

CALENDAR
OF
DALHOUSIE COLLEGE
AND
UNIVERSITY.

HALIFAX, NOVA SCOTIA.

FOUNDED.....1820.

REORGANIZED.....1863.

1883-84.



HALIFAX:

PRINTED FOR THE UNIVERSITY BY NOVA SCOTIA PRINTING CO.

1883.

DARHOUSIE COLLEGE
UNIVERSITY

NOTE.

Persons who possess Calendars of any former Sessions would confer a great favour upon the University, by presenting them to the Librarian.

ADDENDUM.

PAGE 34, § XIII.—FIRST YEAR MATRICULATION EXAMINATION.—The note beginning "Instead of the above," inserted after the Latin Subjects, applies also to the Greek Subjects



	PAGE
University Calendar, 1883-84.....	5
Act of Incorporation and Acts in Amendment thereof.....	7
Manufacturers of the University.....	11
Board of Governors.....	15
Senatus Academicus.....	15
Officers of Instructions.....	16
GENERAL REGULATIONS :	
The Academic Year.....	17
Admission of Students.....	17
Examinations.....	18
Attendance and Conduct.....	18
Residence.....	18
Church Attendance.....	19
The Library.....	19
The Provincial Museum.....	19
The Gymnasium.....	19
Academic Costume.....	20
FACULTY OF ARTS :	
Courses of Instruction.....	21
Time Table.....	32
Graduation in Arts.....	34
Degree of B. A.....	34
Matriculation Examinations.....	34
Entrance Examinations.....	36
Course of Study for B. A.....	36
Regulations as to Examinations, &c.....	37
Degree of B. A. with Honours.....	39
Degree of M. A.....	42
Admission of <i>externi Graduum</i>	42
Graduation in Science.....	43
Degree of B. Sc.....	43
Degree of B. Sc. with Honours.....	43
Fees.....	44
Medals and Prizes.....	44
Musae Exhibitions and Bursaries.....	46
FACULTY OF LAW :	
Courses of Lectures.....	51
Time Table.....	54
Graduation in Law.....	55
Degree of L. B.....	55
Matriculation Examinations.....	55
Course of study for L. B.....	56
Regulations as to Examinations, &c.....	57
Most Courts.....	57
Prizes.....	57
Fees.....	57
LISTS :	
Degrees conferred, 1883.....	58
Honours, Medals, Prizes, &c., awarded 1882-3.....	59
Successful Candidates at Examinations, 1882-3.....	61
Medals, Prizes, &c., awarded 1875-82.....	65
Graduates of the University.....	68
Undergraduates and General Students 1882-3.....	71
ALUMNI ASSOCIATION.....	
EXAMINATION PAPERS, 1882-3 :	
Junior Musae Exhibitions and Bursaries.....	i.
Senior Musae Exhibitions and Bursaries.....	i.
Seasonal Examinations.....	ii.
Examinations for Honours in Classics.....	ii.
Examinations for Honours in Mathematics and Physics.....	ii.
Appendix—Greek Papers.....	iii.

University Calendar, 1883-84.

1883.

- Oct. 1, M.—Meeting of Governors.
10, W.—Last day for receiving schedules and certificates for Museo Exhibitions and Bursaries.
14, Th.—Meeting of Senate, 11 A.M.
15, W.—Meeting of Faculty of Arts, 11 A.M.—Meeting of Faculty of Law, 4.30 P.M.
18, Th.—Winter Session begins.—Examinations for Junior Museo Exhibitions and Bursaries:
10 A.M., Latin.
3 P.M., Greek.
* —Matriculation Examinations (Arts Faculty):
10 A.M., Classics, French and German.
19, F.—Examinations for Junior Museo Exhibitions and Bursaries:
10 A.M., Mathematics.
3 P.M., ditto.
* —Matriculation Examinations (Arts Faculty):
10 A.M., Mathematics.
20, Sa.—Examinations for Junior Museo Exhibitions and Bursaries:
10 A.M., English.
3 P.M., ditto.
* —Matriculation Examinations (Arts Faculty):
10 A.M., English.
21, M.—Examinations for Senior Museo Exhibitions and Bursaries:
10 A.M., Latin.
3 P.M., Greek.
22, Tu.—Examinations for Senior Museo Exhibitions and Bursaries:
10 A.M., Mathematics.
3 P.M., ditto.
* —Matriculation Examinations (Law Faculty) begin, 10 A.M.
23, W.—Examinations for Senior Museo Exhibitions and Bursaries:
10 A.M., Logic and English Literature.
3 P.M., Chemistry and Botany.
* —Bursary Examination in English Literature, 10 A.M.
24, Th.—Bursary Examinations and Examinations for Senior Museo Exhibitions and Bursaries on Classical History and Geography, 10 A.M.
* —Supplementary Examinations, 10 A.M.
* —Meeting of Faculty of Law, 4.30 P.M.
25, F.—Meeting of the Faculty of Arts, 10 A.M.—Nathaniel, Hagstrader, and Leon of Liberty and Syracuse Tutors, 3 P.M.
26, M.—Class tickets issued.
27, Tu.—University, 3 P.M.—Opening address by Prof. Welton.
28, W.—Lectures begin.
Nov. 1, Th.—Meeting of the Faculty of Arts, 9 P.M.
9, F.—Final Matriculation Examinations (Arts Faculty), 3 P.M.
12, M.—Meeting of the Faculty of Arts, 3 P.M.
13, M.—Meeting of the Faculty of Arts, 1 P.M.
Dec. 2, Th.—Meeting of the Faculty of Arts, 1 P.M.
31, F.—No lectures.—Christmas vacation begins.

1884.

- Jan. 5, Th.—Lectures resumed.—Supplementary Examinations in Classical History and Geography, 2.30 P.M.
 7, M.—Meeting of Governors.
 5, Th.—Meeting of the Faculty of Arts, 4 P.M.
 25, F.—George Munroe Day.—No lectures.
 Feb. 5, Th.—Meeting of Senate, 4 P.M.
 21, W.—Ash Wednesday.—No lectures.
 Mar. 1, Sa.—Last day for receiving M. A. Theses.
 Apr. 4, F.—Last day of lectures.—Meeting of Faculty of Arts, 4 P.M.
 7, M.—Meeting of Governors.
 5, W.—Sessional Examinations (Law Faculty) begin, 10 A.M.
 " —Sessional Examinations (Arts Faculty) begin:
 10 A.M., Latin.
 2 P.M., Extra Latin and Honour Classes.
 10, Th.— 10 A.M., Chemistry, Ethics, and Honour Mathematics.
 11, F.—Good Friday.
 12, Sa.— 10 A.M., Greek.
 2 P.M., Extra Greek and Honour Classics.
 14, M.— 10 A.M., Logic, Honour Physics, and Honour Classics.
 2 P.M., Practical Chemistry and Metaphysics.
 15, Th.— 10 A.M., Physics (2d year), Astronomy, and Honour Classics.
 2 P.M., Mathematics, Experimental Physics, and Honour Classics.
 16, W.— 10 A.M., English Literature and Rhetoric, and History.
 2 P.M., Honour Classics and Honour Mathematics.
 17, Th.— 10 A.M., French and Extra English.
 2 P.M., Hebrew and Extra Mathematics.
 18, F.— 10 A.M., Botany, Honour Classics, and Honour Mathematics.
 2 P.M., Political Economy.
 " —Last day for returning books to the Library.
 19, Sa.— 10 A.M., German.
 2 P.M., Extra Physics.
 21, M.—Meeting of the Faculty of Arts, 10 A.M.—Meeting of Faculty of Law, 4.30 P.M.
 22, Th.—Meeting of Senate, 10 A.M.—Results of Examinations declared.
 23, W.—Meeting of Alumni Association, 10 A.M.
 " —Convocation, 5 P.M.

Act of Incorporation

ACTS IN AMENDMENT THEREOF.

An Act for the regulation and support of Dalhousie College.

(Passed the 26th day of April, A.D., 1861.)

WHEREAS, it is expedient to extend the basis on which the said College is established, and to alter the constitution thereof, so as the benefits that may be fairly expected from its invested capital and its central position may, if possible, be realized, and the design of its original founders, as nearly as may be, carried out.

Be it enacted by the Governor, Council, and Assembly, as follows:—

1. The Board of Governors now appointed, consisting of the Honourable William Young, the Honourable Joseph Howe, Charles Tupper, S. Leonard Shannon, John W. Ritchie, and James F. Avery, Esquires, shall be a body politic and corporate, by the name and style of the Governors of Dalhousie College of Halifax, and shall have and exercise all usual powers and authorities as such, and have the title, control, and disposition of the building on the Parade at Halifax, and of the property and funds belonging to the said College, and held for the use thereof by the present Governors; and all vacancies in the Board shall be filled up on recommendation of the remaining members thereof by the Governor in Council; and any of the Governors shall be removable by the Governor in Council, at the instance of the Board of Governors.

2. Whenever any body of Christians, of any religious persuasion whatsoever, shall satisfy the Board that they are in a condition to endow and support one or more chairs or professorships in the said College, for any branch of literature or science, approved of by the Board, such body in making such endowment, to the extent of twelve hundred dollars a year, shall have

a right from time to time, for every chair endowed, to nominate a Governor to take his seat at the Board, with the approval of the Board of Governors and of the Governor in Council, and shall also have a right, from time to time, to nominate a Professor for such chair, subject to the approval of the Board of Governors; and in the event of the death, removal, or resignation of any person nominated under this section, the body nominating shall have power to supply the vacancy thus created.

3. The same right of nominating a Professor from time to time shall belong to any individual or number of individuals, who shall endow to the same extent and support a chair or professorship, and in the nomination of any testator by whose will a chair or professorship may be so endowed.

4. The Governors shall have power to appoint and to determine the duties and salaries of the President, Professors, Lecturers, Tutors, and other officers of the College, and from time to time to make statutes and by-laws for the regulation and management thereof, and shall assemble together as often as they shall think fit, and upon such notice as to them shall seem meet, for the execution of the trust hereby reposed in them.

5. The said College shall be deemed and taken to be a University, with all the usual and necessary privileges of such institutions; and the students shall have liberty and faculty of taking the degrees of bachelor, master, and doctor, in the several arts and faculties at the appointed times; and shall have liberty within themselves of performing all scholastic exercises for the conferring of such degrees, and in such manner as shall be directed by the statutes and by-laws.

6. No religious tests or subscriptions shall be required of the professors, scholars, graduates, students, or officers of the College.

7. The internal regulation of the said College shall be committed to the Senate Academicus, formed by the respective chairs or professorships thereof, subject in all cases to the approval of the Governors.

8. The Legislators shall have power, from time to time, to modify and control the powers conferred by this Act.

9. The Acts heretofore passed in relation to Dalhousie College are hereby repealed, except the act passed in the fourth year of his late Majesty King George the Fourth, entitled, "An Act authorizing the lending of a sum of money to the Governors of Dalhousie College, and for securing the repayment thereof."

An Act to amend the Act for the regulation and support of Dalhousie College.

(Passed the 6th day of May, A.D., 1877.)

Be it enacted by the Governor, Council, and Assembly, as follows:—

1. The present Board of Governors, consisting of nine persons, shall be increased to a number not exceeding fifteen; and the Board shall be filled up by new nominations made on the same principle as set forth in the first section of the Act hereby amended; and any of the Governors shall be re-eligible as heretofore by the Governor in Council.

2. The Governors shall have power to affiliate to Dalhousie College any other colleges desirous of such affiliation, or any schools in arts, in theology, in law or in medicine, and to make statutes for such affiliations, and for the regulation and management thereof, on the same principles as obtain in other universities, and to vary and amend such statutes from time to time. Provided always, that such statutes of affiliation, before they go into effect, shall be submitted to and receive the sanction of the Governor in Council.

3. So much of chapter 24 of the Acts of 1853, entitled, "An Act for the regulation and support of Dalhousie College," or of any other Act, as is inconsistent with this Act, is repealed.

An Act to provide for the organization of a Law Faculty in connection with Dalhousie College, and for other purposes.

(Passed the 14th day of April, A.D., 1881.)

Be it enacted by the Governor, Council, and Assembly, as follows:—

1. The Governors of Dalhousie College at Halifax shall, in addition to the powers conferred on them by section 2 of chapter 27 of the Acts of 1875, entitled, "An Act to amend the Act for the regulation and support of Dalhousie College," have power to organize a Faculty of Law in connection with such College; and to appoint professors or lecturers in law, and out of the revenues of the College to provide for the maintenance and support of such Faculty, and to make rules for the regulation and management of such Faculty, and for the granting of degrees in law on the same principles as obtain in other universities, and to vary and amend such rules from time to time.

2. Section 3 of chapter 24 of the Acts of 1863, entitled, "An Act for the regulation and support of Dalhousie College," is amended by adding the words "and governor" after the word "professor" in the said section, and any individual who has hitherto endowed a chair or chairs in the College shall have a right to nominate a governor for each chair endowed, in the same way as if section 3 aforesaid had been originally passed as now amended.

3. Section 1 of the said chapter 27 of the Acts of 1875 is amended by adding the words "provided, however, that in the event of any body of christians, individual, or number of individuals, endowing and supporting one or more chairs or professorships in the said College, as provided by sections 2 and 3 of the Act hereby amended, and of such body of christians or individuals nominating a professor or governor by virtue thereof, the number of governors may be increased beyond fifteen, but such increase shall be limited to the number of such chairs or professorships as may after the passing of this Act be founded by virtue of the said sections 2 and 3.

Benefactors of the University.

THE MUNRO FUNDS.

In 1879, Geo. Munro, Esq., of New York, a native of this Province, placed in the hands of the Governors the funds necessary for the endowment of a Professorship of Physics. In 1881, he established a Professorship of History and Political Economy. In 1882, he founded a chair of English Literature. This year he has added to the staff of the College a Professor of Constitutional and International Law, and Tutors in Classics and Mathematics, respectively. Since 1880, he has provided the University with Exhibitions and Bursaries, to the amount of \$35,700, which, according to his own desire, have been so offered for competition as to stimulate to greater activity and efficiency the High Schools and Academies of Nova Scotia and the neighboring Provinces.

The Governors desire to place on permanent record their high sense of Mr. Munro's enlightened public spirit, and their gratitude to him for the munificent manner in which he has come to their help in the work of building up an unsectarian University in Nova Scotia.

To correct the donor's name for all time with the benefits thus conferred both on the University and on his native country, the chairs which he has founded shall be called the **GEORGE MUNRO CHAIRS OF PHYSICS, OF HISTORY AND POLITICAL ECONOMY, OF ENGLISH LITERATURE, and OF CONSTITUTIONAL AND INTERNATIONAL LAW, respectively.**

THE McLEOD UNIVERSITY FUND.

The following is an extract from the will of the late Alex. McLeod, of Halifax :

"All the residue of my Estate I give and bequeath to the Governors of Dalhousie College or University in the City of Halifax in Trust that the same shall be invested and form a fund to be called the McLeod University Fund, and the interest and income of which shall be applied to the endowment of three or more professional chairs in said College as they may deem proper; but this bequest is made upon these conditions, namely, that if at any time the said College or University should cease to exist, or be closed for two years, or be made a sectarian college, then and in any such case, the said Fund and all accumulations thereof shall go to the said Synod of the Maritime Provinces of the Presbyterian Church in Canada, to be used for the purposes of higher education in connection with the said Synod, and it is further stipulated that no part of this Fund shall ever be used, either by the said Governors of Dalhousie College or by the said Synod, as a collateral security under any circumstances whatever."

ENDOWMENT FUND.

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

SCIENTIFIC APPARATUS FUND.

Hon. Sir William Young.....	\$500	Duell & Miller.....	\$ 50
Prof. MacGregor.....	500	Robert Harrow.....	50
Alumni Association Dal. College.....	150	Peter Jack.....	50
W. J. Stairs.....	100	John S. Maclean.....	50
Hon. Jeremiah Northup.....	100	A. Friend.....	50
Thos. Hayne.....	100	Thos. A. Brown.....	50
Alex. McLeod.....	100	Essex & Co.....	50
John Harsak.....	100	James Thomson.....	50
W. F. West.....	100	John Gibson.....	50
James Avery, M.D.....	100	Prof. Lawson.....	50
Hon. Robert Ross.....	100	Smaller subscriptions amounting	to
Hon. J. W. Ritchie.....	50		645

FIVE YEARS FUND—1870-75.

Principal Grant, D.D.....	\$200	J. Donabson.....	\$100
J. Duell.....	200	A. K. Mackinlay.....	100
W. J. Stairs.....	200	T. A. Ritchie.....	100
Sanctified Fleming.....	200	E. Smith.....	100
Hon. Sir William Young.....	100	H. B. Blomberg.....	100
Medical Faculty.....	100	Hon. Judge Ritchie.....	50
R. Ross, Jr.....	100	Prof. Macdonald.....	50
Dr. Avery.....	150	J. W. Carmichael.....	50
A. Burns.....	125	C. D. Hunter.....	50
Sir Charles Tupper.....	100	James Scott.....	50
Principal Ross.....	100	Maj.-Gen. Lambie.....	50
Prof. Lawson.....	100	J. J. Bremner.....	50
Prof. Johnson.....	100	Lawson, Harrington & Co.....	50
Prof. DeMill.....	100	F. P. Mott.....	50
Prof. Lischt.....	100	Hon. S. L. Shannon.....	50
John S. Maclean.....	100	G. P. Mitchell.....	50
James Thomson.....	100	W. H. Neal.....	50
Robert Marrow.....	100	R. W. Fraser.....	50
J. Stairs.....	100	J. B. Duffus.....	50
Hon. Jeremiah Northup.....	100	G. Thomson.....	50
Joseph Northup.....	100	F. Jack.....	50
B. H. Collins.....	100	Smaller subscriptions amounting	to
Alex. McLeod.....	100		129

GYMNASIUM FUND.

F. H. Chambers.....	\$50	H. Sedgewick.....	\$10
Sir William Young.....	10	D. C. Fraser.....	10
John Duell.....	10	J. G. MacGregor.....	10
Hon. J. F. Stairs.....	10	J. D. Story.....	5
Jas. Forrest.....	10	H. McKenzie.....	5
A. H. McKay.....	10	Rev. A. G. Russell.....	5
W. M. Duell.....	10	J. R. McKay.....	5
A. Lightfoot, M.D.....	10	H. A. Bayne.....	5
Rev. D. H. Smith.....	10	Rev. L. B. Jorlish.....	5
H. McD. Henry.....	10	S. G. Chambers.....	2
Duell & Ross.....	10	Rev. J. L. George.....	2

Dalhousie College & University.

BOARD OF GOVERNORS.

- HON. SIR WILLIAM YOUNG, Esq., *Ex-Chief Justice, Chairman.*
HON. SIR CHARLES TUPPER, K.C.M.G., C.B., M.D., M.P.
HON. J. W. RITCHIE, Judge of the Supreme Court of Nova Scotia.
HON. S. L. SHANNON, Q.C., Judge of Probate.
VERY REV. G. M. GRANT, D.D., *Principal and Vice-Chancellor, Queen's University, Kingston, Ont.*
JAMES F. AVERY, Esq., M.D.
WILLIAM J. STAINS, Esq., *Vice-Chancellor of the University of Halifax.*
REV. JOHN MACMILLAN, M.A., B.D.
REV. JOHN FORBES.
HON. ALFRED G. JONES.
JOHN S. MACLEAN, Esq.
PETER JACK, Esq.
JOHN DOULL, Esq.
REV. ROBERT MURRAY.
HON. JAMES MACDONALD, *Chief Justice*
WALLACE GRAHAM, Esq., A.B., Q.C.
HIS WORSHIP THE MAYOR OF HALIFAX, *ex officio.*
E. SEDGWICK, Esq., B.A., Q.C., *Representative of the Alumni Association.*
GEORGE THOMSON, *Treasurer.*
WILLIAM M. DOULL, *Secretary.*

SENATUS ACADEMICUS.

- VERY REV. JAMES ROSS, D.D., *Principal.*
REV. WILLIAM LYALL, Esq.,
CHARLES MACDONALD, M.A., *Secretary.*
JOHN JOHNSON, M.A.
GEORGE LAWSON, Ph.D., L.D., F.L.C.
J. GORDON MACGREGOR, M.A., D.Sc.
REV. JOHN FORBES.
J. GOULD SOWERBY, M.A., D.Sc.
RICHARD C. WELDON, M.A., Ph.D.

OFFICERS OF INSTRUCTION.

- VERY REV. PRINCIPAL ROSS, D.D., *Professor of Ethics.*
 REV. WILLIAM LYALL, LL.D., F.R.S.C., *Professor of Logic and Psychology.*
 CHARLES MAIDENBAID, M.A. (Aber.), *Professor of Mathematics.*
 JOHN JOHNSON, M.A. (Duk.), *Professor of Classics.*
 GEORGE LEWSON, PH.D., LL.D., F.I.C., F.R.S.C., *Professor of Chemistry and Mineralogy.*
 JAMES LEEHTE, M.A. (Vind.), *Lecturer on Modern Languages.*
 J. GORDON MACGREGOR, M.A. (Dal.), D.Sc. (Lond.), F.R.S.S.E. & C., *George Meares Professor of Physics.*
 REV. JOHN FORBES, *George Meares Professor of History and Political Economy.*
 J. GOULD SCHREMAN, M.A. (Lond.), D.Sc. (Edin.), *George Meares Professor of English Literature and Professor of Zoology.*
 RICHARD C. WELDON, A.M. (Mt. All.), PH.D. (Yale), *George Meares Professor of Constitutional and International Law.*
 HON. S. G. EIGHT, Judge of the Supreme Court, *Lecturer on Torts and Crimes.*
 HON. J. S. D. THOMPSON, Judge of the Supreme Court, *Lecturer on Construction of Statutes, Procedure and Evidence.*
 HON. S. L. SHANNON, Q.C., *Lecturer on Real Property and Conveyancing.*
 JAMES THOMSON, Q.C., *Lecturer on Real Property and Conveyancing.*
 WALLACE GRAHAM, A.B. (Acad.), Q.C., *Lecturer on Commercial Law.*
 ROBERT BENDJEWIK, B.A. (Dal.), Q.C., *Lecturer on Equity Jurisprudence.*
 BENJAMIN RUSSELL, A.M. (Mt. All.), *Lecturer on Contracts.*
 JAMES STAIR THOMAS, B.A. (Dal.), *George Meares Tutor in Classics.*
 GEORGE MERRAT CAMPBELL, B.A. (Dal.), *George Meares Tutor in Mathematics.*
 DAVID HALCY, *Instructor in Gymnastics.*
 CHAR. SMITH, *Instructor in Gymnastics.*

Librarians:

PROFESSOR FORBES.

