathrm{~B} \cot \mathrm{C}
$$

9. Preve that in any triangle $\sin (\mathrm{A}-\mathrm{B})=\frac{a^{2}-b^{2}}{c^{2}} \sin (\mathrm{~A}+\mathrm{B})$, also $\tan \frac{1}{2} \mathrm{~A} \tan \frac{1}{2} \mathrm{~B}=\frac{a+b-c}{a+b+c}$.
10. A ship in latitude $l$ sails due East or West $d$ miles : find the Difference of Langitude.
11. Find general integral positive solutions for $6 x-5 y=19$, and test them in two cases.
12. There are 9 things, $a, b, c, \& c$. In order to have the greatest numther of combinations of them possible, how many must be taken at a time ?
13. Find the present value of a Freehold, worth $£ A$ annually, (1) to commence at the present time, (2) to commence $q$ years hence.
14. Define a Logarithm; and explain how Logarithms can be employed to simplify numerical calculations, proving one of the rules you enuntiate.
15. Shew that imaginary roots enter an equation in pairs, the equation, $f(x)=0$, being a rational integral function of $x$.

## DALHOUSIE COLLEGE AND UNIVERSITY,

HALIFAX.

SESSIONAL EXAMINATIONS, 1875.

MONDAY, April 19,9 A. M. T0 1 P. M.<br>MATHEMATICS-SECOND YEAR.<br>GEOMETRY AND MENSURATION.

## Professor Macdonald........................ . . Examiner.

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

## DALHOUSIE COLLEGE AND UNIVERSITY,

HALIFAX.

SESSIONAL EXAMINATIONS, 1875.
Friday, April 23,9 A. м. to 12 3.

MATHEMATICS-SECOND YEAR, (EXTRA.)

Professor Macdonald.......................Examiner.

1. If a straight line be at right angles to a plane, every plane whicl; passes through it shall be at right angies to the same plane.
2. Through a given point in space draw a plane parallel to a given plane.
3. X and Y are two circles, the one not being within the other, and Z is a third circle touching them externally : prove that the line joining the points of contact passes through the external centre of similitude of X and Y
4. If you had to construct Tables of the Logarithms of Numbers to the base 12, exhibit fully the process you would pursue, starting from the base of the Napierian system.
5. Prove $\left(1+\frac{1}{n}\right)^{n x}=e^{x}$ when $n$ becomes indefinitely great.
6. All the combinations of $n$ things, when an odd number of them are taken at a time exceed all the combinations of the same, when an even number are taken at a time.
7. Prove the Binomial Theorem for negative indices; and apply the Theorem to find approximately the cube root of 130 .
8. In a bag are 4 balls, equal in other respects, but 3 are black and 1 white. A, B, C, are going to draw a ball in turn, replacing it before the next draw, till white is drawn. The successful drawer gets $\$ 100$. Find the values of their expectations.
9. If $l, m, n$ are the lines drawn from the angles of a triangle to the centre of the inscribed circle, prove $\frac{l m n}{a b c}=\frac{r}{s}$.
10. Prove that if $\cos v=\frac{\cos u-e}{1-e \cos u}$, then $\tan \frac{v}{2}=\sqrt{\frac{1}{1-e}} \tan \frac{u}{2}$ and that if the sides of a triangle are in Harmonic Progression, then $\cos \frac{B}{2}=\sqrt{\frac{\sin A \sin C}{\cos A+\cos C}}$

## DALHOUSIE COLLEGE AND UNIVERSITY,

HALIFAX.

SESSIONAL EXAMINATIONS, 1875.

Friday, April $16 \mathrm{tif}, 9$ A. m. тo $1 \mathrm{p} . \mathrm{m}$.

LOGIC AND PSYOHOLOGY.

## Professor William Lyale, LL.D. <br> Examiner.

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

# DALHOUSIE COLLEGE AND UNIVERSITY, 

HALIFAX.

SESSIONAL EXAMINATIONS, 1875.<br>Thursday, April 22.-9 A. м. то 1 p. м.<br>JUNIOR OHEMISTRY. - SECOND YEAR OF ARTS COURSE.<br>Professor Lawson...................... Examiner.

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


# DALHOUSIE COLLEGE AND UNIVERSITY, 

HALIFAX.

SESSIONAL EXAMINATIONS, 1875.
Wednesday, April 14.

LATIN. - THIRD AND FOURTH YEARS.

HORACE : SATIRES, BOOK I. 3, 4, 5, 6. 9. TERENCE: ADELPHI.
Professor Johnson, M.A.
Examiner.