Assistant Librarians:

MR. THOMAS, TANKS

MR. CAMPBELL.

Jusitor:

ARCHIBALD DUNLOP.

General Regulations.

§ I.—THE ACADEMIC YEAR.—The academic year consists of one session. The session of 1883-4 will begin on Thursday, 18th October, 1883, and end on Wednesday, 23rd April, 1884.

The lengthening of the session by one month is under consideration; but due notice of any change will be given in the Calendar.

The Summer Session is for the present suspended.

§ II.—ADMISSION OF STUDENTS.—(1.) Students may enter the College, either as Undergraduates, with the intention of applying for a University Degree at the end of their course, or as General Students, who do not look forward to a University Degree.

(2.) Women shall be admitted to the College, in the Faculty of Arts,—as undergraduates, on the same terms as men,—and as general students, provided they satisfy the Professors of the classes they wish to join that they are qualified to profit by their lectures.

(3.) Undergraduates shall be required to matriculate before entering upon the course of study prescribed for the degree for which they are candidates. Matriculation consists simply in inscribing the name in the Register of Undergraduates; but no student shall be allowed to matriculate until he has passed one or other of the Matriculation Examinations of the Faculty in which he is to study. (See §§ XIII, XIV, XXVIII, XXIX.)

(4.) No student shall be admitted as an undergraduate after ten days from the opening of the classes, without the special permission of the Faculty in which he is to study.

(5.) Undergraduates from other Universities shall, 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. But if their previous courses have not corresponded to the courses on which they enter in this College, they may be required by the Senate to take extra classes.

(6.) General students must enter their names annually in the Register of General Students. They are not required to pass a matriculation examination, and (except as provided by § II. 2.) they may attend such classes as they choose.

§ III.—EXAMINATIONS (called Sessional Examinations) are held at the end of every session in the subjects of the various classes. Both undergraduates and general students are admitted to these examinations, and those who pass are arranged in three divisions—First Class, Second Class, and Passed—according to the merit of their answers.

§ IV.—ATTENDANCE AND CONDUCT.—(1.) Professors shall mark the presence or absence of students immediately before commencing the work of the class, and shall note as absent those who enter thereafter, unless satisfactory reasons be assigned.

(2.) Absence without sufficient excuse, or lateness, or intimation, on the part of a student, if persisted in after due admonition by the Professor, shall be reported to the Faculty to which he belongs.

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

(4.) Any improper conduct on the part of a student, whether in the College or elsewhere, may subject him to the censure of the Senate; and the Senate may fine, reprimand (either privately or in the presence of the Students), report to the parents or guardians, disqualify for competing for Prizes or for holding Certificates of Merit, or report to the Governors for suspension or expulsion.

§ V.—RESIDENCE.—Students of the Faculty of Arts, under twenty-one years of age, and not residing with parents or guardians, must report to the Principal their places of residence within one week after entering the College.

Persons who wish to take such Students as boarders must furnish the Principal with satisfactory references. A register is kept by the Secretary of the Faculty of Arts, containing the names of those persons who have satisfied this condition; and, for the convenience of Students, a list of the names and addresses of such persons will be posted on the notice-board in the College hall at the beginning of the Session.

§ VI.—CHURCH ATTENDANCE.—Students of the Faculty of Arts, under twenty-one years of age, and not residing with parents or guardians, must report to the Principal, within one week after entering the College, the churches they intend to make their places of worship during the Session. Intimation will be made to the various clergymen of the city, of the names and addresses of the students who have chosen their churches as places of worship.

§ VII.—THE LIBRARY.—(1) All students, graduates, and members of the Alumni Association shall be entitled to the use of the Library.

(2.) A deposit of two dollars must be made with the Librarian, by any person entitled to use the Library, before he can borrow books; but when all such books are returned this deposit will be repaid.

(3.) All books must be returned to the Library on or before the day appointed for that purpose in the Calendar, (p. 6.) Students who fail to comply with this rule shall forfeit half the amount of their deposit.

(4.) No student shall have his Attendance and Examination certificates signed until he has returned the books he may have obtained from the Library.

(5.) Books damaged or lost shall be paid for by the borrower at such rates as the Librarian may direct.

(6.) All fines, library fees, and supplementary examination fees shall be appropriated to the Library Fund.

§ VIII.—PROVINCIAL MUSEUM.—The Provincial Museum in the New Provincial Building, is conveniently situated at a short distance from the College, and, being open to the public, may be consulted by Students daily. It contains extensive collections illustrating the Mineralogy, Zoology, and Geology of the Province, and also Maps, Plans and Models.

§ IX.—THE GYMNASIUM.—(1.) All students, graduates, and members of the Alumni Association shall, on paying the sessional fee and agreeing to comply with the regulations, be entitled to the use of the Gymnasium.

(2.) Students shall be entitled to instruction in gymnastics without the payment of any additional fee.

(3.) Graduates and members of the Alumni Association shall be admitted to the classes, on payment of a fee of three dollars.

(4.) Gold and Silver Badges will be offered for competition this Session at the close of the course of instruction in gymnastics.

The successful competitors for these Badges, in the Session of 1882-3, were as follows:—

Gold Badge H. W. Rogers.
Silver Badge W. R. Taylor.

§ X.—**ACADEMIC COSTUME**—(1.) Bachelors and Masters of Arts, Bachelors of Science and of Laws, and Doctors of Medicine, of this University, shall be entitled to wear gowns,* of black stuff, and hoods. The distinctive part of the costume is the hood. The following are the kinds of hood appointed for the various degrees:—

B.A.—Black stuff lined with white silk and bordered with white fur.

M.A.—Black stuff lined with crimson silk.

B.Sc.—Black stuff, with a lining of white silk, bordered with crimson silk.

L.L.B.—Black stuff, with a lining of white silk, bordered with gold-colored silk.

M.D., C.M.—Black stuff, with a lining of scarlet silk, bordered with white silk.

(2.) Successful candidates for these degrees shall be required to appear at Convocation in the proper academic costume, to have the degrees conferred upon them. Degrees shall be conferred in the absence of the candidate only by special permission of the Senate.

Faculty of Arts.

THE PRINCIPAL
PROFESSORS: L'ÉVÊQUE,
MACDONALD,
JENNINGS,
L'ÉVÊQUE,
MACGREGOR,
FORBES,
SCHURMAN.

LECTURER: L'ÉVÊQUE.

Secretary of the Faculty—PROFESSOR MACGREGOR.

TUTORS: TREHMAN,
CAMBERLAND.

§ XI.—COURSES OF INSTRUCTION, 1883-84.

The following is an account of the classes which are to be held this Session:

CLASSICS.

Professor JOHN JOHNSON, M.A.
Tutor JAMES & THOMAS, B.A.

LATIN.

First Year Class.

Mondays, Wednesdays and Fridays, 10—11 A.M.

Subjects of study:

Vergil: *Ebagoese*.
Cicero: *Pro lege Manilia*.
* *Pro Milone*.
Composition: *Principia Latina*, Part IV (latter half.)

Second Year Class.

Mondays, Wednesdays and Fridays, 11 A.M.—12 N.

Subjects of study:

Horace: *Odes*, Book I.
Livy: *Book I*.
* *Horace: Odes*, Books II, III.
Composition: *Principia Latina*, Part V.

* Students seeking a First or Second Class at the Seminal Examinations are examined in this additional subject, which is not read in class; such students are also required to show special accuracy in grammar.

*The gown worn by a Bachelor of Laws shall be similar to that worn by a Barrister-at-Law.

† Third and Fourth Years Class.

Mondays, Wednesdays and Fridays, 12 N.—1 P. M.

Subjects of study :

Tactics: Agrícola.
 Plantas: Capiti.
 Jeneral: Basilro, III, X, XIII.
 Composition: Principia Latina, Part V.
 Philology.

GREEK.

First Year Class.

Tuesdays and Thursdays, 10—11 A. M.

Subjects of study :

Lacin: Cataphis, Mesolypus, De Simulo.
 * Xenophon: Cyropadía, Book I.
 Grammar: Hadley's.

Second Year Class.

Tuesdays and Thursdays, 11 A. M.—12 N.

Subjects of study :

Homer: Odyssey, Book IX.
 Xenophon: Memorabilia, Book I.
 * Demosthenes: Olynthica.
 Composition: Isthia Græca, Part III.

† Third and Fourth Years Class.

Tuesdays and Thursdays, 12 N.—1 P. M.

Subjects of study :

Plato: Apologia Socratis.
 Euripides: Alcestis.
 Prose Composition.

LATIN AND GREEK.

Honours Class.

Twice a week.

In this class the Latin and Greek subjects prescribed for Honours in the department of Classics are read, and Latin Prose Composition is regularly practised.

* Students seeking a First or Second Class at the Sessional Examinations are exempted in this additional subject, which is not read in class; such students are also required to show special accuracy in grammar.

† A passage taken from a work not prescribed to be read will be set for translation to Students seeking a First or Second Class in those years.

MATHEMATICS.

Professors.....C. MACDONALD, M. A.
Tutor.....Geo. M. CAMPBELL, B. A.

First Year Class.

Daily, 11 A. M.—12 N.

Subjects of study :

ALGEBRA.—Involution, Evolution, Theory of Indices, Equations of the First and Second Degree, Proportion, Inequalities, Indeterminate Equations, Variation, Progressions, Propositions in the Theory of Equations, with Horner's method of approximating the roots of a Degree higher than the Second.

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

Books recommended:—HAMILTON SMITH'S (MILLER & CO.) Elements of Geometry, or COLSON'S or TULLOCH'S; COLSON'S or H. SMITH'S Algebra.

Second Year Class.

Daily, 10—11 A. M.

Subjects of study :

GEOMETRY.—Sixth Book of Euclid finished. DREW'S Geom. Sections, Parabola and Ellipse. Geometrical Exercises continued.

TRIGONOMETRY.—Analytical Plane Trigonometry as far as, but exclusive of, De Moivre's Theorem. Practical applications, with the use of Logarithms, to the Solution of Triangles, Measurement of Heights and Distances, Navigation, &c., Mensuration.

ALGEBRA.—Powers and Combinations, Binomial Theorem, Properties of Logarithms, Compound Interest, Annuities.

Extra work for First or Second Class standing at the Sessional Examinations:—

GEOMETRY.—21 Propositions of the Eleventh Book of Euclid.

TRIGONOMETRY.—Spherical, as far as the solution of Right-angled triangles. Extension of Ordinary course: De Moivre's Theorem and series connected with the measurement of Circular area.

ALGEBRA.—Extension of Ordinary Course. Investigations connected with the Binomial Theorem and the Theory of Logarithms, with applications.

Books recommended:—COLSON'S Algebra, 2nd part; COLSON'S Trigonometry, 1st part; TULLOCH'S Spherical Trigonometry, or SIMON'S Trigonometry, (Wesley's Series); CHAMBER'S Logarithmic, &c., Tables.

Honours Classes.

There are two Divisions in the Honours Classes :

1st Division meets three times a week. Subjects: Analytical Trigonometry, commencing with the applications of De Moivre's Theorem; Analytical Geometry; Theory of Equations; Differential Calculus.

2nd Division meets three times a week. Subjects: Spherical Trigonometry, as far as Napier's Analogies; Theory of Equations; Differential Calculus; Integral Calculus, with Differential Equations; Applications of these to Physics, Physical Astronomy, &c.

PHYSICS.

(George Munro Professorship.)

Professor.....J. J. MacGREGOR, M. A., D. Sc.

Third Year Class.

Principles, N—II A. M., Tenets and Theorems, II A. M.—2 N.

The lectures will be on the following subjects:—

Kinematics, or the Science of Motion; Dynamics, or the Science of Force, including Kinetics and Statics; Hydrostatics, or the properties of Fluids at rest; Thermodynamics, or the Science of Heat.—These subjects are taught in an elementary manner, but students are assumed to be familiar with the Mathematics of the First and Second years classes.

Portions of Thomson and Tait's Elements will be provided for private reading to candidates for a First Class position at the Sessional Examinations.

Books recommended: Thomson and Tait's Elements of Natural Philosophy, P. I. (3d Ed., 1879, Ed. Press, Cambridge), and Garnett's Elementary Treatise on Heat, (Duckworth, Bell & Co.)

Fourth Year Class.

Monisms, Waves and Prisms, II A. M.—2 N.

The lectures will be on the following subjects:—

Properties of Solids and Fluids; the Law of the Conservation of Energy; Heat; Electricity and Magnetism; Light and Elastic Heat; Sound.—These subjects are taught in an elementary manner; but students are assumed to be familiar with the Dynamics of the Third Year Class.

A special paper will be set for candidates for a First Class position at the Sessional Examinations.

Books recommended: Magnus' Hydrostatics and Pneumatics (Longmans, Green & Co.); Garnett's Elementary Treatise on Heat (Duckworth, Bell & Co.); B.P. Thompson's Lessons in Electricity and Magnetism (Macmillan & Co.)

ASTRONOMY CLASS.

Theorems and Theorems, N—II A. M.

The subjects of the lectures will be the Elements of Spherical and Physical Astronomy, together with the Elements of Geometrical Optics and their application to the theory of astronomical instruments.

Candidates for a First Class position at the Sessional Examinations are assumed to be familiar with the Geometry of the Ellipse and the Elements of Spherical Trigonometry.

Books recommended: Lockyer's Treatise on Astronomy (Harper & Brock), and Aikin's Geometrical Optics (Duckworth, Bell & Co.)

Advanced Class.

(Twice a week.)

The subjects of the lectures will be in follow:—

Kinematics: Dynamics of a Particle and of a Rigid Body; Hydrodynamics; Thermodynamics; Electrostatics.—Students will be assumed to have a sufficient knowledge of the Differential and Integral Calculus.

This class is intended especially for candidates for Honours in Mathematics and Physics.

Books recommended: HULL'S MECHANICS (LONGMANS, GREEN & CO.), AND STEVEN'S DYNAMICS OF A PARTICLE (HAMILTON & CO.), AND LIGHT DYNAMICS (Duckworth, Bell & Co.), SERRAT'S HYDRODYNAMICS (Duckworth, Bell & Co.), TAIT'S DYNAMICS OF THE PARTICLE (Duckworth, Bell & Co.)

Physical Laboratory—Qualitative Class.

If a sufficient number of students apply, a class will be formed, in which they will be taught how to make and use simple physical apparatus.—This class is intended to facilitate the instruction of the teaching of physical science into the schools.

Physical Laboratory—Quantitative Class.

This class is intended especially for candidates for Honours in Experimental Physics and Chemistry.

Members of the class will have opportunities of familiarising themselves with the practical use of physical experimental methods in determining, e. g., densities, specific and latent heats, coefficients of expansion, vapour densities, refractive indices, dielectric constants, electrostatic forces, &c.

Books recommended: KOLLMEYER'S PHYSICAL MEASUREMENTS (CHURCHILL)

ETHICS.

Professor.....H. H. PRINCIPAL BISH, D. D.

Monisms, Waves and Prisms, N—II A. M.

Ethics, a department of Mental Philosophy, includes the Philosophy of Man's Active, Moral, Social, and Religious nature.

1. Man as Active Being. Will, Volition, Motives and their influence, Faculties, Liberatorism, Necessitarianism, Account to associate Liberatorism and Necessitarianism, Principles of Action.

2. Man a Moral Being. The Moral Faculty or Conscience defined. Historical review of different opinions respecting the nature of Conscience, and the foundation of Virtue; Existence of Duty, Theism, Ontological arguments, Theological arguments, Atheism, Hebraic and Muscularism; Consideration of Physical and Moral forces opposed; Faculties, the influence various sciences, the immortality of the soul.

3. Man a Social Being. State of Nature, Hunter State, Nomadic State, Agricultural State, Commercial State, Origin and Progress of the Arts, Science, Commerce, Law, Government and War.

4. Man a Religious Being. Man here an object of Worldly. Contents of the Instruction: Natural Religion, Importance of the Study, its grand defect, Handmaid to Revelation.

Books recommended: FENNER'S MANUAL OF MORAL PHILOSOPHY; SERRAT'S ACTIVE AND MORAL POWERS, (Ed. Hamilton.)

LOGIC AND PSYCHOLOGY.

Professor.....REV. W. LEAG, LL. D.

Second Year Class.

Four or Five Lectures a week, 3-4 P. M.

This course will consist of lectures on Mind and its phenomena,—the laws and faculties of Cognition, comprising a review of the doctrines of Locke, Reid, Stewart, Brown, and the modern Sensationalist School,—the philosophy of the Emotions, including Aesthetics—the philosophy of the Beautiful. Under Logic will be considered—Concepts, Judgments and Reasonings; the different orders of Syllogism; the Fallacies; the doctrine of Method; the sources of Error and the means of their correction.

Books recommended: Sir Wm. Hamilton's Lectures on Logic; Prof. Lyell's Intellect, the Emotions and the Moral Nature.

Advanced Class.

One Lecture a week.

This class is intended especially for candidates for Honours in Mental and Moral Philosophy.

The lectures will enter into a more critical view of the psychological side of Philosophy, especially the doctrines of Sir William Hamilton, both in Psychology and Logic, with John Stuart Mill's "Logic of Inductive and Inductive," particularly the 2d and 3d Books of that Treatise.

METAPHYSICS.

Professor.....J. GEORGE DICKINSON, M.A., D. D.

Ordinary Class.

Mondays and Wednesdays, 10-11 A. M.

After an introductory sketch of the problems of Ancient and Medieval Philosophy, the lecturer will be taken up with the exposition and examination of modern philosophical systems along the lines of Rationalism, Empiricism, Common Sense Philosophy and Criticism.

Students are required to write occasional essays, which are discussed in class.

Books recommended: Deussen's Method and Mediation; Frazer's Selections from Berkeley. Other works for First or Second Class.

Advanced Classes.

These classes are intended especially for candidates for Honours in Mental and Moral Philosophy.

THIRD YEAR.

Three a week, 11 A. M.—12 N.

During the present session the work of this class will consist in a study and critical examination,—by means of lectures, discussions, and essays by the students,—of the philosophy of Locke, Berkeley, and Hume.

FOURTH YEAR.

Subjects of lectures:—

GREEK PHILOSOPHY: Lectures on Plato and Aristotle.

GERMAN PHILOSOPHY: Critical study of Kant's Critique of Pure Reason.

This course will not be given till the session of 1894-5.

ENGLISH LITERATURE.

(George Munro Professorship.)

Professor.....J. GEORGE MURPHY, M.A., D.Sc.

First Year Class.

Tuesdays and Thursdays, 12-1 P. M.

RHETORIC AND ENGLISH COMPOSITION.—Exercise in the theories of sentence, Laws of Style, Principles governing the various kinds of Composition (Description, Narrative, &c.)

Members of the class are required to write weekly essays (for the most part on subjects connected with the course in English Literature), which are returned with corrections, after being criticised by professor and students in an hour set apart for that purpose.

ENGLISH LITERATURE.—Critical Reading of the following works of the 18th century—

Addison: Select Essays.

Pope: Rape of the Lock, *Satires and Epistles.

Johnson: London, Vanity of Human Wishes,* Lives of Addison,

Pope, Collins, and Gray.

Collier: The Passions.

Gray: Elegy, Progress of Poetry, The Bard.

Goldsmith: The Traveller, The Deserted Village, Select Essays.

Books recommended: For Eloquence: Nichol's Primer (Glasgow), and Selous's Manual (Leicester). For Literature: Hallam's Selections from Addison and Collier, with notes, Heath, & Co. Boston; Clarendon Press edition of Pope, Selous's Longer English Poets (Macmillan)—which contains all the poetry read in class.

Second Year Class.

Mondays, Wednesdays, and Fridays, 12-1 P. M.

ENGLISH LITERATURE.—LECTURES ON CHAUCER and Shakespeare, with a Critical Reading of the following works of each:

Chaucer.—The Proverbes Tale, Sir Thopas, The Monk's Tale, The Clerk's Tale, The Squire's Tale; Shakespeare.—Hamlet, Twelfth Night, Othello, Cymbeline.

Books recommended: Hall's or the Clarendon Press edition of the separate plays of Shakespeare, Deussen's Primer on Shakespeare, Clarendon Press edition of the Selections from Chaucer.

* Only for Candidates seeking a First or Second Class at the Sessional Examinations.

† Original in 1854-5; otherwise obligatory.

Third Year Class.

Twice or three times a week, 10-11 A.M.

ANGLO-SAXON.—Sweet's Reader (Clarendon Press).

EARLY ENGLISH.—Morris & Skeat's Specimens, Part II, Sections X.-XX. (Clarendon Press); and Chaucer's Tale of the Man of Lawe, &c. (Clarendon Press).

This class is intended especially for Candidates for Honours in English Literature and History.

Fourth Year Class.

ENGLISH LITERATURE.—Detailed History of the Literature of the Elizabethan and early Stuart period.

This class is intended especially for Candidates for Honours in English Literature and History.

Books recommended: Murray's *Time Sketch of English Literature*. Editions of the works required for University Honours will be recommended in the course of the lectures.

HISTORY AND POLITICAL ECONOMY.

(George Moore Professorship.)

Professor: REV. J. FORBES.

HISTORY.

Third Year Class.

Monday, Wednesday, and Friday, 11 A.M.—11 N.

Subject of study:

Medieval History and Modern History to 1648.