1. Translate:
a. Hoc ego commodius quam tu, praeclare senator, Millibus atque aliis vivo. Quacunque libido est, Incedo solus ; percontor quanti olus ac far; Failacem Circum vespertinumque pererro Saepe Forum ; adsisto divinis ; inde domum me Ad porri et ciceris refero laganique catinum ; Coena ministratur pueris tribus, et lapis albus Pocula cum cyatho duo sustinet ; adstat echinus Vilis, cum patera guttus, Campana supellex. Deinde eo dormitum, non sollicitus mihi quod cras Surgendum sit mane, obeundus Marsya, qui se Vultum ferre negat Noviorum posse minoris. Ad quartam jaceo; post hane vagor; aut eqo, lecto Aut scripto quod me tacitum juvet, ungor olivo, Non quo fraudatis immundus Natta lucernis. Ast ubi me fessum sol herior ire lavatum Admonait fugio Campum lusumque trigonem. Pransus non avide, quantum interpellet inani Ventre diem durare, domesticus atior. Haec est
Vita solutorum misera ambitione gravique; His me consolor victurum suavius ac si Quaestor avus pater atque meus patruusque faisset.
b. Sr. Labascit. unum hoc habeo: uide si satis placet :

Potius quam uenias in periclum, Samnio,
Seruesne an perdas totum, dividuom face.
Minas decem conradet alicunde. Sa. Ei mihi, Etiam de sorte nunc uenio in dubium miser?
Pudet nil? omnis dentis labefecit mihi :
Praeterea colaphis tuber est totum caput :
Etiam insuper defrudet? nusquam abeo. Sy. Vt labet:
Numquid uis quin abeam? Sx. Immo hercle hoc quaeso, Syre,
Vt ut haee sunt acta, potins quan litis sequar,
Meum mihi redd:tur, saltem quanti emptast, Syre.
Scio te non usum antehac amicitia mea :
Memorem me dices esse et gratum. Sy. Sedulo
Faciam. sed Ctesiphonem uideo: laetus est
De amica. Sa. Quid quod te oro? Sy. Paulisper mane.
c. Mr. Illinc huc transferetur uirgo. De. O Iuppiter,

Istocine pacto oportet? Mi. Quid faciam amplins?
De. Quid facias? si non ipsa re tibi istuc dolet,
Simulare certe est hominis. Mr. Quin iam nirginem
Despondi : res compositast : fiunt nuptiae:
Dempsi metum omnem: haee magis sunt hominis. De. Ceterum
Placet tibi factum, Micio? Mi. Non, si queam
Mutare, nunc quom non queo, animo aequo fero.

Ita uitast hominum, quasi quom ludas tesseris, Si illud quod maxume opus est iactu non cadit, Illud quod cecidit forte, id arte ut corrigas.
De. Corrector: nempe tua arte viginti minae
Pro psaltria periere: quae quantum potest
Aliquo abiciendast, si non pretio, gratiis.
Mi. Neque est neque illam sane studeo uendere.

De. Quid igitur faciet? Mr. Domi erit. De. Pro diuom fidem, Meretrix et mater familias una in domo ?
2. Write the singular cases of: 'olus,' 'far,' 'ciceris,' 'supellex,' 'Marsya,' 'trigonem, ' 'tesseris.'
3. Account for (1) the cases of: 'quanti,' 'pueris,' 'mihi,' 'lecto,' 'ambitione,' 'Quid quod te,' 'hominis,' 'gratiis;' (2) the moods of 'Surgendum sit,' ' juvet,' 'ire lavatum,' 'durare,' ' perdas,' ' defrudet,' 'facias.'
4. Parse the following; verbs, giving their principal parts : potus, insudet, recisurum, ignoscet, pāreret, quæso, quit, confidam, molendo, appāret, largitor.
5. Give the meaning and derivation of: extricat, trigonem, mina, villula, villum, belle, podagra, silicernium, epol, parasitaster, tesscris, sodes.
6. What is the origin of these French words : oni, école, château, palais mûr, mur, dont, mais, chez, assez.
7. What are the reasons for supposing that written Latin differed considerably from the ordinary speech of the people? How does this question affect the scansion of Terence's plays ?
8. Write a short sketch of Terence's life and works.
9. Translate into Latin : Italy was at that time subject to the government of Proconsuls. One of these officers, named Servilias, stationed in the Picenian territory, received information that the citizens of Asculum were organizing insurrection. He immediately entered that city with a small retinue and assailed the citizens with vehement threats. The people set upon him and slew him; and now blood had been spilt, tree vent was given to passion. All Romans who fell into their hands were massacred and their goods confiscated.