The class work will be conducted by means of lectures and examinations on prescribed reading.

Fourth Year Class.

Tuesday and Thursday, 11 A.M.—12 P.

Subject of study:

Modern History from 1648.

The class work will be conducted by means of lectures and examinations on prescribed reading. In the lectures books of reference will be named, and select portions specified for reading.

Advanced Class.

Once a Week.

Subject of study:

English History from 1603 to 1859.

The work of the class will be conducted by means of examinations on reading prescribed from Clarendon, Gardiner, Green, Halsam, Ranke and other authorities on this period.

This class is intended especially for Candidates for Honours in English Literature and History.

POLITICAL ECONOMY.

Tuesday and Thursday, 10-11 A.M.

The work of this class will be conducted by means of lectures and examinations on prescribed reading.

Text-book: Mill's Principles of Political Economy.

HEBREW.

Professor: REV. FRANKLIN ROSS, D.D.

Three times a Week.

Subjects of study:

Hebrew Grammar; Translation from Hebrew into English, and from English into Hebrew.

Text-book: Green's Elementary Hebrew Grammar.

CHEMISTRY.

Professor: GEO. LARSON, Ph.D., LL.D.

Inorganic Chemistry Class.

Tuesday, Wednesday and Friday, 9-10 A.M.

Subjects of lectures:—

General principles; Chemical Affinity; Combination; Mixtures; Solution; Suspension; Laws of Combination, by weight, by volume; Equivalent Numbers; Atomic Numbers; Atomic Theory; Nomenclature; Notation; Formulae; Equations; Elements and their modes of occurrence in nature, their preparation, their compounds, important chemical processes, natural and artificial, and manufactures, to which they are related; the Metals, their general characters, classification, occurrence in nature; Metallurgical Processes; Alloys; description of all the important metals, their salts and other compounds, and of chemical processes and manufactures connected with them, modes of testing, &c.

Class Book: Green's edition of Wurtz's Elements of Chemistry, or Fowles' Manual of Chemistry, or Bence.

Organic Chemistry Class.

Monday and Wednesday, 10-11 A.M.

Subjects of lectures:—

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

Class Book: Green's edition of Wurtz's Manual of Chemistry, or Fowles' Manual of Chemistry, with other works for advanced students.

Medical Chemistry Class.

Lecty, 9—10 A. M.

The Class for Medical Chemistry meets daily throughout the Session. The course embraces a discussion of the principles of Inorganic and Organic Chemistry, with special reference to chemistry and reagents used in Medicine, and processes employed for detection of poisons, &c.

Chemical Laboratory.

Subjects of practical study:—

LABORATORY PRACTICE.—Preparation and examination of Gases, Liquids and Solids, chiefly the Metalls and their combinations with each other; Collection of Gases; Use of Pneumatic Trough; Filling up of Glass apparatus; Analysis and Synthesis of Water; Air; Illustration of meaning of terms: Base, Acid, Salt, Neutralization, Combustion, Solubility, Affinity, &c.; Illustration of processes of Crystallization, Distillation, Oxidation, &c.; Systematic Analysis (commenced); Flame Reactions; Use of Spectroscope.

Text Book: Laboratory Practice and Qualitative Analysis by Thorpe and Mar.

QUALITATIVE CHEMICAL ANALYSIS.—Systematic Qualitative Analysis; Detection of Bases and Acids, separate and in mixtures.

Text Book: Wills' Tables of Chemical Analysis; Qualitative Analysis, Thorpe, or Appleton.

QUANTITATIVE CHEMICAL ANALYSIS.—The Laboratory will be open daily (except Saturday) from 9 A. M. to 1 P. M., for work in this department. There is a reference library in the balance room for the use of students. Facilities are given in the Laboratory for special courses of Analysis, as of Metallic Ores, Coal, Fertilizers, Soils, Articles of Food and Drink, Mineral and Household Wares, &c.; arrangements for instruction in which may be made with the Professor of Chemistry.

Laboratory students are required to pay in addition to their class fees, for breakage of apparatus and for reagents used.

BOTANY.

Professor.....GEO. LAWREN, Ph.D., LL.D.

Teaching and Thursdays, 11—11 A. M.

Subjects of study:

Morphology of the Cell, of the Tissues, and of the External Coar formation of Plants; Special Morphology of Thallophytes, Chloraceae, Muscivora; Muscular Tissues in the Plant; Aggregation of Organized Structures; Movements of Water and Gases; Chemical Processes, Constituents of Plant Food, Assimilation, Respiration; Influence of Temperature, Light, Electricity, Denaturation; Mechanical Laws of Growth, Tension, Pressure, Friction; Periodicity of Growth, Periodic Movements, Reproduction; Hybridization; Origin of Species; Origin of Varieties; the Theory of Descent; Classification, including a Description of the Principal Natural Orders of American Plants; Geographical Botany; Outline of Vegetable Paleontology.

In connection with the Botanical Class instruction will be given in the general use of the Microscope, the preparation and mounting of Vegetable Tissues, and the Microscopical Observation of vital phenomena in living plants.

On Saturdays being favorable weather there will be Field Excursions for collecting botanical specimens.

FRENCH.

Lecturer.....JAMES LAWREN, M.A.

First Class.

Tuesdays and Thursdays, 2—3 P. M.

Subjects of study:

Voilgère: *Charles XII.*, Book III. Mélière: *Le Bourgeois Gentilhomme*. Translation from English writers, Dictionaire; *Paroisse*;

Text Books: Brachet's Public-School Elementary French Grammar; Supplementary Exercises. Other Text Books required will be announced at the opening of the Session.

Second Class.

Tuesdays and Thursdays, 9—10 A. M.

Subjects of study:

Mélière, *Leveur*; Racine's *Indignée*; Mélière, *les Femmes savantes* (advanced section). Translation from English writers.

Text Books: Brachet's Public-School French Grammar. Exercises to the same on the *Leveur* and *Indignée*. Other Text Books required will be announced at the opening of the Session.

Mélière's *Paroisse* is prescribed for private reading to candidates for a First Class position at the Seasonal Examinations.

GERMAN.

Lecturer.....JAMES LAWREN, M.A.

First Class.

Mondays, Wednesdays and Fridays, 2—3 P. M.

Subjects of study:

Adler's Reader; Schiller's *Walden Teil*.

Text Books: Otto's German Grammar; Ostwick and Harriot's Outline of German Literature.

Second Class.

Mondays, Wednesdays and Fridays, 9—9 P. M.

Subjects of study:

Schiller's *Walden Teil*; Goethe's *Hermann und Dorothea*.

Text Books: The same as in the First Class. Schiller's *Walden Teil* and Goethe's *Hermann und Dorothea*, Part I, Book 2, is prescribed for private reading to candidates for a First Class position at the Seasonal Examinations.

Third Class.

Mondays, Wednesdays and Fridays, 9—10 A. M.

Subjects of study:

Lessing's *Missa von Barabara*; Schiller's *Marie Stuart*; Lessing's *Nathan der Weise*; Goethe's *Egypten*.

Text Books: The same as in the First Class. Goethe's *Frank*, Part I, is prescribed for private reading to candidates for a First Class position at the Seasonal Examinations.

FACULTY

FACULTY OF ARTS

FACULTY

TIME TABLE—FACULTY OF ARTS—1883-84.

HOURS.	FIRST YEAR.	SECOND YEAR.
9—10	Inorganic Chem. (Tu, W, F.) Medical Chemistry (daily).	Inorganic Chem. (Tu, W, F.)
10—11	Latin (M, W, F.) Greek (Tu, Th.) Botany (Tu, Th.)	Mathematics (daily).
11—12	Mathematics (daily).	Latin (M, W, F.) Greek (Tu, Th.) Chem. Laboratory (Tu, Th.)
12—1	English (Tu, Th.)	Chem. Laboratory (Tu, Th.) English Literature (M, W, F.)
1—2		
2—3		2nd German (M, W, F.) 1st French (Tu, Th.)
3—4	1st German (M, W, F.)	Logic (daily).

FACULTY OF ARTS

TIME TABLE—FACULTY OF ARTS—1883-84.

HOURS.	THIRD YEAR.	FOURTH YEAR.
9—10	Hon. Classics (M, F.) 2nd German (M, W, F.) 2nd French (Tu, Th.)	Hon. Classics (M, F.) 3rd German (M, W, F.) 2nd French (Tu, Th.)
10—11	Metaphysics (M, W.) Organic Chemistry (M, W.) Botany (Tu, Th.) Physics (F.)	Ethics (M, W, F.) Political Economy (Tu, Th.) Astronomy (Tu, Th.)
11—12	History (M, W, F.) Physics (Tu, Th.)	History (daily). Experimental Physics (M, W, F.) Chem. Laboratory (Tu, Th.)
12—1	Latin (M, W, F.) Greek (Tu, Th.) Chem. Laboratory (Tu, Th.) Hon. Mathematics (M, W, F.)	Latin (M, W, F.) Greek (Tu, Th.) Chem. Laboratory (Tu, Th.) Hon. Mathematics (Tu, Th.)
1—2		Hon. Mathematics (F.) Hon. Physics (M, W.)
2—3	1st French (Tu, Th.)	2nd German (M, W, F.)
3—4	1st German (M, W, F.) Logic (daily).	3rd French (Tu, Th.)

GRADUATION IN ARTS.

§ XII.—DEGREE OF BACHELOR OF ARTS.—Candidates for the ordinary degree of Bachelor of Arts are required to pass either the First Year Matriculation Examination (admitting to the standing of an undergraduate of the First Year), or the Second Year Matriculation Examination (admitting to the standing of an undergraduate of the Second Year); to attend the classes of the course of study prescribed for this degree during either all four years, or the last three years, according to the standing acquired at the Matriculation Examination; and to pass, according to the regulations of § XVII., both the Seasonal Examinations of the several years of the prescribed course, and the Entrance Examinations, at the beginning of the Second, Third and Fourth years, or the equivalent supplementary examinations in cases in which such supplementary examinations are allowed.

§ XIII.—FIRST YEAR MATRICULATION EXAMINATION.—Candidates for entrance into the First year of the course shall be examined (partly by written papers, partly *ex ore*) in the following subjects:

1. **LATIN.**—Grammar. One Latin subject. The following subjects are recommended:

For 1883: *Cæsar, Gallic War, Book V; or, Cæd, Metamorphoses, Book I.*
For 1884: *Cæsar, Gallic War, Book V; or, Cæd, Metamorphoses, Book II, Fab. I, 1, 3; Book III, Fab. I, 4, 1, 6 (Furcifer's oration).*
For 1885: *Cæsar, Gallic War, Book V; or, Cæd, Metamorphoses, Book II, Fab. I, 1, 3; Book III, Fab. I, 4, 5 (officers' oration).*

Instead of the above, equivalents may be offered, if they be not parts of the undergraduate course or giving a week's notice to the Secretary of the Faculty. In giving such notice a statement must be made of the equivalent to be offered.

5. **GREEK or FRENCH or GERMAN.**

GREEK.—Grammar. One Greek subject. The following subjects are recommended:

For 1883: *Evangelion, Arabic Book IV or Book V.*
For 1884: *Evangelion, Arabic Book V or Book VI.*
For 1885: *Evangelion, Arabic, Book I or Book VI.*

If Greek is to be chosen as one of the subjects of the course, it must be taken as a part of this examination.

FRENCH.—Voltaire's *Charles XII*, Book II, or an equal portion of Bernardin de St. Pierre's *Paul et Virginie* (from the beginning).—Questions in Grammar limited to the Accidence, and based upon the passages selected.

GERMAN.—Adler's *Reader*, Part II, Nos. 7; 10; 13-15.—Grammar.—Flacc 14 lessons in Otto's German Grammar (omitting the 9th and 10th lessons).

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

4. **ENGLISH.**—Language: GRAMMAR, Analysis, Writing from Dictation, Composition on *History and Geography*; Outlines of English and Canadian History and General Geography.

Competitors for Memo Exhibitions and Bourses, whose examinations are approved by the Senate, shall be exempt from further examination for matriculation.

The date of this Matriculation Examination will be found in the Calendar, p. 5.

§ XIV.—SECOND YEAR MATRICULATION EXAMINATION.—(1.) Candidates for entrance into the Second Year of the course shall be examined in the following subjects:

1. **LATIN.**—The subjects of the First Year Class, as specified in § XI., or their equivalents, together with one additional subject (not being a part of the undergraduate course for the year).

2. **GREEK or GERMAN or BOTANY** (according to the subject to be chosen as the second subject of the Second Year).

GREEK.—The subjects of the First Year Class, as specified in § XI., or their equivalents, together with one additional subject (not being a part of the undergraduate course for the year).

GERMAN.—The subjects of the First German Class as specified in § XI., or their equivalents.

BOTANY.—The subjects of the lectures of the Botany class, as specified in § XI.

3. **HUMAN HISTORY and ANCIENT GEOGRAPHY.**—The subjects of the Entrance Examination of the Second Year, as specified in § XV.

4. **MATHEMATICS.**—The subjects of the First Year Class, as specified in § XI.

5. **ENGLISH.**—In addition to the subjects of the First Year Matriculation Examination (in which special stress will be laid on Composition), candidates will be required to pass an examination on Pope's *Dunciad* or *Man* (Clarendon Press edition), and Johnson's *Lives of Addison, Pope, Collins, and Gray*,—or the equivalents thereof.

6. **INORGANIC CHEMISTRY.**—The subjects of the First Year Class.—Candidates may omit the subject; but in that event they must take it instead of one of the elective subjects in the Third Year.

(2.) Candidates for this examination who have previously passed in any one or more of the above subjects, either at the Matriculation Examination or at the Seasonal Examination of the First Year shall be exempt from further examination in such subjects.

(3.) Candidates must give the Secretary of the Faculty at least one week's notice of their intention to appear at this examination, and in giving such notice, must state the classical subjects in which they offer themselves for examination.

§ XV.—ENTRANCE EXAMINATIONS.—These examinations are held at the beginning of the Second, Third, and Fourth Years of the course, respectively. The following are the subjects:

Second Year.

1. CLASSICAL HISTORY AND GEOGRAPHY.—History of Rome to B.C. 41—Geography of Italia, Sicilia, Gallia, Hispania.

Books recommended: Liddell's *Students' History of Rome*; Tomes's *Primer of Classical Geography*; Gibb's & Heath's, or Schmitz's *Classical Atlas*.

2. ENGLISH LITERATURE.—The examination in 1883 will be limited to *Four of Macaulay's Essays*, as follows: *On Milton*, *On Lord Nugent's Memorials of Hampden*, *On Burleigh and his Times*, *On Lord Bacon*.

Third Year.

CLASSICAL HISTORY AND GEOGRAPHY.—History of Greece to the death of Alexander.—Geography of Greece, Asia, Africa.

Books recommended: *Smith's Students' History of Greece*, *Tomes's Primer of Classical Geography*; Gibb's & Heath's, or Schmitz's *Classical Atlas*.

Fourth Year.

HISTORY.—For Session 1884-5: Green's *History of the English People*; Gibb's *Concise History of France*.

§ XVI.—COURSE OF STUDY FOR DEGREE OF B.A.—The following is a list of the classes which must be attended, and of the subjects in which examinations must be passed in the various years of the B.A. course. The details of the subjects studied in these classes will be found under *Courses of Instruction*, (§ XI).

First Year.—1. Latin.

2. Greek or German or Botany.
3. Mathematics.
4. Inorganic Chemistry.
5. English.

Undergraduates who select Botany, as subject 2, shall be required to furnish the Professor, at the beginning of the Second Year, with evidence of their having done the practical work prescribed at the end of the Session.

Second Year.—1. Latin

2. Greek or German or Practical Chemistry.
3. Mathematics.
4. English Literature.*
5. Logic and Psychology.

Undergraduates who selected Greek or German in the First Year must select the same subject in the Second. Those who selected Botany in the first year must select Practical Chemistry in the Second.

*Undergraduates of the Second Year in 1882-84, shall be required to take Inorganic Chemistry instead of English Literature.

Third Year.—1. Latin

2. Physics.
3. History.
4. French or German (1st or 3rd Class.)
5. and 6. Any two of the following:
 - a. Metaphysics.
 - b. Greek (1st Year or 3rd and 4th Years Class).
 - c. Organic Chemistry.
 - d. Practical Chemistry.
 - e. The modern language not chosen as subject 4.

Undergraduates selecting Greek or German, shall take the First Year Class of the First Class, respectively, if they have not studied the subject during the first two years and the Third and Fourth Years Class or the Third Class, respectively, if they have studied the subject during the first two years.

Fourth Year.*—1. Latin.

2. Ethics.
3. French or German (2nd or 3rd Class).
4. 5. and 6. Any three of the following:
 - a. Greek (2nd Year or 3rd & 4th Years Class).
 - b. History.
 - c. Political Economy.
 - d. Physics;
 - e. Astronomy.
 - f. Practical Chemistry.
 - g. Hebrew.
 - h. The modern language not chosen as subject 3.

Undergraduates selecting Greek or German, shall take the Second Year Class or the Second Class respectively, if they have not studied the subject during the first two years, and the Third and Fourth Years Class or the Third Class, respectively, if they have studied the subject during the first two years.

N.B.—If the languages, Greek, French, or German, are chosen as parts of the course, they must be studied in consecutive years, and for at least two years.

§ XVII.—REGULATIONS AS TO EXAMINATIONS AND ATTENDANCE.—(1.) An Undergraduate shall not be allowed to enter the classes of any year, unless he have previously passed all the required Examinations of the previous year.

(2.) If an Undergraduate absent himself from any University examination, except for such cause as may be held good by the Faculty, he shall lose his Session.

*Undergraduates of the Fourth Year in 1883-84 may take either the subjects prescribed for that year in the Calendar of 1882-83, or those prescribed above.

(3.) If an Undergraduate fail to pass in more than two Subjects at any Sessional Examination he shall lose his Session.

(4.) If an Undergraduate fail to pass in more than two Subjects at the Sessional Examinations of the First Year, he shall be allowed to appear as a candidate at the Second Year Matriculation Examination of any subsequent session, provided he give notice to the Secretary of the Faculty at least one week before the opening of the Session.

(5.) In the case of an Undergraduate having to take a Session a second time, the Faculty may permit attendance on classes the examinations of which he has already passed with credit.

(6.) If an Undergraduate fail to pass in one or two subjects at any of the Sessional Examinations, he shall be allowed a Supplementary Examination in each subject or subjects, at the beginning of any subsequent Session, on the day fixed for that purpose in the Calendar (p. 5).—A second Supplementary Examination in the same Session in any subject of the Sessional Examinations shall in no case be granted.—Undergraduates who wish to present themselves at any Supplementary Examination must give notice to the Secretary of the Faculty at least one week before the opening of the Session.

(7.) If an Undergraduate fail to pass the Entrance Examinations of the Second, Third, or Fourth Years he shall be allowed a Supplementary Examination in the same Session on the day fixed for that purpose in the Calendar, (p. 5).

(8.) If an Undergraduate fail to appear at any of the Entrance Examinations on the day appointed in the Calendar, (p. 5) he shall be allowed a Supplementary Examination on the day fixed for that purpose in the Calendar, provided he give notice to the Secretary of the Faculty on, or immediately after, the opening of the Session.

(9.) A student who appears as a candidate at a Supplementary Examination shall be required to pay a fee of two dollars for such examination.

(10.) A student who presents himself for Supplementary Examination on any other day than that specified in the Calendar shall be required to pay an additional fee of one dollar.

(11.) Students are forbidden to take any book or manuscript into the Examination Hall, except by direction of the Examiner, or to give or receive assistance, or to hold any communication with one another at the examinations. If a student violate this rule he shall either lose his Session or suffer such penalty as the Faculty may see fit to impose.

(12.) The amount of absence from prescribed classes, which shall disqualify for the keeping of a Session, shall be determined by the Faculty.

§ XVIII.—DEGREE OF BACHELOR OF ARTS WITH HONOURS.—(1.)

An Undergraduate shall be allowed, during the third and fourth years of his course, to restrict his attention to a more limited range of subjects than that demanded of candidates for the ordinary degree of B. A., by entering upon any one of the following Honours Courses, viz, (1) Classics, (2) Mathematics and Physics, (3) Mental and Moral Philosophy, (4) Experimental Physics and Chemistry, (5) English Literature and History; provided he has attained a First or Second Class standing at the previous Sessional Examination in the subject corresponding to that of the Honours Course selected.

(2.) A candidate for the Degree of Bachelor of Arts with Honours in any of the above departments shall be required to attend the classes provided in the subjects of such department (Sec. § XI.), to make progress satisfactory to the Professors, who conduct such classes, and to pass the examinations in the subjects of such department; and he shall be allowed to omit, from the subjects demanded of candidates for the ordinary degree, certain subjects specified below.

(3.) The examinations for Honours shall be held at the end of the Fourth Session. But a candidate for Honours may defer his examination in the subjects of his Honours Course until a year after he has passed the Sessional Examinations in the ordinary subjects of the fourth year; in which case, however, such candidate shall not be entitled to the degree of Bachelor until he has passed the Honours Examinations.

(4.) A candidate for Honours, who attains a First or Second Class standing at the examination for Honours, shall obtain the Degree of Bachelor of Arts with First or Second Rank Honours in such department, provided he has also attained a First or Second Class standing respectively, at the Sessional Examinations of the Fourth year in those subjects of the ordinary course which correspond to the subjects of his Honours Course.

(5.) A candidate for a degree with Honours, who fails to obtain such degree, shall receive the ordinary degree of Bachelor of Arts, if his examinations in the subjects of the ordinary course, and in those of the department of Honours in which he has studied, are of sufficient merit.

(6.) Candidates for Honours in Classics may, in each of the third and fourth years, omit any two of the subjects of those years not bearing on their Honours course.

Such candidates shall be examined in the following subjects, viz :

LATIN.—PRÆTOR; TULLIUS.

Terence: *Hexameron*.

Virgil: *Georgics*, Books I., IV.

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

Juvenal: *Satire*, VII., VIII., XIV.

Cicero: *De Oratore*, Books I., II.

Tacitus: *Germania*, Agricola.

GREEK.—*Æschylus: Agamemnon.*
Sophocles: Œdipus Coloneus.
Horace: Odes, Books V.—VIII.
Theocritus: Book VII.
Plato: Phædo.
Demosthenes: De Corona.

COMPOSITION.—Latin Prose.

PHILOLOGY.—Müller's Science of Language, vol. 1, chaps. 1-7.
 Pfeiffer's Introduction to Greek and Latin Etymology. Class Lectures.

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

The following changes will be made in the course for 1886:

Theocritus: Book II, for Book VII.

Tacitus: Annals, II, for Germania and Agricola.

Literature: Mahaffy's History of Greek Literature, for Müller and Donaldson's. Crutwell's History of Roman Literature, for Brown's.

(7.) Candidates for Honours in Mathematics and Physics may sit in the Third Year any two, and in the Fourth Year any three, of the subjects of those years not bearing on their Honours Course. Such candidates shall be required to take in the Third Year of their course, the Physics Class of the Fourth Year.—They shall be examined in the following subjects, viz.:

MATHEMATICS.

TRIGONOMETRY.—Angular Analysis; Solution of Spherical Triangles, Napier's Analogies; with application to Astronomical Problems.

ANALYTICAL GEOMETRY.—The Conic Sections, and the Equation of the Second Degree between two variables; as far as set forth in any standard Treatise on the subject.

CALCULUS.—Differential and Integral, as set forth in any standard Treatise on these subjects. Differential Equations (selected courses), with practical applications to Physical Problems.

Books recommended (in order of preference): Todhunter's Spherical Trigonometry; Todhunter's Plane Trigonometry, or Colson's (last part); Todhunter's Practice, or Salmon's Conic Sections; Fall's, Hirst's, or Todhunter's Differential and Integral Calculus; Todhunter's or Young's Theory of Equations; Bode's Differential Equations.

PHYSICS.

Kinematics.
 Dynamics of a Particle.
 Rigid Dynamics.
 Hydrodynamics.
 Thermodynamics.
 Electrostatics.

(8.) Candidates for Honours in Mental and Moral Philosophy may, in each of the Third and Fourth Years, omit any two of the subjects of those years, not bearing on their Honours Course. They shall be examined in the following subjects, viz.:

LOGIC AND PSYCHOLOGY.

Mil's Logic, Books I, II, III.

Hamilton's Lectures on Logic and Metaphysics.

Reid's Essays, VI.

Alison's Essays on the Principles of Taste.

Prof. Leyal's Intellect, the Emotions, and the Moral Nature.

METAPHYSICS.

Plato's Timæus, and Republic.

Aristotle's De Anima and Metaphysics, Book I.

Descartes' Method and Meditations.

Locke's Essay on Human Understanding.

Berkeley's Philosophical Works (Ed. Fraser.)

Hume's Treatise on Human Nature, (with Green's Introduction.)

Kant's Critique of Pure Reason.

ETHICS.

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

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

Smith's Theory of Moral Sentiments.

MacIntosh's Dissertation on the Nature of Virtue.

Kant's Metaphysics of Ethics.

Mil's Utilitarianism.

(9.) Candidates for Honours in Experimental Physics and Chemistry may, in each of the Third and Fourth Years, omit any two of the subjects of those years, not bearing on their Honours Course. Such candidates shall be required to take in the Third Year of their course the Physics Class of the Fourth Year. They shall be examined in the following subjects, viz.:

EXPERIMENTAL PHYSICS.

Properties of Solids, Liquids and Gases, including the principles of the Kinetic Theory of Gases.

Heat, including the principles of the Dynamical Theory.

Sound, Light and Radiant Heat, including the principles of the Undulatory Theory.

Electricity and Magnetism.

The Conservation of Energy as the great experimental law of physical phenomena.

In the treatment of these subjects no more profound mathematical knowledge will be demanded than is necessary for the Bachelor degree.

Candidates shall be required to show considerable familiarity with both the theory and the practice of the methods of determining physical constants, such as densities, coefficients of expansion, specific and latent heats, vapour densities, refractive indices, electrical resistance, decomposing force, &c. and especially with the physical methods and instruments usually employed in chemical research.

The following works are recommended to candidates for consultation:—Magnus' Hydrostatics and Pneumatics (Longmans); Storer's Treatise on Heat (Clarendon Press); Maxwell's Theory of Heat (Longmans); Stone's Elementary Lessons on Sound (Macmillan); ABUS' Geometrical Optics (Delphian, Bell & Co.); Glaschow's Physical Optics (Longmans); Ruscoe's Spectrum Analysis (Macmillan); Articles Electricity and Magnetism, Encyclopædia Britannica, 9th Ed. (A & C. Black).

CHEMISTRY.

A Course of Extra Study will be prescribed by the Professor, who will explain the nature and extent of the work to be done, and advise what books should be read and consulted.

(16.) Candidates for Honours in English Literature and History may, in each of the Third and Fourth Years of their course, omit any two of the subjects of those years not bearing on their Honours course. They shall be examined on the following subjects, viz.:

LITERATURE.

1. Selections from Anglo-Saxon Literature. Sweet's Reader.
2. The literature of the last half of the fourteenth century as represented by Morris & Skeat's Specimens, Part II, Sections X.-XX., with Introduction, and the following works of Chaucer: The Tale of the Man of Lawe, The Parliamentes Tale, The Second Nonnes Tale, The Chaucous Yemanes Tale.
3. Detailed History of the Elizabethan and early Stuart Literature, including a general acquaintance with the more important works of the period, and an intimate knowledge of the following:

Lily: Epitaphs. The Anatomy of Wit.
 Spenser: The Faerie Queene, Book II.
 Marlowe: Doctor Faustus.
 Greene: Friar Bacon and Friar Bungay.
 Sidney: An Apologie for Poetrie.
 Bacon: Advancement of Learning, Book I.
 Shakespeare: Henry V., Hamlet, Lear.
 Milton: Of Reformation in England, Eikonoklastes, Samson Agonistes.

4. The following specimens of later English poetry:—

Cooper: The Task, Books L-III.
 Coleridge: The Ancient Mariner.
 Wordsworth: The Prelude, Books L-VI.
 Keats: Hyperion.
 Shelley: Adonais.

HISTORY.

A minute investigation of English History from A.D. 1603-1699.

§ XIX.—DEGREE OF MASTER OF ARTS.—A Bachelor of Arts, of at least three years' standing, maintaining throughout a good reputation, shall be entitled to the Degree of Master of Arts, on producing a satisfactory thesis on some literary, philosophical or scientific subject. The subject must have been previously approved by the Senate.—The thesis must be handed in on or before the 1st March.

§ XX.—ADMISSION AD EUNDEM GRADUM.—Bachelors or Masters of Arts, who have received their degrees in course at Universities approved by the Senate, shall be admitted ad eundem gradum in this University, on producing satisfactory proof of rank and character.

GRADUATION IN SCIENCE.

§ XXI.—DEGREE OF BACHELOR OF SCIENCE.—The Degree of Bachelor of Science, for which a course of study has for some years been prescribed, is for the present suspended.

Due provision will be made for the graduation of those undergraduates who have already entered upon this course. They shall be required to attend either the classes prescribed in former Calendars,* or equivalent classes sanctioned by the Faculty of Arts; and to pass the Sessional Examinations in the various subjects of the several years, according to the regulations of § XVII.

§ XXII.—DEGREE OF BACHELOR OF SCIENCE WITH HONOURS.—Undergraduates in Science may specialise their studies during the Third and Fourth Years by becoming candidates for Honours in (1) Mathematics or Physics, or (2) Experimental Physics and Chemistry. The requirements and privileges of candidates for the degree of B.Sc. with Honours, shall be the same as those of candidates for the degree of B.A. with Honours (See § XVIII).—The subjects of examination in the above departments of Honours shall be the same as those specified in § XVIII.

* The Course of Study for B.Sc., prescribed in former Calendars, was as follows:

- First Year.—(1) Mathematics.
 (2) Inorganic Chemistry.

(3) English Language and Rhetoric.
 (4) Latin or German.—If German be taken in the First Year, it must be taken throughout the course; but Latin may be taken the first two years and German the last year.

- Second Year.—(1) Mathematics.
 (2) Botany or Zoology.
 (3) Organic Chemistry.
 (4) Latin or German.
 (5) French.
 (6) Either (A) Vector Mathematics and Chemical Laboratory or (B) Chemical Laboratory (non-extended course).—Which group (A or B) is taken in the Second Year must be taken in subsequent years.

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

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

§ XXIII.—FEES.—(1.) The following is a statement of the fees payable in the Faculty of Arts. They are all payable in advance.—No student shall be allowed to enter a class until he has paid the proper fees:

Matriculation Fee, payable by Undergraduates on matriculating.....	\$2.00
Registration Fee, payable annually by general students.....	1.00
Library Fee, payable annually by all students.....	1.00
Gymnasium Fee, payable annually by all male students attending at least two classes, except registered students of the Halifax Medical College.....	1.00
Fee for each class attended, per Session, payable by general students, and by undergraduates for classes attended in addition to those of this prescribed course.....	6.00
Practical Chemistry class, for every three months of practical work in the Laboratory.....	6.00

(2.) An undergraduate in Arts shall pay but one fee to each Professor whose classes he may attend as parts of his regular course, except in the case of the Professors of Classics and Mathematics, to whom fees shall be paid in both the first and the second years.—Undergraduates, taking one or both of the modern languages as parts of their course, shall pay to the Lecturer in Modern Languages, one fee for each language taken.—No fees shall be exacted for the tutorial classes in Classics and Mathematics.

(3.) Undergraduates in Science shall pay but one fee to each Professor whose classes they may attend as parts of their regular course, except in the case of the Professor of Chemistry and Mineralogy and the Lecturer on Modern Languages, to each of whom fees shall be paid twice.—A fee of six dollars per Session shall be paid for the Practical Chemistry or Laboratory Class as often as it may be taken.

(4.) The graduation fees are as follows:

Fee for either the B. A. or the B. Sc. Diploma, which is payable by candidates before the Sessional Examinations of the Fourth Year, and will be returned in case of failure.....	\$ 5 00
Fee for M. A. Diploma, which must accompany the Thesis, and will be returned if the Thesis is not sustained.....	10 00
Fee for B. A. or M. A. (of certain grades).....	10 00

§ XXIV.—MEDALS AND PRIZES.

MEDALS.

THE GOVERNOR-GENERAL'S GOLD MEDAL.—This medal will be awarded to the Undergraduate standing highest among those taking Honours in the department of Classics, the winner of the Sir William Young Medal being excluded.

THE SIR WILLIAM YOUNG GOLD MEDAL.—This medal will be awarded to the Undergraduate standing highest among those taking Honours in the department of Mathematics and Physics, the winner of the Governor-General's Gold Medal being excluded.

THE GOVERNOR-GENERAL'S SILVER MEDAL.—This medal will be awarded to the Undergraduate standing highest among those taking Honours in one of the following departments, viz.: (1) Experimental Physics and Chemistry, (2) Mental and Moral Philosophy, (3) English Literature and History, in this order of preference, the winner of a gold medal being excluded. If there should be no candidate for Honours in either of these departments, it will be given to the Undergraduate standing next the gold medallist in any other department of Honours in the order of preference in which these departments are enumerated in § XVIII.

PRIZES.

(The Senate reserves to itself the right of withholding Prizes and Bursaries, in cases in which sufficient merit is not shown.)

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

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

THE ST. ANDREW'S CHURCH PRIZE.—This Prize will be awarded this year to the Undergraduate who stands first in Mathematics at the Sessional Examinations of the Second Year, the winner of the Waverley Prize being excluded.

NORTH BRITISH SOCIETY BURSARY.—A BURSARY, of the annual value of \$60, has been founded in connection with Dalhousie College by the North British Society of Halifax, to be competed for at the Sessional Examinations of the Second Year's Course in Arts, and held by the successful competitor for two years, namely, during the Third and Fourth Years of the Undergraduate Course in Arts. Candidates must be Undergraduates who have completed two years of the Curriculum, and must be eligible, at the proper age, to be members of the North British Society. The next competition will take place in April, 1854, at the Sessional Examinations. In awarding this Bursary, Classics, Mathematics, and Chemistry will be reckoned each 150; Logic, 100.

THE WAVERLEY PRIZE.—This Prize, the interest of an endowment of \$1000, will be awarded annually to the Student

of the Second Mathematical Class who stands highest at the Sessional Examinations in the Mathematics of the year, the winner of the North British Society Bursary being excluded.

THE DR. AVERY PRIZE.—A Prize of the value of \$25 is offered by Dr. Avery for competition to the Undergraduates in Arts of the Fourth Year, who are not studying for Honours. It will be awarded to the Undergraduate who stands highest at the Sessional Examinations.

THE JACK HERBARIUM PRIZE.—A Prize of \$25 is offered by F. Jack, Esq., Halifax, for the best Herbarium or collection of Dried and Mounted Specimens of the Native Plants of Nova Scotia, collected by the competitor during the year 1883,—the whole to be carefully named and classified, with dates and places of collection.

The collection, or a duplicate set of unmounted specimens to be presented by the successful competitor to the college, to form the basis of a Herbarium of the Nova Scotia Flora.

Collections in competition to be sent in to the Professor of Botany, not later than the first week of February, 1884. The competition is open to all.

§ XXV.—MUNRO EXHIBITIONS AND BURSARIES.—

1. The following Exhibitions and Bursaries are offered by Geo. Munro, Esq., of New York, to be competed for at the beginning of the Session in each of the years 1883-4, 1884-5, 1885-6, 1886-7, viz.:

- (1) Five Junior Exhibitions
- (2) Ten Junior Bursaries
- (3) Five Senior Exhibitions
- (4) Ten Senior Bursaries

(2.) The Exhibitions are each of the value of \$200 per annum; the Bursaries are each of the value of \$150 per annum. Both Exhibitions and Bursaries are tenable for two years.

(3.) *The Junior Exhibitions and Bursaries* are offered for competition (as limited by § XXV. 6) to candidates for matriculation in Arts, provided they have previously neither matriculated at any University conferring Degrees in Arts, nor appeared as candidates for these Exhibitions and Bursaries more than once.

(4.) *The Senior Exhibitions and Bursaries* are offered for competition to Undergraduates entering the Third year of the Arts course. Candidates must have completed two and only two years of their course in Arts either at this or at some other University, and must have matriculated within three academic years of the date of competition. Candidates from other Universities must comply with the conditions of § II, 5.

(5.) *The Exhibitions (Junior and Senior)* are open to all candidates satisfying the conditions of sections 3 and 4 respectively.

(6.) *The Bursaries* are limited to candidates from the unmentioned districts, and are awarded according to the following scheme:

Four Bursaries to District No. 1, comprising the Counties of Halifax, Colchester, Pictou and Yarmouth.

Two Bursaries to District No. 2, comprising the remaining Counties of Nova Scotia proper.

One Bursary to District No. 3, viz., the Island of Cape Breton.

Two Bursaries to District No. 4, viz., Prince Edward Island.

One Bursary to District No. 5, viz., New Brunswick.

(7.) The district under which a candidate competes shall be determined either by the locality of the last school or academy* which he has attended for one school or academic year within the two calendar years immediately preceding (for Junior Exhibitions and Bursaries) the date of the competition, (for Senior Exhibitions and Bursaries) the date of his matriculation; or in the event of his not having attended for a school or academic year any school or academy within those two years, by his permanent or usual residence previously to matriculation.

(8.) *The Junior Exhibitions and Bursaries* shall be held during two years, provided the holder (*a*) attend in consecutive years the classes proper to the first and second years of the Arts Course to the satisfaction of the Senate, Greek being taken as one of the subjects of each of these years, (*b*) attain a second class standing in at least one of the subjects of examination at the end of the first year, besides passing in the others, and (*c*) pass either the entrance and Sessional Examinations or the Supplementary Examinations of the second year.

(9.) If a candidate, to whom a Junior Exhibition or Bursary has been awarded, is able to pass the Second Year Matriculation Examination, he may enter the Second Year; in which case, however, he shall hold his Exhibition or Bursary during that year only.

(10.) *The Senior Exhibitions and Bursaries* shall be held during the third and fourth years of the Arts course on conditions similar to those for Junior Exhibitions and Bursaries. But in the case of an Undergraduate studying for Honours in

*A College and having University powers shall, for the purpose of this rule, be considered a school or academy.

†For the purpose of this condition, Geometry and Algebra shall be reckoned as separate subjects.

any department, the favorable report of the Professor or Professors in that department on his Honours work in the Third Year shall be considered equivalent to the attainment of a second-class standing in one subject.

(11.) The annual amounts of the above Exhibitions and Bursaries will be paid in three instalments, the first on the first Monday after the opening of the classes, the second on the first Monday after the Christmas vacation, and the third on the day of the Spring Convocation, the payment of each instalment being dependent upon the fulfillment of the conditions of tenure at the date at which it becomes due.

(12.) Candidates are required to make application for these Exhibitions and Bursaries by means of a printed schedule inserted at the end of this Calendar. These schedules, with the certificates mentioned therein, must be filled up by candidates and sent to the Principal on or before October 10th, 1885.—No schedule will be received after this date.

(13.) A certain standard of answering at the Examinations, fixed by the Senate, will be required for obtaining any of the above Exhibitions and Bursaries. A higher standard will be required for Exhibitions than for Bursaries.

(14.) The Senate shall in all cases decide as to the fulfilment of the above rules and conditions.

(15.) The Examinations for the Exhibitions and Bursaries which are offered for 1885 will be held on the days fixed for that purpose in the Calendar (p. 5).

(16.) The subjects of examination for the Junior Exhibitions and Bursaries in 1885 shall be as follows:

1. **LATIN.**—*Cæsar, Gallic War, Book V; Ovid, Metamorphoses, Book I Grammar; Accidence, Syntax, Prose, Sentences of Herodianus Verus.* *Composition: Easy sentences to be translated into Latin prose. *Text Books: Smith's Smaller Latin Grammar, or Boyce's Latin Grammar; Smith's Principia Latina, Part IV, Eves. 1-35; Amaldi's Latin Prose Composition, Eves. 1-9, 21-43.

2. **GREEK.**—*Xenophon, Anabasis, Books IV and V; Grammar; Accidence (omitting Accentuation), other rules of Syntax.* *Text Book: Hadley's Elements of Greek Grammar.

3. **MATHEMATICS.**—*Arithmetic: the ordinary rules of arithmetic, Vulgar and Decimal Fractions, Proportion and Interest. Algebra: as far as Simple Equations and Squares, with Theory of Indices. Geometry: First, Second, and Third Books of Euclid or the subjects thereof.*

*These Text Books are mentioned to indicate in a general way the extent of knowledge required.

†Classical subjects for 1881 and 1882.

Latin, 1880.—*Cæsar, Gallic War, Book V; Ovid, Metamorphoses, Book I, Fab. 1-2, 3; Book III, Fab. 1, 4, 5, 6 (Terentian's Edition).*

1881.—*Cæsar, Gallic War, Book V; Ovid, Metamorphoses, Book I, Fab. 1, 2, 3; Book III, Fab. 1, 4, 5, 6 (Terentian's Edition).*

Greek, 1884.—*Xenophon, Anabasis, Books 7 and VI, 1885.—Xenophon, Anabasis, Books I and VI.*

4. **ENGLISH.**—*Language: Grammar, Analysis, Writing from Dictation, Composition. History and Geography: Outlines of English and Canadian History and General Geography.*

The relative values of these subjects shall be as follows: Classics, 250; Mathematics, 200; English, 150.

(17.) The subjects of examination for the Senior Exhibitions and Bursaries of 1885-6 and 1884-5 shall be as follows:

CLASSICS.

1. **LATIN:** 1885, *Horace, Odes, Books III, IV; Livy, Book XXI.—1884, Horace, Odes, Book IV; Cicero, Selected Letters (Richard and Bernard's Edition).*

*Composition: An easy English passage on a Classical subject to be turned into Latin prose. For models, see Smith's Principia Latina, Part V.

2. **GREEK:** 1885, *Xenophon, Hæcæticæ, Book I; Demosthenes, Olynthiaca.—1884, Homer, Odyssey, Book X; Herodotus, Book I §§ 92-216.*

*Composition: Translation of easy sentences into Greek prose, to illustrate the use of the cases. For examples, see Smith's Latin Greek, Part III, Nos. 1-44.

3. **CLASSICAL HISTORY AND GEOGRAPHY.** HISTORY OF GREECE to the death of Alexander. Geography of Greece, Asia, Africa.

*Text Books: Smith's *Outlines of Greece*. Todd's *Primer of Classical Geography*.

MATHEMATICS.

ALGEBRA: As set forth in Colenso's or Toddman's Algebra, excluding Properties of Numbers, Diophantine Analysis and Continued Fractions.

TRIGONOMETRY: Analytical Plane, as far as, but exclusive of, DeMoivre's Theorem: with application to Mensuration.

GEOMETRY: The First, Second, Third, Fourth and Sixth Books of Euclid, on the subjects thereof, with the Definitions of the Fifth; Easy Exercises on the same.

LOGIC OR ENGLISH LITERATURE.

LOGIC: Sir Wm. Hamilton's Lectures on Logic. The Doctrine of Concepts. The Doctrine of Judgments. The Doctrine of Reasonings. Syllogisms: their Divisions according to internal form, their Divisions according to external form. Reasoning in Comprehension, and Reasoning in Extension. Fallacies.

ENGLISH LITERATURE: 1885.—Spenser's *Fæerie Queene*, 1st Book: Six Cantos. Shakespeare: As you like it, Richard II, King Lear. The principal scenes of the Argonauts Age.—1884.—Spenser, *Fæerie Queene*, Book I; Shakespeare, Richard II, Henry V.; Milton, Comus, Amphitruon; Dryden, *Amos Mirabilis*, Absalon and Achitophel. The Hind and the Panther.

INORGANIC CHEMISTRY OR BOTANY.