## Additional for First and Second Class.

1. Point out some peculiarities of syntax in the following sentences, and give the usual constructions:
$a$ a. durus componere versus.
b. cum mea nemo

Scripta legat vulgo recitare timentis.
c. utpote plures

Culpari dignos.
Judice quo nosti populo.
notante
2. Explain these forms : coeperet, cědo, faxo, siit, potin, siet, face, noris, erepsemus, scibo, patrissas, produxe.
3 Distinguish : scio, nosco, novi,-hic, iste, ille, is,-fores crepant, fores puitant,-postulo cum infin., postulo cum ut et subj., -nescio qui sit, nescio quis sit.
4. Trace the steps by which $s$ has come to be the sign of the plural, and the absence of it the sign of the sing. in French nouns. Mention exceptions.
5. Give some account of the different kinds of stage performances in Italy.

## DALHOUSIE COLLEGE AND UNIVERSITY,

# halifax. <br> SESSIONAL EXAMINATIONS, 1875. 

Thursday, April 15 th.

## GREEK.

## THIRD YEAR.

## EURIPIDES: MEDEA.

## Professor Jounson,

$\qquad$ Examiner.

## 1. Translate:-










 $\mu a ́ \lambda \iota \sigma \tau a ~ \pi a ́ v \tau \omega \nu ~ к а i ̀ ~ \xi ข \nu \varepsilon \rho \gamma o ̀ v ~ \varepsilon і ̇ д o ́ \mu \eta \nu$, 'Eкáтทv, $\mu v \chi$ оїs vaíovocv ह̇otias $\dot{\varepsilon} \mu \bar{\eta} s$,











$\delta б \mu \nu v \tau \varepsilon \pi a ́ v \tau a ~ \sigma v \gamma \chi \varepsilon ́ \varepsilon \sigma \sigma$ 'Iáбovos












 $\mu \eta \delta^{\circ} \eta \dot{\sigma} \sigma \chi a i a v, ~ a ̀ \lambda \lambda a ̀ ~ \vartheta a \tau \varepsilon ́ \rho o v ~ \tau \rho o ́ \pi \pi o v, ~$


 кย́aן.
3. Account for the cases of the following words which occur in the
 $\tau \rho \bar{\pi} \pi о v, \dot{\varepsilon} \chi \theta \rho o i s$.
4. Name the parts of the verb in which the following forms are found, and give their principal tenses:- $\alpha \gamma \tilde{\eta} \lambda a \iota$, ávao $\chi \varepsilon \vartheta \varepsilon i v, \dot{\alpha} a \mu \varepsilon i \eta v$,

5. What relations are expressed by the dative case? What prepositions govern (1) two cases, (2) three cases?
6. A wish may be expressed in different ways; give examples with Latin equivalents.
7. Give a scheme of Anapæstic metre. Scan the lines beginning:-

8. Sketch the life of Euripides.
9. Translate into Greek:-Let no one speak evil of any one. I have no means of acquiring money from those that are present.' He says that the river Nile contains all kinds of fish. But now having heard this, we fear the city has been taken. If you had anything to say in behalf of this man, I would gladly hear it.

## ADDITIONAL FOR FIRST AND SECOND CLASS.

1. Form sentences containing the following words, so as to shew
 $\pi \rho^{\prime} \nu$ —фаігонаь.
2. Translate into Latin and accentuate:-
 какоข.
 $\dot{a} \zeta \eta \mu о v_{\varsigma} ; ~ \tau о \lambda \mu \eta \tau \varepsilon о \nu \tau а \delta^{\prime}$.
3. Give an account of the rise and growth of Tragedy in Greece.
4. Point out the differences between the tragedies of Euripides and those of Sophocles.
5. Describe the place, time, and manner of representing plays at Athens.

## DALHOUSIE COLLEGE AND UNIVERSITY,

HALIFAX.

# SESSIONAL EXAMINATIONS, 1875. 

Monday, April 19, 9 a. m. to 1 p. m.

STATICS AND DYNAMICS-THIRD YEAR.

## Professor Macdonald................................ . . Examiner.

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

## DALHOUSIE COLLEGE AND UNIVERSITY,

HALIFAX.

# SESSIONAL EXAMINATIONS, 1875. 

Tuesday, April 20.-9 A. м. то 1 р. м.

## experimental physics.

Very Rev. Princlpal Ross, D. D........... Examiner.

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

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## XAHIFAE

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# DALHOUSIE COLLEGE AND UNIVERSITY, 

HALIFAX.

SESSIONAL EXAMINATIONS, 1875.<br>Friday, April 16 th , from 9 a: m. to 1 p. m.

METAPHYSICS AND ESTHETIOS.

Professor William Lyall, LL D ....... ........ Examiner.

1. Why was the New Academy so called? What element did it admit into speculation which Plato and the Academy had eliminated from it? State the character of this philosophy, with the names of its founders and principal abettors.
2. What was the fate of Philosophy among the Romans? What plaee does Cirero hold in philosophy?
3. Who was the founder of Neo-Platonism? In what state of opinion had it its rise?
4. What were the peculiar doctrines of Plotinus? What are the principal names of the Alexandrian School ?
5. What was the relation of Christianity to Philosophy ?
6. What contributions did Boethius, Cassiodorus, Isidorus of Seville, and Bede of England, make to Philosophy ?
7. What were the "Trivium" and "Quadrivium"?
8. From what circumstance did the Scholastic age derive its name ? Who were the Schoolmen ?
9. What great question divided the Scholastic period of Philosophy ? What is the aspect of this question at the present day ?
10. Show Descartes' place in philosophy, and his influence on succeeaing speculation. What view of St. Anselm's did he revive?
11. What tendency in Aristotle and others do we recognize in reference to the feelings as claiming a place in any classification of the mental states? Who first admitted them into a distribution of the mind ?
12. What classifications have been given of these states? How, and on what principle, do we propose to classify them?
13. What do you understand by the Esthetic state, and in what class of the emotions are we to find it ?
14. What are some of the theories on the subject of the Beautiful and the Sublime? Give a particular account of Alison's theory.
15. What error does Sir William Hamilton seem to have fallen into in reference to the feelings and the conations respectively? Classify the Desires.
16. How would you regard Consience among the active powers?
:7. What is the distinctive characteristic of the Will among these powers?
17. What is the relation of the Will to morality? And what apparent paradox emerges in connexion with the origin of moral evil? What is our wisdom in reference to that paradox ?

# DALHOUSIE COLLEGE AND UNIVERSITY, 

HALIFAX.

SESSIONAL EXAMINATIONS, 1875.<br>Thursday, April 22. -9 A. M. TO 1 p. M.<br>SENIOR CHEMISTRY. -THIRD YEAR OF ARTS COURSE.<br>Professor Lawson.................... Examiner.

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

10, Explain the constitution of Ifrorganic Salts, taking $\mathrm{HCl}, \mathrm{H}^{2} \mathrm{O}$, or any other compound, as a type.

# DALHOUSIE COLLEGE AND UNIVERSITY, 

HALIFAX.

SESSIONAL EXAMINATIONS, 1875.<br>FRIDAY, April 23.<br>FRENCH-THIRD YEAR.<br>James Liechti, Esq........................Examiner.

Translate: I. La vie passive de l'homme n'est rien et ne regarde qu' un corps dont il sera bientôt délivré ; mais sa vie active et morale, qui doit influer sur tout son être consiste dans l'exercice de sa volonté. La vie est un mal pour le méchant qui prospère, et un bien pour l'honnête homme infortuné ; car ce n'est pas une modification passagère, mais son rapport avec sou objet, qui la rend bonne ou mauvaise.

Change done dès aujourd'hui ; et puisque c'est dans la mauvaise disposition de ton āme qu'est tout le mal, corrige tes affections déréglées et ne brûle pas ta maison pour n'avoir pas la peine de la rarger
J. J. Rousseau, (Le suicide.)
II. Ledru: Ah çà, jeune homme, si vous vouliez modérer vos expressions; c'est 17 ton anquel je ne suis point habitué!

Charles: Tu t'y remettras, car on m'a tout dit. J'avais d'abord dessein de t'assommer, mais j'ai changé d'idee. Un me donnerait quelque faquin, autant te garder: ainsi, je consens à t'obéir, à condition que tu seras à mes ordres.

Je ne t'erapêche pas d'être un homme de génie! et pourvu que tu te conduises en garçon d'esprit, c'est tout ce qu'il nous faut. Mon pēre doit être parti maintenant ; et en son absence, nous voulons donner un bal au château : c'est la fête du village.
Ledru: Mais Monsieur.
Charles: Ecoute donc, tu es mon gouverneur; c'est à toi d'arranger pour qu'il n'en sache rien. Evgéne Scriee, (Les Precepteurs.)
III. Les traits de son visage impassible autant que celui de M. de Talleyrand, paraissaient avoir été conlés en bronze. Son âge était un problème : on ne pouvait pas savoir s'il était vieux avant le temps, ou s'il avait ménagé sa jeunesse afin qu'elle lui servît toujours. A l'imitation de Fontenelle, il economisait le mouvement vital, et concentrait tous les sentimens humains dans le moi. Aussi sa vie s'écoulait-elle sans faire plus de bruit que le sable d'une horloge antique Vers le soir, l'homme-billet se changeait en un homme ordinaire, et ses métaux se métamorphosaient en coeur humain. S'il était content de sa journée, il se frottait les mains en laissant échapper par les rides crevassées de son visage une fumée de gaité, car il est impossible d'exprimer autrement le jeu muet de ses muscles. Enfin dans ses plus grands accēs de joie, sa conversation restait monosyllabique, et sa contenance était toujours négative.