INORGANIC CHEMISTRY: Atomic Weights. Definite Proportions by weight. Equivalent and Volumetric Proportions. Atomic Theory. Non-metallic Elements (except F, S and B), their distribution in nature, preparation,

properties, their oxides, acids or other compounds of theoretical importance. The Metals, general chemical character and classification. Constitution of Salts. Details relating to the following Metals so far as regards their mode of occurrence in nature, their oxides and most important salts, and common processes and manufactures illustrating their chemical characters:—K, Na, Ba, Ca, Mg, Al, Fe, Zn, Mn, Cr, B, Ss, Pb, Co, Hg, Ag, As, Pn. Reactions are required to be given in form of chemical equations.

BOTANY: The Cell, its structure, contents and development. Tissues. External conformation of Plants. The Axis. Leaves, structure, function, principal forms and modifications in form in the principal families of plants. Reproductive process in flowering plants. The Fruit, morphology principal modifications. The Seed, embryo. Reproduction of Ferns, Mosses, Algae, Fungi. General principles of the Natural System of Classification, with examples of the principal divisions. Details of structure, relations, and geographical distribution in North America of the following orders:—Ranunculaceae, Nymphaeaceae, Cymuliferæ, Violaceae, Vitaceae, Leguminosae, Rosaceae, Onagraceae, Cucurbitaceae, Cactaceae, Graminales, Umbelliferae, Cuculaceae, Compositae, Ericaceae, Convolvulaceae, Boraginaceae, Solanaceae, Chenopodiaceae, Polygomonaceae, Urticaceae, Betulaceae, Coniferae, Orchidaceae, Liliaceae, Cyperaceae, Gramineae, Polydnicaceae.

The relative values of the above subjects shall be as follows:—Classics, 200; Mathematics, 200; Logic or English Literature, 150; Chemistry or Botany, 150.

Faculty of Law.

THE PRINCIPAL, (see office).

Professor: WILSON.

Lecturers: RAGLE,

THOMPSON,

SHANNON,

THOMPSON,

GESHAM,

ROSENBERG,

RUSSELL.

Dean of the Faculty: PROFESSOR WILSON.

§ XXVL—COURSES OF LECTURES.

The following courses of lectures, to be given in the Session of 1883-4, will begin on the 31st October 1883, and end on the 4th April, 1884.

CONSTITUTIONAL AND INTERNATIONAL LAW.

(George Munro Professorship.)

Professor: E. C. WILSON, M. A., F.R.S.

Constitutional Law.

Wednesday and Friday, 11—1 P. M.

Subjects of lectures:

English Kingship, mediæval and modern. The Administrative System. The Written Code of the Constitution: Magna Charta, Petition of Right, Habeas Corpus Act, Bill of Rights, Act of Settlement. Law of Parliament. Select cases in Constitutional Law. British North America Act. Select cases on the B. N. A. Act.

Constitutional History.

Thursday, 11—1 P. M.

Subjects of lectures:

Anglo-Saxon Borough. The Judicial System of the Anglo-Saxons. The Writings of the Feudalism in England. Origin and Growth of the Two Houses of Parliament. Origin and Development of Trial by Jury. The Royal Prerogative. History of the Law of Treason. The Liberty of the Person. The Liberty of the Press. History of Party Government. Origin and Development of the Cabinet System. History of the Reform Bill. Duration of Parliaments.

Private International Law.

Mondays, 11 A. M.—12 N.

Subjects of lectures:

Teaching rules as to (1) personal capacity, (2) rights of property, (3) rights of obligation, (4) rights of succession, (5) family rights, (6) forms of legal acts. The use of courts by strangers. The efforts of foreign judgments. Extradition. Select cases upon the Conflict of Laws.

COMMON LAW.

Wednesdays and Fridays, 11 A. M.—12 N.

The details of this course of lectures will be announced at the opening of the Session.

TORTS AND CRIMES.

Lecturer..... Mr. JUSTICE ROSE.

Tuesdays and Fridays, 2—4 P. M.

Subjects of lectures:

TORTS.—Historical Outline. Distinctions. Distinction between Torts and Crimes. Negligence. Death. Slander of Title. Trade Mark. Slander and Libel. Malicious prosecution. Conspiracy. Assault and Battery. False imprisonment. Seduction. Trespass to Property. Conversion.

Text Books: Addison on Torts. Blackstone on Torts.

CRIMES.—Sources of Criminal Law. Felonies and Misdemeanors. Offences against property, against persons, against the Queen and Her Government, against Public Justice, against Public Peace against Public Trade, against Public Morals. Conspiracy. Accessories. Offences after previous conviction.

Text Book: Archbold.

EVIDENCE, CONSTRUCTION OF STATUTES, PLEADINGS AND PROCEDURE.

Lecturer..... Mr. JUSTICE FLEMING.

Wednesdays and Fridays, 4.30—5.30 P. M.

This course will embrace lectures on the following subjects:

EVIDENCE: Nature of Proof, Production and Effect of Evidence, Relevancy.

CONSTRUCTION OF STATUTES: Classification of Statutes, Parts of Statutes, General Rules of Construction, Limitations of Legislative Power, "Strict," "Liberal," and "Equitable" Construction, Treaties, Grants, Deeds and Ordinances.

PLEADINGS AND PROCEDURE: Parties to Actions, Forms of Actions, Forms of Pleadings, Construction of Pleadings, Defects in Pleadings.

It is expected that special reference will be made to the following works: Evidence: Greenleaf and Joyce. Construction of Statutes: Sedgwick and Matthews. Pleadings, &c.: Stephen on Pleadings, Chitty on &c., Statutes relating to Pleadings and Practice.

REAL PROPERTY AND CONVEYANCING.Lecturers: { Mr. SHERWIN, Q.C.
..... Mr. FLEMING, Q.C.

Mondays and Thursdays, 4.30—5.30 P. M.

Subjects of lectures:

Estates of Freehold: Estates less than Freehold; Estates in Joint-Tenancy, Coparcenary, Tenancy in Common; Estates in Possession, Remainder, and Reversion; Aliens of Property; Conveyancing, Judgments, &c.; Easements and Servitudes; Rents, including Law of Landlord and Tenant; Descent of Real Estate, Wills.

Books recommended: Blackstone, Vol II: Williams on Real Property; Tudor's Leading Cases on Real Property; Greenwood's Manual of Conveyancing.

MERCANTILE LAW.

Lecturer..... Mr. GASTON, Q.C.

Tuesdays and Thursdays, 8—9 P. M.

Subjects of lectures:

Bills of Exchange and Promissory Notes, Shipping, Insurance, Guaranty, Partnership, Joint Stock Companies, Liens, Stoppage in Transit, Bailments.

Books recommended: Sedgwick Mercantile Law and the Books treating of the above subjects recommended by the Baristers' Society of Nova Scotia for admission to the Law.

EQUITY JURISPRUDENCE.

Lecturer..... Mr. GASTON, Q.C.

Wednesdays and Fridays, 4.30—5.30 P. M.

The lectures in this course will treat of the following among other subjects:

Trusts, Mortgages, Fraud, Mistake, Specific Performance of Contracts, Rescission of Contracts, Administration of Debts and Assets, Election, Account, Discovery, Injunction, Equity Pleadings and Practice.

Books recommended: Story's Equity Jurisprudence, Goddard's Equity, Story's Equity Pleadings, White and Tudor's Leading Cases, Statutes of Nova Scotia relating to Equity Jurisprudence and Procedure.

CONTRACTS.

Lecturer, Es. BROWN.

Mondays and Thursdays, 8 - 9 P.M.

Subjects of lectures :

Definition of terms; agreement or convention, consideration, proposal, acceptance, promise, &c. Persons who may contract, principal and agent. Disabilities arising from infancy, coverture, insanity, intoxication, &c. Express and implied contracts. Quasi contracts distinguished from implied contracts. Verbal and written contracts. Specialties. Statutory requirements as to validity or authentication of contracts; Statute of Frauds, Statute of Limitations (its part). Causes vitiating agreements; mistake, fraud, duress, &c. Contracts void on grounds of public policy, illegality of consideration, &c. Classification of contracts as to their subject matter. General principles governing sales and bailments. Discharge of contracts, rescission, performance, payment, release, merger, &c. Lending cases.

Text Books: Leake on Contracts. Pollock on Contracts. Langbeil's Select Cases on Contracts. Langbeil's Summary of Contracts.

TIME TABLE—FACULTY OF LAW—1883-84.

HOURS.	FIRST YEAR.	SECOND YEAR.
11—12.	Common Law (W. F.)	Private International Law. (N.)
12—1	Constitutional History (Tu.)	Constitutional Law (W. F.)
4.30—5.30	Real Property &c. (M. Th.)	Procedure and Evidence &c. (M. Th.) Equity Jurisprudence (W. F.)
8—9	Torts and Crimes (Tu. F.) Contracts (M. Th.)	Commercial Law (Tu. Th.)

GRADUATION IN LAW.

§ XXVII.—DEGREE OF BACHELOR OF LAWS.—Candidates for the Degree of LL.B. are required to pass either the First Year Matriculation Examination of this Faculty (admitting to the standing of an Undergraduate of the First Year), or the Second Year Matriculation Examination (admitting to the standing of an Undergraduate of the Second Year), or other Examinations recognized as the equivalents of these; to attend the classes of the course of study prescribed for this degree during either the first two or the last two years respectively, according to the standing given by the Matriculation Examination; and to pass either the Sessional or the Supplementary Examinations in the subjects of either all three years or of the last two years, according as the candidate has entered as an Undergraduate of the First or of the Second Year.

Although attendance on the classes of the Third Year of the course is not required of those Undergraduates who have already attended the classes of the first two years, it is urgently recommended.

§ XXVIII.—FIRST YEAR MATRICULATION EXAMINATION.—(1.) Candidates for entrance into the First Year of the Course shall be examined in the following subjects, except in cases in which certain Examinations mentioned below (§ XXVIII. 3) shall have been already passed:

CLASSICS.—Xenophon—Anabasis, Books one and two. Cicero—The first and 4th Orations against Catiline. Virgil—Æneid, Books one and two. Translation from English into Latin. Latin Grammar.

MATHEMATICS.—Arithmetic; Geometry, Euclid—Books one, two and three.

ENGLISH.—A paper on English Grammar, Composition.

HISTORY AND GEOGRAPHY.—English History, Roman History; Geography, North America and Europe.

EXERCISES OF BOOK-KEEPING.

OPTIONAL SUBJECT INSTEAD OF GREEK.—French, Translation from French into English, and from English into French.

(2.) Persons desirous of appearing as candidates at this examination must give notice to the Dean of the Faculty, on or before Oct 14th, 1883; and they shall be required to pay a fee of \$10.00.—The Examination will be held this Session, on Tuesday, Oct. 23rd, at 10 o'clock A. M.

(3.) Graduates in Arts of any University, Undergraduates in Arts of this University, and articled clerks in any of the Provinces of the Dominion of Canada shall be admitted to the standing of Undergraduates of the First Year in the Faculty of Law, without passing any examination.

§ XXIX.—SECOND YEAR MATRICULATION EXAMINATION.—(1.) Candidates for entrance into the Second Year of the Course must be either graduates in Arts of some University, undergraduates in Arts of this University, or articled clerks in one of the Provinces of the Dominion of Canada. They must also either have passed examinations in the subjects of the First Year of the Course, in some Law School recognised by the Faculty, or pass examinations in these subjects in this University.

(2.) Candidates who wish to present themselves for examination in those subjects at the beginning of the Session, must give notice to the Dean of the Faculty on or before October 16th, 1883.—The examinations will begin October 23rd, 1883.

(3.) Barristers-at-Law, or articled clerks in any of the Provinces of the Dominion of Canada of at least two years standing, shall, in the Session of 1883-84, be admitted to the standing of Undergraduates of the Second Year without examination. But this privilege will not be granted in future Sessions.

§ XXX.—COURSE OF STUDY FOR DEGREE OF LL.B.—The following is a statement of the classes which must be attended, and of the examinations which must be passed, in the several years of the Course:

- First Year.**—1. Real Property and Conveyancing.
2. Contracts.
3. Torts and Crimes.
4. Common Law.
5. Constitutional History.

- Second Year.**—1. Evidence, Construction of Statutes, Pleadings and Procedure.
2. Commercial Law.
3. Equity Jurisprudence.
4. Private International Law.
5. Constitutional Law.

- Third Year.**—1. International Law.
2. Jurisprudence.
3. Roman Law.

§ XXXI.—REGULATIONS AS TO EXAMINATIONS AND ATTENDANCE.—(1.) If an undergraduate fail to pass in any subject or subjects of the Sessional Examinations, he shall be allowed a Supplementary Examination in such subject or subjects at the beginning of any subsequent Session.

(2.) Undergraduates who wish to present themselves at a Supplementary Examination, must give notice to the Dean of the Faculty on or before the first Tuesday in October.

(3.) Students are forbidden to bring any book or manuscript into the Examination Hall, except by direction of the Examiner, or to give or receive assistance, or to hold any communication with one another at the Examinations. If a student violate this rule, he shall be excluded from the Sessional Examinations of the Session, and such other penalty shall be imposed as the Faculty may determine.

(4.) The extent of absence from prescribed classes, which shall disqualify for the keeping of a Session, shall be determined by the Faculty.

(5.) The Sessional Examinations will begin this Session on April 9th, 1884.

§ XXXII.—Moot Courts.—It is intended to organise, in connection with the Faculty, a Moot Court, at which cases will be submitted for argument by the students. The Moot Court will be held at least once a fortnight, and will be presided over by a member of the Faculty, or by some practising Barrister. Every candidate for a degree will be required to take part, when called upon by the Faculty, in arguments at the Moot Court, unless specially excused.

§ XXXIII.—PRIZES.—University prizes will be awarded to those students who stand first at the Sessional Examinations in the subjects of the various classes.

§ XXXIV.—FEES.—The following are the fees payable by students of the Faculty of Law. They are in all cases payable in advance.

Matriculation Fee payable by undergraduates on matriculating	...	\$2.00
Registration Fee, payable annually by general students	.....	1.00
Library Fee, payable annually by all students	.....	1.00
Gymnasium Fee, payable annually by students attending at least two classes	.....	1.00
Fee for each class attended, per Session, payable by general students	.....	5.00
Fee for the classes of the First Year, payable by undergraduates	.....	15.00
Fee for the classes of the Second Year, payable by undergraduates	.....	20.00
Fee for the classes of the Third Year, payable by undergraduates	.....	10.00
Fee for LL.B. diploma, which is payable before the final examination, and will be returned in case of failure	.....	10.00

DEGREES.

APRIL, 1889

MASTERS OF ARTS.

ALFRED DICKIE, B. A., Stewiacke.

BACHELORS OF ARTS WITH HONOURS.

JOHN ALBERT BELL, Halifax.
JAMES ALEXANDER MACDONALD, Halifax.
THOMAS SPEAR MACGREGOR, Little Bras d'Or.

BACHELOR OF SCIENCE WITH HONOURS.

ARTHUR GORDON REID, Halifax.

BACHELORS OF ARTS.

HENRY DICKIE, Upper Stewiacke.
WILLIAM MATHESON FRASER, B.Sc., Dartmouth.
JOHN WILLIAM MCLENNAN, Sydney, C. B.

BACHELOR OF SCIENCE.

ARCHIBALD MCCOOL, New Glasgow.

HONOURS, PRIZES, CERTIFICATES OF MERIT,
EXHIBITIONS, BURSARIES, 1882-83.

HONOURS.

CLASSICS—*Second Rank*—John Albert Bell.
MATHEMATICS AND PHYSICS—*First Rank*—Arthur Gordon Reid.
Second Rank—James Alexander Macdonald, Thomas Spear MacGregor.

UNIVERSITY PRIZES.

CLASSICS: *Fourth Year*, Bell, J. A.—*Third Year*, McLeod, J. P.—*Second Year*, Gammell, I.—*First Year*, Mackay, E.
MATHEMATICS: *Second Year*, Gammell, I.—*First Year*, Mackay, E.
ASTRONOMY: Reid, A. G.
PHYSICS: Murray, D. A.
ETHICS: McLENNAN, J. W.
POLITICAL ECONOMY: Bell, J. A.
METAPHYSICS: McLeod, J. P.
LOGIC AND PSYCHOLOGY: (Gammell, I. and MacKenzie, A. S.)
ENGLISH LITERATURE AND RHETORIC: (Larkin, F. H., and Ritchie, Elias.)
CHEMISTRY—INORGANIC: (Gammell, I. and Newcombe, Margaret F.—ORGANIC: Campbell, G. G.)
HISTORY: McLENNAN, J. W.
FRENCH: *Fourth Year*, Smith, H. M.—*Third Year*, Adams, H. S.
BOTANY: TUCKER, H.
HEBREW: McLENNAN, J. W.
MINERALOGY: McColl, A.

SPECIAL PRIZES.

THE WAVERLEY PRIZE: Gammell, I.
THE ST. ANDREW'S CHURCH PRIZE: (Aiton, W., and Robinson, G. E.)
THE DR. AVERTY PRIZE: McLENNAN, J. W.
THE GOVERNOR-GENERAL'S GOLD MEDAL: Bell, J. A.
THE SIR WILLIAM YOUNG GOLD MEDAL: Reid, A. G.
THE GOVERNOR-GENERAL'S SILVER MEDAL: Macdonald, J. A.

CERTIFICATES OF MERIT.

FACULTY OF ARTS.

FIRST CLASS: *Fourth Year*—Bell, J. A.; McLENNAN, J. W. *Third Year*, Adams, H. S.; McLeod, J. P.; Murray, D. A. *Second Year*, Gammell, I.; Martin, K. J.; MacKenzie, A. S.; Robinson, G. E. *First Year*, Cahas, C. H.; Mackay, E.; Mackay, N. F.; Robinson, A.SECOND CLASS: *Fourth Year*—Dickie, H. *Third Year*—None. *Second Year*, Aiton, W.; Calkin, Lilla B.; Fitzpatrick, H.; McLeod, J. M.; Newcombe, Margaret F.; Tuck, W. *First Year*—Allison, M. G.; Larkin, F. H.; Lewis, A. W.; Stewart, D.

FACULTY OF SCIENCE.

FIRST CLASS—NONS.

SECOND CLASS—Fourth Year, McCall, A. Third Year—Smith, H. M. First Year—Sanderson, Maria F.

SENIOR MUNDO BURSARIES.

- DISTRICT I.—Not awarded.
 " II—No candidate.
 " III—Murray, D. A. Truro.
 " IV—Alston, H. S. Halifax.
 " V—James, P. Digby.
 " VI—No candidate.
 " VII—McLeod, J. P., Valleyfield, P.E.I.

JUNIOR MUNDO EXHIBITIONS.

- (1) Mackay, F., Pictou Academy.
 (2) Caban, C. H., Yarmouth Academy.
 (3) Calder, J., West Bay, C. B. (private study).
 (4) Mackay, N. F., Pictou Academy.
 (5) Robinson, A., Sussex, N. B.

JUNIOR MUNDO BURSARIES.

- DISTRICT I. (1) McDonald, K. M., Pictou Academy.
 (2) Stewart, D., Pictou Academy.
 (3) Lewis, A. W., Normal School, Truro.
 (4) McKenzie, D. H., Truro Academy.
- DISTRICT II. (1) Merton, S. A., Liverpool Academy.
 (2) Heid, H. L., Keniville, (private study).
- DISTRICT III. Not awarded.
- DISTRICT IV. (1) Nicholson, A., Prince of Wales College, Charlottetown, P.E.I.
 (2) Coffin, V. E., Prince of Wales College, Charlottetown, P.E.I.
- DISTRICT V. Macine, A. W., St. John, N. B.

EXAMINATIONS, 1882-83.

MATRICULATION EXAMINATIONS.

OCTOBER, 1882.

(The following list contains the names of those who either passed the Matriculation Examinations, or were allowed to matriculate on report of the examiners for MUNDO BURSARIES. The names are in alphabetical order.)

FACULTY OF ARTS.

FIRST YEAR: Caban, C. H.; Calder, J.; Campbell, A. J.; Coffin, V. E.; Harvey, N. B.; Jarvis, F. H.; Lewis, A. W.; McDonald, K. M.; Mackay, E.; Mackay, N. F.; McKenzie, D. H.; McKenzie, W. J.; Macrae, A. W.; Morrison, A. M.; Merton, S. A.; Nicholson, A.; Potter, J. G.; Reid, H. L.; Robinson, A.; Smith, J. E.; Stewart, D.

SECOND YEAR: Langille, E. M.

FACULTY OF SCIENCE.

FIRST YEAR: Sanderson, Maria F.

ENTRANCE EXAMINATIONS IN CLASSICAL HISTORY AND GEOGRAPHY.

OCTOBER, 1882.

THIRD YEAR: (Names in alphabetical order.) Adams, Dill; Jones, McDonald, D.; McLeod, J. P.; Murray, D. A.; Taylor.

SECOND YEAR: (Names in order of merit.) Class I.—Garnell; Langille. Class II.—Coffin, F. J.; Tufts; Thompson, A. W. Passed.—MacKenzie, A. S.; Fitzpatrick; McLeod, J. M.; Alton; Robinson, G. B.; Martin; McLean, J. M.; Calkin, L. B.; Thompson, W. M.; Newcombe; Locke.

SPECIAL EXAMINATION.

OCTOBER, 1882.

THIRD YEAR: *Experimental Physics*, McLennan.

SUPPLEMENTARY EXAMINATIONS.

OCTOBER, 1882.

SECOND YEAR: *Greek, French, Logic and Chemistry*, Taylor.
 FIRST YEAR: *Latin*, Campbell, G. G. *Algebra*, Logan.

JANUARY, 1883.

THIRD YEAR: *Classical History and Geography*, Fraser.
 SECOND YEAR: *Classical History and Geography*, Coffin, F. S.; Crawford; Morrison, D. I.; McKinnon; Freeman.

SESSIONAL EXAMINATIONS.

APRIL, 1885.