Balzac, ( $L$ ' usurier.)
Translate into French :
A. Towards ten, a gentle knock was heard at the door ; ; stir; a second knock was heard, rather londer, nerberl did nos see who is there," said the king; it was Colo, fill gentle; "Go, and in"" said the king. "Sire" sid come voice, "it is time to go to Whitehe colonel, with a low and half trenabling to rest there." "I will go directly," answered Chave some further time Hacker went out.

Guizot-(Last moments of Charles 1.)
B. Alas! my money, my dear money, my dear friend; I have been deprived of thee; and since thou hast been taken from me, I have lost my support, my consolation and joy; all is over with me, I have done with the world. I cannot live without thee. Alas! I am exhausted ; I am dying, I am dead; I feel as if I were buried already. Is there no one to revive me by giving me back my beloved money, or by informing me who has taken it.
(1.) Account for the following words, giving full explanations: ranger (I) ; auquel, ty, d’idée, autant, conduise (II) ; savoir, servît, le moi (III).
(2.) Mention at least ten of the leading points in which the English and French differ, giving an example in illustration of each point.
(3.) Explain the construction of the Object Pron. (disj. and conj.) writing short examples. Name those Pros. which are both conj. and disj. Why is the following sentence incorrect: Permettez que je vous lui présente They are to be sent to him there.
(4.) Que. show by examples the various meanings this word admits of. Which is the position of the relat. Pron.? The Queen's daughter who is to be married. What I have been thinking of, and what I am speaking of now, will shortly be done.
(5.) Quelgue soit son influence, quels que talents, qu'il ait, et quel que savant qu'il soit, il n'a pu rénssir. Correct and explain. Quelgue is invariable before a noun in one case? Write an example.
(6.) Both words of a negation may be placed together, or either may be used without the other? State the three cases. Name principal negations.
(7.) Show how and when the reflect form is to be used. What is the Passive Form of intrans. verbs? Certain intrans. verbs are conjugated with être only ? These students are spoken of. The tour of the world is made in less than 90 days. These gentlemen are writing one another.
(8.) Form Adverbs from gentil, économe, impuni, traître. Illustrate the various meanings of combien, and state what word is used in exclamations instead of combien. Translate : He studies very much. You are late. The mall is due. It is late.
(9.) Explain the difference between: dans and en; vers and envers; avant and devant. How is chez to be applied? In truth. In the United States. In the year 1875.
(10.) Give the equivalents for: But for ; either (before nouns.) Trans. Both in England and France. Whether I read or write. Unless you do your duty.
(11.) Explain in full the agreement of Present and Past Parts., giving examples.
(12.) Write short notes on : LaBruyère, Mad. de Sévigné, Mad. de Staël, Châteaubriand, Eugēne Scribe, and Jules Janin.

# DALHOUSIE COLLEGE AND UNIVERSITY, 

HALIFAX.

SESSIONAL EXAMINATIONS, 1875.

Friday, April 23.

GERMAN-THIRD YEAR.

James Liechiti, Esq.......................... Examiner.

## Translate: I. "Schiller": Kampf mit dem Drachen.

Des Beifalls lang gehemmte Lust Befreit jetzt aller Hörer Brust, So wie der Ritter dies gesprochen, Und zehnfach am Gewölb, gebrochen, Wälzt der vermischten Stimmen Schall sich brausend fort im Wiederhall. Laut fordern selbst des Ordens Söhne, Dass man die Heldenstirne kröne, Und dankbar im Triumphgepräng Will ihn das Volk dem Volke zeigen; Da faltet seine Stirue streng Der Meister und gebietet Schweigen.

Und spricht: Den Drachen, der dies Land, Verheert, schlugst du mit tapfrer Hand ; Ein Gott bist du dem Volke worden : Ein Feind kommst du zurick dem Orden, Und einen schlimmern Wurm gebar Dein Herz, als dieser Drache war. Die Schlange, die das Herz vergiftet, Die Zwietracht und Verderben stiftet, Das ist der widerspenst'ge Geist, Der gegen Zucht sich frech empöret, Der Urdnung heilig Band zerreisst; Denn er ist's, der die Welt zerstöret.
II. "Goethe": Reineke Fuchs.
" Gehen wir," sagte der Fuchs, "es soll an Honig nicht fehlen, Heute bin ich zwar schlecht zu Fusse ; doch soll mir die Liebe,
Die ich euch lange gewidmet, die sauren Tritte versüssen.
Denn ich kenne niemand von allen meinen Verwandten,
Den ich verehrte, wie euch! Doch kommt! ihr werded dagegen
An des Königes Hof am Herrentage mir dienen,
Dass ich der Feinde Gewalt und ihre Klagen beschäme.
Honigsatt mach ${ }^{\prime}$ ich euch heute, so viel ihr immer nur tragen
Möget."-Es meinte der Sehalk die Schläge der zornigen Bauern.
Reineke lief ihm zuvor und blindlings folgie der Braune.
" Will mir's gelingen," so dachte der Fachs, "irh briage dich heute Noch zu Markte, wo dir ein bitt'rer Honig zu Theil wird."

## III. "Friedrich Jacobs": Gastfieundschuft.

Auch dieses Mal täuschte das Anzeichen nicht. Ich wurde auf das Freundlichste begrüsst, in das Haus gefüht, init Speis' and Trank reichlich bewirthet und endlich in ein Bett gebracht, hoch wie ein Berg, und geräumig genug, um noch drei Andere, wär' es nöthig gewesen, aufzunehmen. Da war es mir fürwahr, als wär' ich in die Zeit entrickt, wo die Hausväter an der Strasse sassen, und wenn ein Wanderer vorïberzog, oft wetteifernd mit einander ihn unter ihr Dach einInden und an ihrem Herde bewirtheten, ohne auch nur zu fragen wo er herkäme, was er für Geschäfte treibe und wie lange er zu weilen gedenke.
Translate into German: "Dialogue."
Dionysius. But why dost thou return? Hast thou no fear of death? is it not mad then, to seek it?

Pythias. I return to suffer, though I do not deserve death. Honour forbids me to let my friend die for me.
Dionysius. Dost thou, then, love him better than myself?
Pythias. No, I love him as myself; but I know I ought to suffer death rather than my friend, since it was $I$, whom thou hadst decreed to die. It were not just that Damon should suffer, to tree me from that death which was not for him, but for me only.

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

Pythias. Very true, we are both innocent, and it is equally unjust to make either of us suffer.
(1.) Write the Genit. sing. and the Nom. Plur. of: Buch, Baner, Engel, Kenntniss, Reichthum, Gold, Meer, Wald, Herz. Also the Nom. Sing. of: Beile, Wörter, Edelleute, Kapitalien, Leute, Gesichter, Eisenbahnen, Inseln.
(2.) Ein neues, eingebundenes Buch and ein neu eingebundenes Buch; ein ganzes, neues Haus and ein ganz neues Haus. State the difference in the meaning of these sentences, and give the reason. Decline in full : ein schlimmerer Wurm; alle meine Verwandten; bittrer Honig.
(3.) Write the equivalents of: In the finest, best manner; most politely ; most humbly; extremely ; the worst of all. Name a few comparatives that have no positive. Compare: gern viel, bald, wenige, nahe, rund.
(4.) What are the particular functions of the verb werden. Explain fully, giving examples. Translate: The course is being completed. When will the college be closed. We are not allowed any dictionary. German is spoken here. Dinner is preparing.
(5.) Distinguish the meanings of the conjunctions als, wenn, $d a$, and give examples. The sentence: Wir lernen nicht nur deutsch, aber auch französisch, is incorrect. Why? There is no language but has its difficulties, (Schwierigkeiten.)
(6.) State the cases governed respectively by the prepositions: seit, um, hinter, wegen, über, gegen, bei, neben, olne. Exs. Translate: I did not think af it. Of it assumes a peculiar form? Mention corresponding expressions.
(7.) Explain the formation of the purt. past of reg. and irreg. verbs. Which verbs reject the syllable ge. He has studied more than any one. Write 1st person of the Jmpft. and the Past Part of: lesen, stehen, thun, verbergen, abmehmen, erfinden herauspringen, spazieren reiten.
(8.) Auch dieses Mal täuschte das Anzeichen nicht. Freundlich lud er mich ein, (invite) Die Sprache, die ich studirt habe. Nachdem er sein Diploma erhalten hatte, reiste er nach Hause. Explain fully the construction in the preceding examples. Write two other forms.
(9.) Show by examples the position of the adverbial of time, and the negation nicht.
(10.) Which are the two Classical Periods of German Literature? Mention the most distinguished writers of the second period. Give some account of Lessing.
(11.) Mention the principal works of Goethe. Give an interpretation of his Faust.
(12.) Classify Schiller's Dramas; and give a short criticism of each. Which is the tundamental idea of schiller's views of life.