GENERAL PASS LIST.

(Containing the names of Undergraduates who have passed in all the subjects proper to their years.—The names are arranged alphabetically.)

FACULTY OF ARTS.

FOURTH YEAR: Bell; Dickie; Fraser; Macdonald, J. A.; MacGregor, T. S.; McLeenan.

THIRD YEAR: Adams; Dill; Jones; McDonald, D.; McLeod, J. P.; Murray.

SECOND YEAR.—Alton; Calkin, Lillie B.; Coffin, F. S.; Crawford; Fitzpatrick; Gammell; Langille; Locke; McLean, J. M.; McLeod, J. M.; MacKenzie, A. S.; Martin; Newcombe, Margareta F.; Robinson, G. E.; Thompson, A. W.; Thompson, W. M.; Tufts.

FIRST YEAR: Allison; Caham; Calder, J.; Coffin, V. E.; Larkin, Lewis; McDonald, E. M.; Mackay, E.; Mackay, N. F.; Macrae, A. W.; Morton; Nicholson; Reid, R. L.; Robinson, A.; Smith, J. F.; Stewart.

FACULTY OF SCIENCE.

FOURTH YEAR: McColl; Reid, A. G.

THIRD YEAR: Smith, H. M.

SECOND YEAR: Campbell, G. G.; Trazean, H.

FIRST YEAR: Saunders, Maria F.

CLASS LISTS.

(Containing the names of Undergraduates and general students who passed in the various subjects of the course, the names being in order of merit.)

LATIN.

FOURTH YEAR: Class I.—Bell. Class II.—McLeenan; Reid, A. G.; Dickie. Passed—Macdonald, J. A.; MacGregor, T. S.; Fraser, Macdonald, W.

THIRD YEAR: Class I.—McLeod, J. P. Class II.—(Dill; Jones). Passed—Taylor; McDonald, D.; Miller.

SECOND YEAR: Class I.—Gammell; Robinson, G. E.; Alton; MacKenzie, A. S.; Martin; (McLeod, J. M.; Tufts). Class II.—Fitzpatrick; Newcombe; Calkin, L. B. Passed—Crawford; Langille; (Locke; Thompson, W. M.); Coffin, F. S.; Trazean; Campbell, G. G.; (McLean, J. M.; Thompson, A. W.)

FIRST YEAR: Class I.—Mackay, E.; Macrae; Caham; (Mackay, N. F.; Robinson, A.) Class II.—(Allison; Coffin, V. E.; McDonald, E. M.); Larkin; Stewart; Nicholson; Lewis; Reid, R. L. Passed—Morton; Calder, J.; Harvey; Smith, J. F.; Munro; Campbell, A. G.; MacKenzie, D. H.

GREEK.

FOURTH YEAR: Class I.—Bell. Class II.—Dickie. Passed—Macdonald, W.

THIRD YEAR: Class I.—McLeod, J. P. Class II.—None. Passed—Dill.

SECOND YEAR: Class I.—(Gammell; Alton); Crawford; McLeod, J. M.; Martin; Robinson, G. E. Class II.—Tufts; Fitzpatrick; MacKenzie, A. S.; Newcombe. Passed—Calkin, L. B.; Langille; Thompson, W. M.; Locke; Coffin, F. S.; (McLean, J. M.; Thompson, A. W.)

FIRST YEAR: Class I.—Mackay, E.; Robinson, A.; Mackay, N. F.; Macrae; Allison; Caham. Class II.—Lewis; Larkin; Nicholson. Passed—Reid, R. L.; Coffin, V. E.; Morton; McDonald, E. M.; Calder, J.; Stewart; Smith; Campbell, A. G.; Harvey.

MATHEMATICS.

SECOND YEAR: Class I.—Gammell; Martin; MacKenzie, A. S.; Robinson, G. E. Class II.—Crawford; Tufts; Calkin, L. B.; Langille; Newcombe. Passed—Fitzpatrick; Locke; Campbell, G. G.; Alton; Morrison, D. L.; McLeod, J. M.; Thompson, W. M.; Coffin, F. S.; Trazean; Morrison, A. M.; (McLean, J. M.; Thompson, A. W.) Passed in Geometry—McKinna, T. H.

FIRST YEAR: Class I.—Mackay, E.; Mackay, N. F.; Stewart; Caham; Calder, J.; Lewis; McKenzie, D. H. Class II.—Morton; Nicholson; Robinson, A.; Allison; McDonald, E. M. Passed—Reid, R. L.; Macrae; Smith, J. F.; McKenzie, W. J.; Saunders; Larkin; Coffin, V. E. Passed in Geometry—Calkin, W.; Harvey; Campbell, A. G.; Munro.

PHYSICS.

Class I.—Murray, Adams. Class II.—None. Passed—Dill; Jones; McDonald, D.

MATHEMATICAL PHYSICS.

Passed—Smith, H. M.

EXPERIMENTAL PHYSICS.

Class I.—Reid, A. G. Class II.—None. Passed—McColl.

ASTRONOMY.

Class I.—None. Class II.—Reid, A. G.; MacGregor. Passed—Macdonald, J. A.

ETHICS.

Class I.—McLeenan; Dickie. Class II.—Fraser; Bell. Passed—Ross; Blair; McRae, W.; Farnesux; Campbell, A.

LOGIC AND PSYCHOLOGY.

Class I.—(Gammell; MacKenzie, A. S.); Tufts; Newcombe; Langille; Fitzpatrick; Martin; Robinson, G. E.; Calkin, L. B.; Alton; McLeod, J. M.; Rogers; Coffin, F. S. Class II.—Locke; McLean, H. E.; McKinna, T. H.; Fleming; Campbell, A.; Miller. Passed—Blair; Thompson, W. M.; Ross; Crawford; Morrison, D. L.; Smith, H. M.; Logan; (McLean, J. M.; Thompson, A. W.)

METAPHYSICS.

Class I.—McLeod, J. P.; Murray. Class II.—Dill. Passed—Jones; McDonald, D.; Taylor.

ENGLISH LITERATURE AND RHETORIC.

Class I.—(Larkin; Ritchie, E.); Coffin, V. E.; (Ritchie, M.; Smith, J. F.); MacGregor, H.; Robinson, A.; (Saunders; Stewart); Caham; Reid, R. L. Class II.—Creelina; James; Mackay, E.; Rolson; Mac-

Ray, N. F.; MacLigh, C. K. *Passed—Laws*; McKenzie, D. H.; Allison; Munro; (Mason, A. W., Nicholson; Calder, J.; McDonald, E. M.; Morton; McKenzie, W. J.; Campbell; Ferguson; Thomson, A.; Reynolds; Harvey.

HISTORY.

Class I—McLennan; Bell. Class II—Fraser. Passed—Dickie.

POLITICAL ECONOMY.

Class I—Bell; McLennan. Class II—Dickie, Fraser.

ORGANIC CHEMISTRY.

Class I—(Newcomb; Graham). Callin L. B.; McKenzie, A. S. Class II—Robinson, G. E.; Fitzpatrick; Larriba; Juffs; Allison; McLeod, J. M.; Sanders; Crawford. Passed—Murray; Callin, B. H.; Ross; Locke; Morrison, D. I.; Coffin, F. B.; Thompson, W. M.; (McLennan, J. M., Thompson, A. W.)

ORGANIC CHEMISTRY.

FOURTH YEAR: *Class I—McColl.*

SECOND YEAR: *Class I—Campbell, G. G.; Trueman.*

CHEMICAL LABORATORY.

FOURTH YEAR: *Class II—McColl.*

THIRD YEAR: *Class II—Smith; Miller.*

SECOND YEAR: *Class II—Campbell, G. G.; Trueman.*

BOTANY.

Class I—Trueman; Campbell, G. G.

MINERALOGY.

Class I—McColl; Miller; Smith, H. M.

HEBREW.

Class I—McLennan; McIsac, W.

FRENCH.

FOURTH YEAR: *Class I—Smith, H. M.; Macdonald, J. A.; McLennan; McColl; Dickie. Class II—MacGregor, T. S.; Miller.*

THIRD YEAR: *Class I—Adams; McLeod, J. F.; Murray; McDonald, D.; Class II—Taylor; Jones; Dill; Campbell, G. G.; Passed—Trueman.*

GERMAN.

FOURTH YEAR: *Class II—McColl.*

THIRD YEAR: *Class I—Adams; Smith, H. M.; Sanders. Class II—McDonald, D.; Jones.*

GENERAL LIST OF MEDALS, PRIZES, EXHIBITIONS, BURSARIES, &c., 1878-82.

THE GOVERNOR-GENERAL'S GOLD MEDAL.

1878, George, J. L. 1880, Crowell, E. 1881, Crookson, H. G. 1882, Trueman, J. S.

THE SIR Wm. YOUNG GOLD MEDAL.

1882, Campbell, G. M.

THE GOVERNOR-GENERAL'S SILVER MEDAL.

1878, Cameron, J. H. 1880, Fraser, W. M. 1881, not awarded. 1882, not awarded.

THE NORTH BRITISH SOCIETY BURSARY.

1878, Thomson, A. E. 1880, Campbell, G. M. 1882, McLeod, J. P.

THE DR. AVEKY PRIZE.

1880, Thomson, A. E. 1881, Sedgewick, J. A. 1882, Carson, G. S.

THE WAVERLEY BURSARY.

1879, Murray, H. 1882, Bell, J. A.

THE ST. ANDREW'S CHURCH PRIZE.

1878, Thomson, A. E. 1879, Murray, H. 1880, Melish, H. 1881, Macdonald, J. A. 1882, Murray, J. A.

THE YOUNG ELOCUTION PRIZES.

1878, (1) Sedgewick, J. A. (2) Cameron, D. 1879, (1) McLaren, C. D. (2) Crowell, E. (3) Fraser, W. F. 1880, (1) Murray, D. A. (2) Melish, H. 1881, (1) Forsyth, J. B. (2) Dill, E. M.

THE ALUMNI PRIZES.

1878: (*Third Year*), (1) McKay, R., (2) McLennan, J. M. (*First Year*), (1) Trueman, J. S. (2) Crookson, H. G. 1879: (*First Year*), (1) Campbell, G. M. (2) Carson, G. S.

UNIVERSITY PRIZES.

CLASSICAL: Fourth Year: 1878, George, J. L. 1879, McLennan, I. M. 1880, Thomson, A. E. 1881, Sedgewick, J. A. 1882, Trueman, J. S. Third Year: 1878, McQueen, G. W. 1879, Thomson, A. E. 1880, Murray, H. 1881, Trueman, J. S. 1882, Bell, J. A. Second Year: 1878, Thomson, A. E. 1879, (1) Murray, H., (2) Trueman, J. S. 1880, Melish, H. 1881, Bell, J. A. 1882, McLeod, J. P. First Year: 1878, (1) Trueman, J. S., (2) Crookson, H. G. 1879, Campbell, G. M. 1880, (1) Bell, J. A., (2) Macdonald, J. A. 1881, (1) McLeod, J. P., (2) Adams, E. S. 1882, (1) Graham, L., (2) Allison, W., and McLeod, J. M.

- MATHEMATICS: Second Year:** 1878, Thompson, A. E. 1879, (1) Murray, H. (2) Creelman, H. G. 1880, Campbell, G. M. 1881, Reid, A. G. 1882, Murray, D. A. *First Year:* 1878, (1) Campbell, G. M., (2) Creelman, H. G. 1879, (1) Campbell, G. M., (2) Carson, G. S. 1880, (1) Murray, D. A., (2) Reid, A. G. 1881, (1) McLeod, J. P., (2) Elliot, H. 1882, Calkin, Lillie B.
- PHYSICS:** 1878, Cameron, J. H. and McKay, R. 1879, Dickie, A. 1880, Creelman, H. G. 1881, Carson, G. S. 1882, MacGregor, T. S. *Math. Phys.*, Reid, A. G.
- ASTRONOMY:** 1881, Creelman, H. G. 1882, Campbell, G. M.
- ETHICS AND POLITICAL ECONOMY:** 1878, Cameron, J. H. 1879, Cameron, C. S. 1880, Deegan, J. F. 1881, Stewart, T. 1882, Carson, G. S.
- METAPHYSICS AND ESTHETICS:** 1878 (1) McKay, R., (2) McLeod, I. M. 1879, (1) Mahon, A. W., (2) Crowell, E. 1880, Murray, H. 1881 (1) Fraser, W. M., R. Sc., (2) Campbell, G. M. 1882, Taylor, W. F.
- LOGIC AND PSYCHOLOGY:** 1878, Thompson, A. E. 1879, Murray, H. 1880, Mahon, A. W. 1881, McLennan, J. W. 1882, McLeod, J. P.
- HISTORY:** 1878, Cameron, J. H. 1879, Dickie, A. (*Constitutional History*), Mahon, A. W. 1880, Crowell, E. 1882, Crows, W.
- RHETORIC:** 1878, Trueman, J. S. 1879, Fowler, G. W. 1880, Bell, J. A. 1881, McLeod, J. P. 1882, McLeod, J. M.
- CHEMISTRY:** 1878 *Third Year*, McKay, R.; *Second Year*, (1) McKnight, S. J., (2) Thomson, A. E. 1879, Murray, H. 1880, Campbell, G. M. 1881, (*Organic*) Reid, A. G.; (*Inorganic*) Dickie, H. 1882, (*Organic*) Smith, H. M.; (*Inorganic*) McLeod, J. P.
- GEOLOGY:** 1881, Cameron, A. G. 1882, Cameron, A. G.
- ZOOLOGY:** 1881, Morse, J. A.
- BOTANY:** 1882, Smith, H. M.
- FRANCE:** *Fourth Year:* 1878, Munro, G. W. 1879, Cameron, C. S. 1880, Mahon, A. W. 1881, Stewart, T. 1882, Mellich, H. *Third Year:* 1878, McKay, R. 1879, Mahon, A. W. 1880, Murray, H. 1881, Mellich, H. 1882, Smith, H. M.
- GERMAN:** 1880, Creelman, H. G. 1881, Reid, A. G.
- HEBREW:** 1882, Carson, G. S.

PROFESSORS' SCHOLARSHIPS.

- 1878—(1) Campbell, G. M., Truro High School; (2) Wylie, J. T., Pictou Academy and Halifax High School.
- 1879—In Arts: (1) Bell, J. A., Halifax High School; (2) Morse, J. A., do.; (3) Macdonald, J. A., do. In Science: Reid, A. G., Halifax High School.
- 1880—In Arts: (1) Adams, H. S., Halifax High School; (2) Eshblado, J., private study. In Science: Smith, H. M., private study.

THE MUNRO EXHIBITIONS.

(The names are in order of merit.)

- JUNIOR**—1881, Gamswell, L.; Aiton, W.; Fitzpatrick, H. K.; McLeod, J. M. 1882, Mackay, E.; Cahen, C. B.; Calder, J.; Mackay, N. R.; Robinson, A.

THE MUNRO BURSARIES.

(The names are in order of merit.)

- SENIOR**—1882, McLeod, J. P.; Murray, D. A.; Adams, H. S.; Jones, F.
- JUNIOR**—1880, McLeod, J. P.; Dill, E. M.; Elliot, H.; Morrison, D. L.; Jones, F. 1881, Robinson, G. E.; Kempton, W. F.; Coffin, F. J.; Thompson, A. W.; Calkin, Lillie B.; Crawford, J.; Martin, E. J.; McLean, J. M.; MacKenzie, A. S.; Newcombe, Margaret; E. Tuffin, W. M. 1882, Nicholson, A.; Morton, S. A.; McDonald, E. M.; Stewart, D.; Lewis, A. W.; Coffin, V. E.; Macrae, A. W.; MacKenzie, D. H.; Reid, R. L.

CERTIFICATES OF MERIT.

(The names are arranged alphabetically.)

- FIRST CLASS: Fourth Year:** 1878, Cameron, J. H. 1879, Cameron, C. S.; McLean, I. M. 1881, Creelman, H. G. 1882, Mellich, H., Trueman, J. S. *Third Year:* 1878, Cameron, C. S.; McKay, R.; McLeod, I. M.; McQueen, G. W. 1880, Blanchard, C. W.; Creelman, H. G.; Murray, H. 1881, Campbell, G. M.; Trueman, J. S. 1882, Bell, J. A.; Reid, A. G. *Second Year:* 1878, Thomson, A. E. 1879, Murray, H. 1880, Campbell, G. M.; Mellich, H. 1881, Bell, J. A.; Reid, A. G. 1882, Adams, H. S.; McLeod, J. P.; Murray, D. A. *First Year:* 1878, Creelman, H. G.; Trueman, J. S. 1879, Campbell, G. M.; Carson, G. S. 1880, Bell, J. A.; Macdonald, J. A.; Morse, J. A.; Murray, D. A.; Reid, A. G. 1881, Adams, H. S.; Elliot, H.; McLeod, J. P. 1882, Aiton, W. P.; Calkin, Lillie B.; Coffin, F. J.; Gamswell, L.; Kempton, W. F.; Martin, K. J.; MacKenzie, A. S.; McLeod, J. M.; Mellich, L.; Robinson, G. E.; Tuffin, W. M.
- SECOND CLASS: Fourth Year:** 1878, Munro, G. W.; Rogers, A. 1879, Emerson, R. E. J. 1880, Crowell, E. 1881, Seligswald, J. A. 1882, Cameron, A. G.; Carson, G. S.; Davidson, F. J.; Patterson, G. G. *Third Year:* 1879, Crowell, E.; Thomson, A. E. 1880, Mellich, H. 1882, Macdonald, J. A.; McLennan, J. W.; Taylor, W. P. *Second Year:* 1878, Fraser, W. E. 1879, Creelman, H. G.; Trueman, J. S. 1880, Cameron, A. G. 1881, Macdonald, J. A.; MacGregor, T. S.; McLennan, J. W.; Morse, J. A. 1882, Smith, H. M. *First Year:* 1878, Spencer, W. H. 1879, McLennan, J. W. 1880, McIntosh, H.; McLeod, J. P.; Thompson, E. 1881, Dill, E. M.; Jones, F.; Morrison, D. L.; Eshblado, J. 1882, Crawford, J.; Fitzpatrick, H. K.; Newcombe, Margaret; F.; Thompson, A. W.

GRADUATES OF THE UNIVERSITY.

N. B.—Graduates to whose names an asterisk is prefixed are members of the Alumni Association.—Degrees printed with the names have been obtained at other Universities.

Graduates are requested to notify the Principals of any change of address.

* Allan, Rev. John M., Madras	R. A., 1872	M. A., 1873
Azmond, Rev. Joseph, New Hebrides	B. A., 1866	M. J., 1872
Archibald, Rev. F. W., M. A. Truro	B. A.	1877
Archibald, Rev. W. F., Greenwood, P.E.I.	B. A., 1875	M. A., 1879
* Bayne, Prof. H. A., Ph.D., Kingston, O.	B. A., 1866	M. A., 1872
* Bayne, Rev. E. S., Murray Harbor, P.E.I.	B. A.	1871
Bell, F. H., Halifax ¹	B. A.	1873
Bell, J. A., Halifax ¹	B. A.	1883
Bethune, J. L., Baddeck, C. B.	M. D., C. M.	1875
Blanchard, C. W., Wainwright	B. A.	1889
* Bruce, Rev. W. T., M. D., Colchester	B. A.	1872
Bryden, Rev. C. W., Salisbury, N. B.	B. A.	1873
Burgess, Rev. J. C., Carleton, N. B.	B. A.	1891
Caenis, Rev. J. A., M. A., Up. Musquodouit	B. A.	1878
Caeson, A. G., New Brunswick	B. A.	1882
* Cameron, C. S., Halifax ²	R. A.	1873
* Cameron, J. H.	B. A.	1875
Cameron, William	B. A.	1873
Cameron, J. J., Shelburne, Ont.	B. A., 1868	M. A., 1871
Camphill, G. M., Dal. Coll., Halifax ³	B. A.	1882
Campbell, D. A., Halifax	B. A.	1871
Carnichael, J. M., New Glasgow	B. A.	1872
Carr, Rev. A. F., Alberton, P. E. I.	B. A., 1868	M. A., 1871
Carson, G. S., Sussex, N. B.	B. A.	1881
Chambers, F. B., Truro	B. A.	1879
Chambers, R. E., New Glasgow	B. A.	1877
Chase, Rev. J. H., Oulou	B. A., 1866	M. A., 1869
Christie, Don., Antigonish	M. D., C. M.	1874
Christie, Rev. T. M., Trinidad	B. A.	1868
Croley, Alfred, Halifax	B. A.	1868
Cox, Robinson, Stewiack	B. D., C. M.	1875
Credman, Rev. D. F., Shelburne	R. A., 1873	M. A., 1880
Credman, H. G., Halifax ²	B. A.	1881
Crichton, J. G. A., Montreal	B. A.	1865
Crichton, J. S., Dartmouth	B. A.	1880
Crowell, Edwin, Harrington ¹	B. A.	1880
Cruikshank, Rev. W. B., D., Montreal	B. A.	1872
Davidson, J. F., Halifax	B. A.	1862
De Wolfe, G. H., Tintou, Eng.	M. D., C. M.	1873
Dicke, Alfred, Stewiack	B. A., 1879	M. A., 1883
Dicke, Henry, Upper Stewiack	B. A.	1883
Donk, W. S., Halifax	B. A.	1874
Duff, Kenneth, Lunenburg	B. A.	1873