# DALHOUSIE COLLEGE AND UNIVERSITY, 

HALIFAX.

SESSIONAL EXAMINATIONS, 1875.<br>TUEADAY, April 20.-9 A. m. To 1 p. M.<br>Very Rev. Princtpal Ross, D. D............Examiner.<br>ETHICS.

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

POLITIOALECONOMY.

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

## DALHOUSIE COLLEGE AND UNIVERSITY,

 HALIFAX.
## SESSIONAL EXAMINATIONS, 1875.

Wednesday, April 21.

EARLY ENGLISH HISTORY.

Professor DeMill, M. A......................Examiner.
(Not more than six questions are to be answered.)

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

## DALHOUSIE COLLEGE AND UNIVERSITY,

## HALIFAX.

SESSIONAL EXAMINATIONS, 1875.<br>Wednesday, April 21.

CONSTITUTIONAL HISTORY.

Professor DeMill, M. A....................... Examiner.
(Not more than six questions are to be answered.)

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

## DALHOUSIE COLLEGE AND UNIVERSITY,

HALIFAX.

SESSIONAL EXAMINATIONS, 1875.

Wednesdat, April 21.

HISTORY.

Professor DeMill, M. A.......................Examiner.
(Not more than one question is to be answered out of each group.)

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

# DALHOUSIE COLLEGE AND UNIVERSITY, 

HALIFAX.

## SESSIONAL EXAMINATIONS, 1875.

Thursday, April 15, 9 A. m. to 1 p. M.


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

# DALHOUSIE COLLEGE AND UNIVERSITY, 

HALIFAX.

SESSIONAL EXAMINATIONS, 1875.

Friday, Aprili 23.

## FOURTH YEAR-FRENCH.

James Liechti, Esq.
.Examiner.

## Traduisez: 1. Celimène:

"Et ne faut-il pas bien que monsieur contredise?
A la commune voix veut-on qu'il se réduise,
Et qu'il ne fasse pas éclater en tous lieux
L'esprit contrariant qu'il a reçu des cieux ?
Le sentiment d'autrui n'est jamais pour lui plaire :
Il prend toujours en main l'opinion contraire,
Et penserait paraitre un homme du commun,
si l'on voyait qu'il fût de l'aris de quelqu'un.
L'homeur de contredire a pour lui tant de charmes,
Qu'il prend contre lui-même assez souvent les armes ;
Et ses vrais sentimens sont combattus par lai,
Aussitôt qu'il les voit dans la honche d'antrui."-Molière.
II. "Compagnons," leur dit-il, "achevez votre ouvrage,

Et de mon sang glacé souillez ces cheveux blanes
Que le sort des combats respecta quarante ans.
Frappez, ne craignez rien: Coligny vous pardonne ;
Ma vie est peu de chose, et je vous l'abandonne ;
J'eusse aimé mieux la perdre en combattant pour vous."
Ces tigres, ā ces mots, tombent ā ses genoux :
L'un, saisi d'épouvante, abandonne ses armes ;
L'autre embrasse ses pieds qu'il trempe de ses larmes ;
Et de ces assassins le grand homme entouré
Semblait un roi puissant par son peuple adoré.-Voltaree.
III. "Mais croyez vous, parce que vous n’aurez pas payé que vous ne devrez plus rien? Croyez-vous que les milliers, les millions d'hommes qui perdroat en un instant, par l'explosion terrible ou par ses contre-coups, runt ce qui faisait la consolation de leur vie et pent-etre leur unique moyen de la snstenter, vous laisseront paisiblement jouir de vorre crime? Contemplateurs stoiques des manx incalculables que cette catastrophe vomira sur la France, impassibles égoïstes, quị pensez que ces convulsions du désespoir et de la misère passeront comme tant d'autres, et d'autant plus rapidement qu'elles seront plus violentes, êtes-vous bien surs que tant d'hommes sans pain vous laisseront tranquillement savourer les mets dont vous n'aurez voulu diminuer ni le nombre ni la délicatesse?

Mirabead, (Discours contre la banqueroute.)
IV. On accuse l'enthusiasme d'être passager: l'existence serait trop heureuse si l'on pouvait retenir des émotions si belles; wais c'est parce qu'elles se dissipent aisément qu'il faut s'occuper de les conserver. La poésic et les beaux-arts servent à développer dans l'homme ce bonheur d'illustre origine qui relēve les coenrs abattas, et met à la place de l'inquiéte satiété de la vie le sentiment habituel de l'harmonie divine dont nous et la nature faisons partie. Il n'est ancun devoir, aucun plaisir, Aucun sentiment qui n'emprante de l'enthcusiasme je ne sais quel prestige, d'accord avec le pur charme de la vérité.