* Emserson, E. R. J., Montreal	B. A.	1879
* Fitzpatrick, Rev. James, Salspring	B. A.	1875
* Farrow, J. James, Halifax	B. A., 1868	M. A., 1873
* Fraser, D. C., New Glasgow	B. A.	1872
* Fraser, Rev. D. S., Malheur Bay	B. A.	1874
* Fraser, W. M., Halifax	B. B., 1866	K. A., 1886
* Fraser, W. E., M. A. Truro	B. A.	1882
Fulton, G. H., Guysborough	B. A.	1876
* George, Rev. J. L., M. A., Shantouka	B. A.	1878
Grant, W. R. (obit.)	B. A.	1877
Gunn, Rev. Adam, Kennebec	B. A.	1877
Hamilton, H. H., Fictou	B. A.	1872
Hardman, Rev. J. C., R. D., Campbellton	B. A., 1874	M. A., 1878
Hardman, Rev. W. C.	B. A., 1874	M. A., 1881
Hardman, A. W., Fictou	B. A.	1877
Hiltz, C. W., (obit.)	M. D., C. M.	1872
Hunter, John, Colchester	B. A.	1873
Jordan, Rev. L. H. R. D., Halifax	B. A., 1875	M. A., 1878
Kinsman, F. S., Centreville	B. A.	1880
Knox, J. H., Milton	B. A.	1862
Laird, G. A., Wainwright	B. A.	1887
Landells, R., Halifax	B. A.	1882
Landry, A. W., M. D., C. M., Halifax	B. A., 1871	M. D., C. M., 1878
Lippincott, Andrew, M. D., Estaburg, Pa.	B. A.	1867
* Logan, Rev. Richmond, Sheet Harbor	B. A., 1877	M. A., 1880
Logan, Melville, Halifax	B. A.	1873
Macdon, Rev. W. A., New London, P.E.I.	B. A.	1869
McColl, A. G., New Glasgow	B. A.	1883
McCrone, S. T., New Glasgow	B. A.	1867
McDonald, J. H., (obit.)	B. A., 1867	M. A., 1870
Macdonald, C. D., Fictou	B. A.	1873
Macdonald, W. M., Halifax	B. A.	1861
Macdonald, J. A., Halifax ²	B. A.	1883
Macdonell, Isaac, (obit.)	B. A.	1876
McGregor, Rev. Daniel, Merigonish	B. A.	1874
McGregor, Prof. J. G., D. Sc., Halifax	R. A., 1871	M. A., 1874
MacGregor, T. B., Little Bras, P. O.	B. A.	1863
McKay, A. H., R. S., Fictou ¹	B. A.	1873
Yack, Rev. Kenneth, Richmond, N. B.	B. A.	1868
Nickson, Rev. J. A., Hamilton, Bermuda	B. A.	1873
McKenzie, Hugh, Truro	B. A., 1872	M. A., 1875
McKenzie, Prof. J. J., Ph. D., (obit.)	B. A., 1869	M. A., 1872
McKenzie, James, Greenhill, Fictou	B. A.	1877
McKenzie, J. W., Strathalbyn, P.E.I.	B. A.	1862
McKittrick, Burgess, Truro	B. A.	1877
McLean, L. M., Hopedale ¹	B. A.	1879
McLean, Rev. J. A., Harrington	B. A.	1870
McLeod, Rev. A. W., Fictou, Co. Fictou	B. A., 1875	M. A., 1880
McLeod, Rev. J. W., Trinidad	B. A., 1875	M. A., 1880
McLeod, Don., Strathalbyn, P.E.I.	B. A.	1874
McLennan, J. W., Sydney, C. B.	F. A.	1883
McMillan, Finlay	M. D., C. M.	1872
McMillan, Rev. G. W., Princeton, P. E.	B. A., 1874	M. A., 1878
McNaughton, Rev. Samuel, Preston, G. E.	B. A., 1867	M. A., 1870
Mehta, Wm., Richmond, C. B.	M. D., C. M.	1872
Melish, H., Halifax	B. A.	1882
Millar, Rev. E. D., Lunenburg	B. A.	1860
Morton, Joseph H., Shelburne	M. D., C. M.	1879
Munro, J. H., Truro	M. D., C. M.	1876
Munro, John, Montreal	B. A.	1876
Munro, G. W., New York	K. A.	1878
Murray, J. S., Charlottetown, P.E.I.	B. A.	1877

¹ Graduated with Second Rank Honours in Classics.

² Graduated with Second Rank Honours in Mathematics and Physics.

¹ Graduated with Second Rank Honours in Classics.

² Graduated with Second Rank Honours in History and English Literature.

³ Graduated with Second Rank Honours in Mathematics and Physics.

Newcombe, E. L., LL. B., Kentville.....	B. A., 1878.....	M. A., 1881
Oxley, J. M., LL. B., Oranosa.....	B. A.....	1874
Patterson, G. G., New Glasgow.....	B. A.....	1862
Pittsdo, Colin, Minneapolis.....	B. A.....	1879
Pollak, A. W., (obit.).....	B. A.....	1872
Reid, A. G., Halifax.....	B. Sc.....	1863
Robert, Cassimir, Archaet, C. B.....	M. D., C. M.....	1876
Robinson, J. M., Halifax.....	B. A.....	1873
Rogers, Anderson.....	B. A.....	1878
Ross, Alexander, Dalhousie, N. B.....	B. A.....	1867
Ross, Rev. William, Prince William, N. B.....	B. A.....	1873
Russell, Rev. A. G., Oranosa, LL. B., N. Y.....	B. A., 1872.....	M. A., 1875
Scott, Rev. Ephraim, New Glasgow.....	B. A.....	1879
Scott, Rev. Prof. H. M. D., B. D., Chicago.....	B. A.....	1879
Scott, J. M. D., Ft. Collins, Colo., U. S.....	B. A.....	1877
Sedgewick, J. A., Halifax.....	B. A.....	1881
Sedgewick, Robert, Q. C., Halifax.....	B. A.....	1877
Shaw, Robert (obit.).....	B. A.....	1836
Simpson, Rev. Isaac, LaHave.....	B. A.....	1878
Smith, Rev. D. H., Truro.....	B. A., 1867.....	M. A., 1871
Smith, Rev. Edwin, Steviacko.....	B. A.....	1867
Spencer, W. H., Lomdoderry.....	B. A.....	1881
Stewart, J. M. D., Pictou.....	TL A.....	1876
Stewart, Thomas, Whycocomagh.....	B. A.....	1862
Stranberg, H. H., Cape John, Pictou.....	B. A.....	1875
Sutherland, Rev. J. W. St. James, N. B.....	B. A.....	1669
Sutherland, Robert (obit.).....	M. D., C. M.....	1872
Thomson, A. E., Edinburgh University.....	B. A.....	1880
Theobald, W. M., Madras.....	B. A.....	1870
Tory, E. A., Gaspereborough.....	B. A.....	1882
Troutman, A. L., St. John, N. B.....	B. A., 1872.....	M. A., 1878
Troutman, J. S., Dal. Col., Halifax.....	B. A.....	1869
Waddell, John, Edinburgh University.....	B. A.....	1877
Walsan, Rev. John, Bermuda.....	B. A.....	1870
Whitman, Alfred, Halifax.....	B. A.....	1878

* Graduated with Second Rank Honours in Classics.

† Graduated with Second Rank Honours in Mathematics and Physics.

‡ Graduated with Second Rank Honours in Mental and Moral Philosophy.

§ Graduated with First Rank Honours in Mathematics and Physics.

UNDERGRADUATES IN ARTS, 1882-3.

FOURTH YEAR.

Bell, J. A., Halifax.....
Dickie, H., Upper Stewiacko.....
Fraser, W. M., B. Sc. Dartmouth.....
Macdonald, J. A., Halifax.....
MacGinger, T. S., Little Bras d'Or.....
McLennan, J. W., Sydney.....

THIRD YEAR.

Adams, H. S., Halifax.....
Dill, E. M., Centre Rowden.....
James, P., Digby.....
McDonald, D., Cape North, C. B.....
MacKnight, S. J., Dartmouth.....
McLeod, J. P., Valleyfield, P. E. I.....
Murray, D. A., Truro.....
Taylor, W. B., Halifax.....

SECOND YEAR.

Alton, W., Sussex, N. B.....
Collier, E. H., Kentville.....
Calkin, Lillis B., Truro.....
Coffin, F. J., Savage Harbor, P. E. I.....
Coffin, F. S., St. Stewart, P. E. I.....
Crawford, J., Charlottetown.....
Fitzpatrick, R. K., Scotsburn, Pictou.....
Fleming, D., Halifax.....
Freeman, H. S., Milton.....
Gannell, I., Upper Stewiacko.....
Keupman, W. F., Milton.....
Langille, R. M., River John, Pictou.....
Locke, E. T., Lockport.....
Martin, K. J., Bellisle, P. E. I.....
MacKenzie, A. S., Dartmouth.....
McKinna, T. H., Halifax.....
McLean, J. M., Stratford.....
McLeod, J. M., Valleyfield, P. E. I.....
Morrison, D. I., Pictou.....
Newcombe, Margarete F., W. Corn- wallis.....
Rahman, G. E., Charlottetown.....
Thompson, A. W., Durham.....
Thompson, W. M., Durham.....
Tuffin, V. M., Halifax.....

FIRST YEAR.

Allison, M. G., Windsor.....
Coban, C. H., Hahon, Yarmouth.....
Cahler, J., West Bay, C. B.....
Campbell, A. J., Truro.....
Coffin, V. E., St. Stewart, P. E. I.....
Harvey, N. D., Halifax.....
Larkin, F. H., Alberton, P. E. I.....
Le wis, A. W., Centre Rowden.....
McDonald, E. M., Pictou.....
MacKay, E., Hantsfield, Pictou.....
MacKay, N. E., West River, Pictou.....
McKenzie, D. H., Scotsburn.....
McKenzie, W. J., West Bay, C. B.....
Macrae, A. W., St. John.....
Misrao, S. A., Milton.....
Nicholson, A., Charlottetown.....
Peterson, C. G., Halifax.....
Reid, R. L., Kentville.....
Robinson, A., Sussex, N. B.....
Smith, J. P., Halifax.....
Stewart, D., Upper Margaretsville.....

UNDERGRADUATES IN SCIENCE, 1882-3.

FOURTH YEAR.

McColl, A., New Glasgow.....
Seid, A. G., Halifax.....

THIRD YEAR.

Milner, J. J., Halifax.....
Smith, H. M., Halifax.....

SECOND YEAR.

Campbell, G. C., Truro.....
Troutman, H., Truroville, N. B.....

FIRST YEAR.

Saunders, Maria F., Halifax.....

GENERAL STUDENTS, 1882-3.

Anderson, Mrs. Halifax.	MacGregor, Helen M., Halifax.
Baker, I. W. N., Summerset.	MacGregor, Anna M. "
Blair, J. T., St. John.	MacGregor, Harry C. "
Boak, Louisa, Halifax.	MacIntosh, Catherine K. "
Buckley, A. H., Guysboro.	McLean, H. X., Mid. River, C.B.
Burns, James E., Halifax.	McLean, J. M., Great Village.
Burns, Edith E., Halifax.	Macdon, Mary F. D., Halifax.
Calder, W. C., Halifax.	McLeod, J., "
Callin, W. S., Truro.	Macmah, Maggie, "
Campbell, A., Pictou.	McLias, W. L., Granville, Pictou.
Carve, A. A., New Glasgow.	Morrison, A. M., Dartmouth.
Cagwell, A. W., Halifax.	Murray, A. W., Halifax.
Crawford, E. H., "	Munn, C., Valleyfield, P.E.I.
Croftman, Libbie, "	Murray, A. J., River John, Pictou.
Crows, W., "	Murray, D., Black River, Pictou.
Dodwell, F., "	Mylius, L., Halifax.
Fleming, Annie, "	Newlands, R. W., Halifax.
Fraser, J. A., Charlottetown.	O'Donnell, Lottie W., "
Fuller, A. J., Aylesport.	O'Donnell, Winnie J., "
Furneaux, H. J., St. John's Nfld.	Parker, Laura M., Dartmouth.
Goalwin, F. W., Bay Verte, N.B.	Payson, Clara A., Halifax.
Gowley, J. M., Stewiacke.	Fincham, F. J., Boston, Mass.
Goulden, R. L., Halifax.	Fringe, W. B., Cornwall, Ont.
Hawkins, A. C., "	Raymond, A. F., Yarmouth.
Henry, W. A., "	Reynolds, Hattie J., Halifax.
Higgins, —, "	Ritchie, Eliza, "
James, Harriet E., "	Ritchie, Mary Y., "
Kelsey, F. W., St. John's.	Robson, Isabel H., "
Kiripatrick, Clara, St. John's.	Rogers, H. W., Amherst, N.B.
Knevels, J. H., B.A., Milton.	Ross, J. T., Halifax.
Johnstone, I. W., Sydney Mines.	Ross, J. T., Easttown.
Loza, A. F., North Sydney.	Slayter, J. E., Halifax.
Mealpion, L. A. W., St. John, N.B.	Smith, Agnes, "
MacDonald, Margaret, Halifax.	Thomson, Alice M., Halifax.
Macdonald, W., Newport.	Thomson, Ebenezer, "
McDonald, E., Melville.	Thompson, W. D., Chester.
McFarlane, J. D., Mid. River, C.B.	Tyler, H. E., England.

SUMMARY.

Undergraduates in Arts	59
Undergraduates in Science	7
General Students	74
Total	140

ALUMNI ASSOCIATION OF DALHOUSIE
COLLEGE AND UNIVERSITY.

(Incorporated 1876.)

EXTRACT FROM THE CONSTITUTION.

ART. II.—The object of the Association shall be the promotion of the best interests of the University.

ART. III., Sec. 1.—All graduates of the University and all students who have attended classes throughout one academic year shall be eligible for membership; but no person shall become a member until three years have elapsed from the time of his matriculation or first registration.

SEC. 2.—Other persons not eligible for membership under section 1 of this article may be elected as honorary members on the nomination of the Executive.

OFFICERS:

REV. I. H. JORDAN, M.A., B.D.	President.
J. M. CALMICHAM, B.A.	Vice-President.
F. H. BELL, B.A.	Secretary.
J. F. DAVISON, B.A.	Treasurer.

ROSE SEDGWICK, B.A., Q.C.,	} Members of Executive Committee.
J. G. MACGREGOR, D.Sc.,	
HUGH MACKENZIE, M.A.,	
JAMES FOREST, M.A.,	
REV. W. S. WHITTIER,	

HONORARY MEMBERS:

Rev. Principal Ross, D.D.	Prof. R. E. Webber, Ph.D.
Rev. Prof. W. Lyall, LL.D.	Hon. Judge Bigby.
Prof. C. Macdonald, M.A.	Hon. Judge Thompson.
Prof. J. Johnson, M.A.	Hon. S. L. Stannus, Q.C.
Prof. G. Lawson, Ph.D., LL.D.	Jan. Thomson, Q.C.
Prof. J. Losh, M.A.	W. Graham, A.B., Q.C.
Rev. Prof. D. Henselman, D.C.L.	B. Russell, A.M.
Rev. Prof. J. Forest.	

ORDINARY MEMBERS:

Those graduates to whose names an asterisk is prefixed in the list on page 73, together with the following:

Beak, H. W. G., Barrister, Halifax.	Silver, A. P., Queen Street, Halifax.
Belcher, J. T., Barrister, Halifax.	Stairs, J. F., Halifax.
Don, W. M., Merchant, Halifax.	Story, J. D., Post Office, Halifax.
Gibbert, J. M., Barrister, Halifax.	Tappin, W. H., Merchant, Halifax.
Henry, H. M.D., Barrister, Halifax.	Tupper, Chas. H., LL.B., M.P., Barrister, Halifax.
Hempsey, R., Halifax.	West, F. D., Merchant, Halifax.
Humphrey, W., Halifax.	Whitler, H. H., Halifax.
Mills, W. A., Barrister, Halifax.	Whitler, Rev. W. S., Halifax.
Ross, J. T., Barrister, Halifax.	
Ross, W. B., Barrister, Regina.	

EXAMINATION PAPERS.

EXAMINATION PAPERS, 1882-83.

JUNIOR MUNRO EXHIBITIONS AND BURSARIES

GREEK.

For Greek Paper, see Appendix.

LATIN.

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

CÆSAR: GALLIC WAR, BOOK VI. OVID: METAMORPHOSES, BOOK I.

TIME: THREE HOURS.

I.

A. Translate: Ambiorix copias suas judicio non condiderit, quod proinde dimitendum non existant, in tempore excitans et repentinis equitibus advenam prohibita, cum religum exercitum sublequi cœperet, dubitans esse: nisi certe, hinc inde jam agros sensit, ubi cœnoscens cavillum jussit: quoniam pars in Arduennam iberat, pars in concitatis pedibus profugit: qui prociui Oceanum fuerant, hi insula sese occulaverunt, que satis effera commertat: mali, ex suis tribus agros, se sinque omnia alienigenis crediderant. Carvolora, rex dimidie partis Bituronus, qui non cum Ambiorige coalitione inerat, scate jam confectus, cum laborum aut belli aut fuge ferre non posset, amibus precibus delatatus Ambiorige, qui ejus comitibus accere fuisse, saxo, capite magna in Gallia Germanique copia est, se exanimavit.

1. *Dimitendum, excitas, fuisse.* Parse, giving rules for mood.
2. *Sibi genus conssare possit.* What other constructions are found with *conssare*? Are verbs of "command" always followed by the infinitive?
3. *Qui prociui Oceanum fuerant.* Account for case of Oceanum. What were the boundaries of Gallia? Give the ancient and modern names of the rivers that flow west.
4. *Ubi purpenti sui cruce ad eos legatus cœlit.* Note a peculiarity of syntax.
2. What does Cæsar tell us about the Druids?

B. Translate:

Mora Jovis passim rivos prebant simulatque parenti
 Adjuvunt; ubi paries assumunt implent.
 Est tamen summi generis iactura color
 Omnis; has et canit terzæ metallica orbe
 Formæ fœdæ, rugosæ; quis et lacrimæ in oras
 Thrasæ? furiosæ parat populandas tradere terras?
 Tu in cunctantes, sibi exilis fore ceteris, curæ,
 Te a. Se poram triplicare vult, solidoque priori
 Mœnem sem pugna pugnæ hic origo mœra.
 Jamque erit in tota sparsurus Iulianæ terras;
 Nec timuit, no fortè nec tot ab ignibus atque
 Conciperet flammæ, longaque adæseret axes.
 Esso quoque in factis semisister, affere tempus,
 Quo mare, quo tellus, conceptaque regia collæ
 Arctici et metalli mores operosa laborat.
 Tela repensulari molibus fabricata Cyclopes;
 Tanta placet diversa, genus mortale sui imitæ
 Pendere, et ex aliis similes diametra cubo.

1. (a) *Sibi exilis fore ceteris curæ.* Give rules for mood and case.
 (b) *Quis et terzæ metallica orbe Formæ fœdæ, rugosæ.* Write the
 nom. cf. Quæ. Account for case of *auribus* and mood of *sit*.

2. Digress fait. Sed non comas tua petire

What is the prose construction?

3. Misi Delphos talles

Et Charo et Tenedos Palaramque regis servæ.

Describe their situation.

4. The chief facts of Quid's life.

II.

1. Write the acc. and abl. sing. and gen. pl. of: *tallus, vîs, valvis, vomeribus, vicinæ, cœmit, lactis, juliar, cœstus, Io, Phœchê.*

2. How are nouns classified? Write the words for 128 in each class.

3. Define these classes of verbs and conjugate one example of each class: *Incantâre, Propinquâre, Noster-Passive, Desiderâre.*

4. Write throughout (a) pres. indic. pass. of *perire*

(b) fut. indic. act. of *esse*

(c) pres. subj. act. of *male*

5. Parse, giving chief part: *parat, incantat, reperunt, iactas, viciu.*

6. Scan vs. 10, 11, 12, and give rules for quantity of syllable in vs. 11.

7. What is the Latin for—At Rome, at Carthage, in the forum—things unlike each other: the one, the other; so surround the city with a wall; some, others.

8. Translate into Latin: He wrote a very pleasant letter to us about his journey. What is sweeter than honey? They will have a great quantity of gold and silver. The enemy did not resist our attack. Why did you return to the country? So two legions having been created, the army tried to escape. Childius was accused of many crimes by Cicero.

MATHEMATICS.

Exercise.....C. MACDONALD, M.A.

GEOMETRY.

TIME: THREE HOURS.

1. If two triangles have two sides of the one equal to two sides of the other, but the base of the one greater than the base of the other, then the triangle having the greater base shall have also the greater vertical angle.

2. In any obispherical triangle, the square of the side opposite the obtuse angle exceeds the sum of the squares of the sides, &c. Give the full conclusions, and prove the proposition.

3. The opposite angles of a quadrilateral inscribed in a circle are together equal to two right angles.

4. Divide a line into two parts, so that the square of the one may be double the square of the other.

5. CD and FG are two diameters of a circle, and from P in the circumference perpendiculars are drawn to them, meeting the circle again in Q and L. Prove are QL double of are D-G.

6. Construct a right-angled triangle equal in area to a given rectangle, and having its altitude, i.e., one of the sides containing the right angle, equal to a given line.

ALGEBRA.

TIME: THREE HOURS.

1. Express in words the value of each of the figures in the number, 9070500.

2. Reduce to its simplest equivalent

$$\{(a-b)x - (b-c)y\} - \{(a+b)x + (b+c-d)y\} + ax - bx - cy$$

3. For what values of x is $x^2 + y^2$ divisible by $x + y$?

Illustrate by an example when w is not less than 4.

4. Find the value of $(x+y-z)(x+z-y)(y+z-x)(x+y+z)$, when $x^2 = a^2 + y^2$.

$$5. \text{ Express in simplest form } \sqrt{\frac{32}{243} \frac{x^2}{y^2} \frac{1000}{r} \frac{1000}{s} \frac{-a(1-b)}{t}}$$

and $(2a-x)^2 + \sqrt{c^2x + 2ax^2 + x^3}$.

6. $x^2 + mx + a^2$ is a factor of $x^4 + ax^3 + a^2x^2 + a^3x + a^4$; prove $a^2 = m + 1$.

7. Solve the equation

$$\left(x - \frac{5}{2}\right)\left(x + \frac{3}{2}\right) - (x+5)(x-3) = 91.$$

and $\sqrt{\frac{x^2}{z} + b} = \sqrt{\frac{x-1}{a} - b} = c$.