Mme de Staë́e, (De l'enthousiasme.)
Tradnisez en Francais :
(A.) In travelling, the best instrument, the most efficacious passport, is to speak fluently the lanyuage of that country which we may happen to visit. The traveller who is unable to mix in conversation is like a being
hoth deaf and dumb, who can do no more than use gestures, and, moreover, like one who, all but blind, perceives objects under a false light. Charles the Fifth used to say, that a man who knew four languages was worth four men ; in fact, all men have need of one another, and a stranger may be said not to exist for us, if we cannot understand his language.
(B.) The Normans were then the foremost race of Christendom. Their valonr and ferocity had made them conspicuous among the rovers whom Scandinavia had sent forth to ravage Western Europe. Their sails were long the terror of both consts of the Channel. Their arms were repeatedly carried far into the heart of the Carlovingian empire, and were victorions under the walls of Maestricht and Paris. At length one of the feeble heirs of Charlemagne ceded to the stranger; a fertile province, watered by a noble river, and contiguous to the sea, which was their favorite element.

Macaulay.
Questions de Syntaxe et de littérature.
(1.) I thought my friends were busy, but they are not. Education is to the mind what cleanliness is to the body. What is of moment to man, is to fulfill his duties upon earth. He had determined to ge to England, for which purpose he saved all the money he could. There is not sufficient ground for complaining. Expliquez la syntaxe des pronoms dans ces phrases.
(2.) Construisez quelques phrases ponr illustrer l'emploi de l' Inversion.
(3.) Manger, boire et dormir, c'rst leur unique occupation. C'est moins. son ambition que ses malheurs qui l'ont perdu. Plus d'un méchant a péri par ses propres intrigues. Le pen de biens qu'il a eus lui ont tait gagner de grandes richesses. Donnez les règles sur l'accord des verbes des phrases précédentes,
(4.) Qu'est-ce qui est incorrect dans les phrases qui suivent: Je lui fournis tout ce qu'il a besoin. La charité chrétienne nous commande d'aimer et de prêter assistance ā notre prochain. Il n'aime ni ā causer, ni le jen, ni le spectacle, ni ā se promener. Le physicien arrache tous ses secrets à la nature.
(5.) Les conquêtes d'Alexandre donnèrent lieu ā ses capitaines de s'entr'égorger les uns les autres. La figure de Syntaxe, renfermée dans cette phrase, est vicieuse?
(6.) Qu'est-ce que le Gérondif, et quel en est l'emploi? He pressed my hand while speaking to me. Quel est l'accord du Part. Present, accompagné de toujours. Ex.
(7.). Qu'y a-t-il à remarquer ā l'égard des Part. Passés suivants: Vous et moi excepte. Elles's se sont nui. Les arbres que j'ai ous abattre. On les a faits sortir. Il les a laissés tuer. Elle s'est proposé pour vous peindre. Translate: The little trouble they have taken, (se donner.) I made all the efforts I could.
(8.) Quelles sortes de mesures ou de vers y a-t-il en français? Donnez les règles principales sur l'emploi de la césure. A quels vers est-ce qu'elles s'appliquent?
(9.) Faites l'examen des vers suivants, et corrigez-les. "L'ingrat, il me laisse cet embarras funeste." "On peut encor vous rendre ce fils que vous pleurez." Vousकouvez bientôt lui prodiguer vos bontés.
(10.) La césure est-elle bien marquée dans ce vers de Boileau: "Un tel mot pour avoir réjoni le lecteur."
(11.) Quelle était l'influence de Rocine, de Molière de Boileau et de Bossuet sur la littérature sous Louis XIV.? La mission à chacun? Classifiez les ouvrages de Racine et mentionnez les chefs-d'oeuvre des autres. En quoi Molière et Racine se ressemblent-ils?
(12.) Qu'est-ce qu'on entend par "les classiques de la décadence? Eerivez ce que vous savez sur "Jacques Délille."
(13.) Par quoi la poésie du XIX. siècle se caractérise-t-elle? Châteaubriand of Mad. de Staël se sont signalés par quoi? De quelle école Victor Hugo fut-il le chef, et qu'avait-elle pour but?
(14.) Quelle est la caractéristique la plus remarquable de notre époque? Quels hommes ont mis l'histoire au niveau des autres pays? Quatre hommes se sont distingués surtout dans la critique?


[^0]:    *Only Students competing for a First or Second Class at the Sessional Examinatione will be examined in this additional work, which will not be read in class.
    $\dagger$ The Examination in these subjects will be held at the beginning of the Winter Session