8. If $ay + bx = 6A$, $ly + lx = 6B$, and $a^2 + y^2 = 6^2$, prove $a^2 + b^2 = A^2 + B^2$.

9. Show, generally and not by working a particular example, that if the last figure of a whole number is 5, the last two figures of its square are 25. Show also that the sum of the squares of two consecutive odd numbers is divisible by twice the intermediate whole number.

ENGLISH.

Time: Four Hours.

ENGLISH LANGUAGE.

Examiner..... PROFESSOR SCHEEMAN.

- Write out and practice the passage read.
- Trace the words from 'has produced' to 'is folk.'
- Analyze from 'open which they published' to 'the two nations.'
- Give the plural of *omnis*, *res*, *genus*, *quinto*, *solus*, *secus*, *confessus*, and *hereditarius*. Of what number are *solus*, *secus*, *placens*, *victus* and *omnigenus*?
- 'For Christ his sake':, salt have his his servants.' Explain the use of 'his' in both phrases, and give the history of 'his.'
- Explain the formation of the plural *ves* from *ves* and the diminutive *vesicula* from *ves*.
- To what foreign influences has the English Language been exposed in the course of its development? And how have they affected it?
- Give rules for distinguishing the Saxon from the Latin elements of our language.
- Show by a table the relation of English to French, German, Italian, Gaelic and Greek.
- Scan the following:
 - "As a beam o'er the face of the waves may play."
 - "Hope springs eternal in the human breast."

ENGLISH AND CANADIAN HISTORY, AND GEOGRAPHY.

Examiner..... PROFESSOR FOSBERG.

- Give a brief account of the reign of Henry V.
- What circumstances tended greatly to the extension of commerce during the reign of Henry VII?
- Name the Queens of Henry VIII. What was the fate of each?
- What is the Habeas Corpus Act? When was it passed?
- Give a short account of the massacre of Glencoe.
- During whose reign were the following battles fought: Agincourt, Marston, Callen Moor, Darby, Emsay, Flodden, Killcrankie and Waterloo?

7. When and how did England gain possession of Gibraltar, Malta, Jamaica and Canada?

- How far was the feudal system introduced into Canada?
- Give a short account of the Aroostock War; the Ashburton treaty; the Rectory; Italy.
- When and by whom were the following cities founded: Montreal, Quebec, Halifax?
- Describe briefly the struggle for responsible government in Nova Scotia.
- The first General Assembly ever convened within the territory of the present Dominion met in the Court House on the 2nd of October—Fill in the place and year.

- Define the terms *meridians*, *latitude*, *longitude*.
- State accurately the zone or zones in which each of the five continents lies.
- Name the countries and large islands crossed by the equator.
- Describe the southern coast of Asia, giving the names of countries, bodies of water, important islands, principal seaports and large rivers.
- Describe the Mississippi; what tributaries does it receive from the West, from the East? By or through what States does the main river flow?
- Give the boundaries of France, Brazil, Pennsylvania, Cumberland (N. S.), Charlotte (N. W.), Quebec (P. E. I.).
- Through what waters would a ship pass in sailing from St. Petersburg to Montreal, Calcutta to London (via Suez)?

SENIOR MUNRO BURSARIES.

GREEK.

For Greek Paper, see Appendix.

LATIN.

Examiner..... JOSEF JOHNSON, M. A.

LIVY: BOOK XXI.—HORACE: ODES, BOOKS III., IV.

Time: Three Hours.

A. Translate: *Ceterum semini omnium maior iustitius quam ipsi censeo videri; quibus offerri, qua pota cogarum, alter conati victus faret, esse vilis; restitutos ac relictos ac neglectos militibus minime, nec quonquam esse preter coligari, qui dilanati dimicaliosum vellet; eum, aringo magis quam corpore mirari, memora valoris adiem ac tota herere. Sed non esse eam agro succedendum. Quid enim aliud differi aut terri*

impos' (pono tertium consules, quem aliam exercitum cooperari? Castra Carthaginiensium in Italia sic tergo in ceteris) urbis esse. Eo Siciliae ad Sardiniam, victis ademptis, nec eis Hispaniam Hispaniam regi, sed solo patrio terraque, in qua gentili forent, belli Romanam. "Quantum ingenuescunt" legitur "patres nostri, dum roma Carthagini belata scilicet, si violenter non, progressionem suam, circa novissima consularesque exercitibus, in media Italia javentis intra contra, Puzosum, quod inter Alpes Apenninorumque agrum sit, suo diebus fecerit!"

1. Illustrate the different uses of the *inf.* and *subj.* from this extract.

2. Distinguish—*adverb.*, *adv.*, *conjunct.*, *conjunct.*, *conjunct.*; *ris*, *citae*, and their opposites; *adverb.*, *adverb.*, *adverb.*, *adverb.*, *adverb.*, and give the Greek equivalents of these last words.

3. Point out in the extract some peculiarities of Livy's style.

4. Turn into *oratio obliqua*: "Elo erit locus" Magno frangi ait, "quoniam terra. Dolge vestitus vinctus ex loco pedis atque equis, cum quibus ad me vigilia prima venio; nam corpora curare tempo est."

5. Humbal's review into Italy is discussed. What author does Livy mention in this book, and how does he criticize his statements?

6. What period was covered by Livy's History? How much is extant?

R. Translate:

Geni quo creatio facta ab Illo
Jactata Tuscia sequosibus sacra
Natoque manibusque potens
Perfuit Atrocas ad arces,
Daris et Rex totius imperibus
Nunc ferat insidias in Alpibus,
Per damna per carceres, ab Ipeo
Ducit apud antroque leno.

Non hinc sedit corpore fixator
Vincit debentem crevit in Excelsis,
Monstruave sublimare Colubi
Malis Echionese Thebas.

Meres profecto, palidior eventit;
Lacres, nulla promer integram
Utra hinc victoris prestige
Proelia cotigatus loquacia.

Karthagini jam non ego narties
Mittam superbes; occidit, occidit
Spes omnis et Iertunia nostri
Nominis Hassirufab interrupto.

Nil Claudias non perfertit manus,
Quae et benigno nomine Juppiter
Defendit et canae sacraeque
Expulsi per acuta belli.

1. Date and occasion of this ode.

2. a. Monstruave sublimare Colubi.

b. Quid debent, o Roma, Nereides

Totis Mezentium sumis.

Write explanatory notes.

3. Point out peculiarities of diction in: *ancla*, *opibus*, *vires*, *Tigris*, *vulgas*, *apis*.

4. Parse: *locere*, *dehactertez*, *lacessat*, *vbere*, *parvula*.

5. Scan these lines and name the metres:

a. Delectare tibian—

b. Nosque et potestis incibus et Sacris—

c. Te multa prece, te prosequitur aere.

6.—Translated into Latin: The Helvetii, whom O-gyberis had persuaded to seek more fertile lands, on hearing that Caesar had suddenly arrived at Caesar, asked him to allow them to pass through the Roman province, promising to do no injury. Caesar, who at first had only a small army, said that he would soon be able to reply; but the ambassadors return to him after a few days. Meanwhile Caesar having collected a large army said that he would not allow them to pass, and that if they attempted to go he would prevent them by force.

MATHEMATICS.

Examiner C. MACDONALD, M. A.

GEOMETRY, &c.

TIME: THREE HOURS.

1. Equiangular parallelograms have to one another the ratio compounded of the ratios of their sides. Prove also, that they are to one another as the rectangles contained by their adjacent sides; and show the identity of these two statements.

2. Make a rectilinear figure similar to one, and equal in area to another, given rectilinear figure.

3. Draw a perpendicular to a given plane from a given point without it.

4. $a : b :: c : d$; $b = a_0$; $b_1 = 2c$. Prove algebraically or otherwise that $a : b :: a + a_0 + a_0 + 2c : b + b_1 + b_1 + 2c$. Mention any place in Euclid's Sixth book where this proposition is employed.

5. The perimeters of similar polygons are to one another in the ratio of their homologous sides.

6. From one angle of a square a line is drawn cutting off an n th part of the diagonal, and produced to cut the nearest side. Prove that of this side no $(n-1)$ th part is cut off.

7. BK and LQ are tangents to a circle, centre C; and QN is drawn perpendicular to RC produced, cutting the circle in M. Prove $PN : RN ::$ diameter: chord QM.

ALGEBRA AND TRIGONOMETRY.

TIME: THREE HOURS.

- Sum the two series, $\frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \dots$ to 8 terms, and $\frac{1}{2} + \frac{1}{2^2} + \frac{1}{2^3} + \dots$ to infinity.
- If $a; b; c; d$ show $(c^2 + d^2)^2 : (b^2 + d^2)^2 :: a^2 + c^2 : b^2 + d^2$.
- Solve the simultaneous equations:
 $x + y + z = 12$, $xy + yz + zx = 47$, and $x^2 + y^2 = a^2$.
- Solve the Equation $x^{10} - ax = 4x^{10}$; and express the value of x to the logarithmic base 10.
- Describe generally the method of proving the Binomial Theorem, when the index of the power is a positive integer.
- If a trigonometrical function (e.g. $\tan \phi = \frac{m}{n}$) be given, the number of values of ϕ is infinite. Show this, and express the general value of any function you choose.
- Find the sides of two polygons, the one inscribed in, and the other circumscribed about, a circle of radius r ; and show that their perimeters, as n increases indefinitely, tend to equality.
- In any triangle, $a \cos A + b \cos B + c \cos C = 2 \cos A \cos B \cos C$.
- CD bisects the angle C of the triangle ABC, and meets the base in D; prove that the length of $CD = \frac{2ab}{a+b} \cos \frac{C}{2}$.

LOGIC AND PSYCHOLOGY.

Examiner.....PROFESSOR LYALL, LL.D.

TIME: THREE HOURS.

- Define a Concept as distinguished from a Judgment, and a Judgment as distinguished from Reasoning.
- How would you regard reasoning, as opposed to Sir Wm. Hamilton, or J. Stuart Mill's, account of that process?
- In either of which two quantities, according to Sir Wm. Hamilton, may the reasoning process be factored? Explain these respectively.
- How are Syllogisms divided, according to the connection between the premises and conclusion is determined by the laws, 1st, of Identity and Contradiction; 2nd, of Excluded Middle; and 3rd, of Reason and Consensus? Give the rules of these respectively.
- What threefold modifications do Syllogisms, in respect of their external form, admit of? In an Extensive Sorites, which proposition is the major and which the minor, in the series of Syllogisms? And vice versa as respects the latter?
- What classification may the Fallacies be brought under? Specify the extra-logical Fallacies.

CHEMISTRY.

Examiner.....PROF. G. LAWSON, LL.D.

TIME: THREE HOURS.

- What is meant by Chemical Affinity? Compare it with Cohesion. Give examples of the operation of these forces. Explain what is meant by the terms Molecule and Atom.
- The properties of weight according to which bodies combine are invariable for each combination. Give experiments demonstrating this statement. State the law of multiple proportions, with examples. In what proportions by volume do gases combine?
- History of chlorine, mode of preparation, reaction, chemical properties, action on compounds containing hydrogen; oxygen compounds of chlorine.
- What is Alloy? Explain mode of formation, composition and classification of Metallic Oxides.
- Classification of Salts. What is meant by Neutral, Acid and Basic Salts? What usually determines the colour of a Salt? Examples.
- Give a detailed account of Iron (Ferrum), with special regard to the modes of occurrence of its compounds in the earth's crust, the changes which they undergo on the surface, the reduction of iron ores, and the chemical value respectively of cast iron, malleable iron and steel.

SESSIONAL EXAMINATIONS, 1883.

GREEK.

For the Greek Papers of the various years, see Appendix.

LATIN.

Examiner JOHN JOHNSON, M. A.

FIRST YEAR.

CICERO: PRO MILONE. VIRGIL: ECLUQUES.

TERS: TERTIA HORA.

I.

A. Translate.

Atqui, Milone interfecto, Clodius huc assequeretur, non modo ut pretor esset, sed et coactus. que accersis facere nihil posset, sed etiam, ut si coactus praesor esset, qui us si non adjuvantibus, ac consuetudinibus, speraret posse se obtinere in illis suis cogitatis foreibus; cuius illi curatio, ut ipse iudicialiter, nec, si posset, sapientem expenset, quam tantum beneficium ei se debere arbitrabatur. ac, si vellunt fortunas rite possunt frangere hominis ecclesiasticum corroborationem iam vetustate audaciam. An vero, iudices, vos soli ignoratis? vos hospites in hac urbe veritatis? vester pergrauisur aures, neque in hoc peruagato diuitis sermone versamur, qua sine lege, si lege nuncuante sunt, ac non faces uris et potius respiciat.) fuerit impetratis nobis omnino atque tantum?

1. *Atqui Milone interfecto audaciam*: Show the connection of the clauses in this sentence.
2. *Que accersis facere nihil posset*: Give briefly the rules for case and mood.
3. *Iud Cassianus, Cui bene fuerit*: Write an explanatory note and account for case and mood.
4. *a. d. xii. Kal. Feb.*: Write this in full, explain the construction, and show how the day nominally corresponding to it in our calendar is found. What do these days really correspond to?
5. *Tantus hoc, iudices, non sine coactis etiam fletis fideles declinatis* *hominis memorias perdidit, cum qui patris obsequii causa non tantum* *matris, variatis hinc inde, non solum deo, sed etiam conscientia* *stare esse sententia liberatus*: Translate and give a full explanation.
6. What changes must be made in turning *quis recte fide oratio obliqua*?
7. Whom did Cicero write this speech? Why did he defend Milo? What was his defence and how did he support it? What was unusual in the circumstances of the trial?

II.

B. Translate:

Fortunate serua, hic, inter familia nota
Et fons sacros, frigus capabile opacum!
Hinc tibi, quae sompes, vicinis ab hinc, neque
Hyblais apibus forem capere abili.
Scilicet huiusmodi modis hinc serua:
Hinc a ta sub rube canet frondosus ad canas;
Nec tamis interna rancore, tra cum, palumbes,
Nec genere aera coasabit iustor ab hinc
T. Amie lores ergo procerum in auctem carri,
Et from document modica in hinc placea,
Aute, peneratis antecum hinc, etiam.
Aut Amiein Paribus hinc, aut Germania Tigridis,
Quam oestro illis labatur postore valus.
M. At non sine illi obsequio hinc Afro,
Pars Seythiam et populum Ostia veniens Oxen.
E: positus nota divina orbe Britannica.

1. *Hinc tibi, quae sompes, vicinis . . .* Supply the ellipse. The sentence is sometimes translated as it stands: what is the objection? What poetical construction is found in the sentence?
2. *Hyblais apibus forem capere abili*: Account for the cases.
3. *Rapidius Ostia veniens Oxen*: What different translations have been suggested?
4. What geographical mistake is Virgil supposed to have made in this extract?
5. Date and place of Virgil's birth and death? What circumstance in his life is referred to in the *Elogium*? What contemporary poets does he name? Give an account of any one of them. How is the date of the *Elogium* fixed?

III.

1. Give the meaning, name the gender, and decline in the singular (marking quantity of final syllables).
(a.) *Tigridis, pater, Argo, Tyrus*.
(b.) Similarly in the plural: *apibus, de, res, græce*.
2. Write the forms corresponding in the other degrees of comparison to:
Neque, serua, tristi, penalis.
3. Mark quantities and parse, giving chief parts:
Patris, aera, fere, lege.
4. *Hinc tibi Græci nominis dæctur origo—*
Sompes habet; serper pastorem ille andit ances—
Aiphe Nilivum palæstrina. juncque viciati.
Scan, and give rules for quantities in the first line.

C. Translate into Latin:

He lived for many years a. Confess, but three years after the taking of that city he moved with all his family to Rome, where he spent the rest of his life. It cannot be denied that very many persons believe that it is the son and not the earth that moves. I will strive to the utmost of my power, not to be found unworthy of being appointed consul.

(Additional for First and Second Class.)

CICERO: PRO LEGE MANILIA.

TIME: TWO HOURS.

I.

A. Translate:

Videat et sentiat hoc idem quod vas, utrum virum esse, in quo semina sunt omnia, et cum propter eas, quo etiam caret agris: cultis adventa ipso atque nomine, tamen ille ad manutium bellum revertit, tamen laetitia huiusmodi repressos esse intelligit ad retardatio. Illi vos, quosdam libere legi tunc licet, tacite rogant, ut se quoque, sicut ceterarum provinciarum socios, dignos existimatis, quosum salutem tali vobis commendatis, atque hoc utiam magis, quod telepos in provinciam vobis modis huiusmodi cum imperiis videmus, ut etiam si ab hoste defendat, tamen imperium adventum in vobis sociorum non multum ab hostili expugnatione differat. hinc audietur artes, vane presentium vident tam prospera, tanta mansuetudo, tanta humanitas, ut si hostem esse videamus, apud vos ille diuisione commoratur.

1. *Ad certissimum bellum venit:* What is the date of this war? How long did it last?

2. *In quo servus sint certis, et cum propter eas quo etiam caret agris:* Why are different modes used?

3. *Rogant ut se . . . dignos existimatis quorum salutem tali vobis commendatis:* Give the rules for the modals.

B. Translate:

Quid tam invidiam quam ut quibus vos comites claudis fortis neque esset, equos Romanos ad bellum maximum formidolosissimum pro comite mitteret? Missas est. Quo quidem tempore, quum oesent non nemo in senatu qui dixerat non oportere *utrum libentem pro comite, sed pro consulibus mittere.* Tamen in eo rei publicae bene gerenda spes constituebatur, ut eorum comitibus nonis vobis adolescentis virtuti committeretur. Quid tam singulare quod ut ex senatu consulto legibus solentis comiti ante ferret, quam alium alium magistratum per leges capere libentis? quid tam incredibile quam ut horum equos Romanos ex senatu comento triumpharet?

1. *Non se alium esse sententiis pro comite sed pro consulibus mittere:* Explain the point of this statement.

2. *Ex senatu comento legibus solentis comiti ante ferret quom . . .* What laws are meant?

3. What is the date of the fact mentioned in the last sentence?

II.

1. What nouns of the 4th declension are feminine?

2. What nouns have different forms in the plural?

3. Some adjectives are compared with *magis* and *maxime*: some have either no positive or only certain cases of it.

4. What terminations are used to form diminutives? Give examples.

5. Form sentences to show the different ways the conjunction "that" may be translated into Latin.

6. Arrange as Hexameters:

(a.) *Vani certis spes expectata elasi—*

(b.) *Ut ipse vobis illis abstractum excedit.*

SECOND YEAR.

HORACE: ODES, BOOK I. LIVY: BOOK I, CHAP. 1-50.

TIME: THREE HOURS.

A. Translate:

Sunt certis vobis opes est intactae Palladis urben
Carminis perpetuo celebrare et
Indique decemque fronti mactentem olivam.
Pluvium in Junonis locorum
Apium dicit equis Argos litteque Mycosas.
Me vos iam patris Laodarium
Nec tam Larione peccanti non per optime,
Quam domus Achaiae rousantia
Et insepse Aio se Tiburii locus et ada
Meditibus potanda vobis
Albas ut obnoxi detergat nebula caele
Saepe Notus necque peritit inhos
Pepente, sic tu sapientis fuisse mentem
Tristitiam vobisque laborum
Melli, Pance nera, sed te felicitia agris
Castra repetit sua desca tenebit
Tibaris umbra sui. Tener Salamina patrumque
Cum fegeret artem tota Lycae
Tempora popula fatur vobis corona,
Et vobis affatus anicos.

1. (a.) *Sunt certis vobis opes est:* Distinguish just quod with indicative and subjunctive.

(b.) *Indique decemque fronti mactentem olivam:* Explain the meaning of this line and translate it according to different readings.

2. (a.) *Pluvium in Junonis locorum:* What is unusual in this expression?

(b.) *Apium dicit equis Argos:* This seems an imitation of an Homeric phrase.

3. *Larione, domus Achaiae, Aio, Tiburii, Salamina:* Describe their situation, giving the modern names of the last three.

4. (a.) *Argos, Aio, inhos—fidibus, pino, vna:* Name the gender, write the nom. and gen. sing. and note any peculiarities of declension.

(b.) *Notus, detergat, vffatus—perita, ferreus, mace et:* Name, giving the chief parts.

5. *Inhos o soli comitaeque—*
Fluvium considerit aceto—
Mito secum roa quo locorum—

Give three lines and name the metrical systems to which they respectively belong.

6. A sketch of Homer's life up to his introduction to Masomus. What friends does he mention in this book?

B. Translate:

Ister haec iam praemis Alban erant equites, qui multitudine transierunt Romam. Legiones cuncto ducto de discedent erant. Quae ubi intravit portas, non quidem fatis tantum illis, sed iuvare, quibus copiarum esse urbem solent: equum, cinctis portis, simulave arietis muris, aut arce vi capiti, clamor hostium et cunctis per urbem, armatorum cuncta ferro stragemque misit: sed alienigena tristes se tanta moestia in dextris omnia aditosa, ut, pro metu obliui quid reliquerunt, quid sensum ferant, delituisse caecillo, rognantisque illi alios, tunc in luminibus stant, tunc errabundi domos sua, nihilam illud videri, pervagantur. Illi vero iam apertum clamore acie substantiam insabat, iam impetum, iam discedantur, ulantibus arbi paritibus redditoribus, pulvisque, ex discedantibus locis ortus, videri nullo infanti cuncta impleret, raptim quibus praesentis poena: istis, quam feram ad portam stragem, in quibus aditumque adstragemque esset, reliquerunt: iam tantumque apertum rognantibus impleret vias: et conspectus aliorum causam alienigenae integritat lacrimas.

1. Distinguish the *nas* (*s*) of *ubi* with the *indio* and *subj*:

(A) *nas* and *prose nas*.

2. Show the connection of clauses in the sentence beginning: *Ut vero iam equites* . . .

3. Explain *quibus praesentis poena* *istis*: Explain the syntax. Write the regular construction.

4. Give *paries* *ister* *ist* *erant*, *ist* *helle* *opino* *paries* *erant* *apertis*: Write an historical note. Why is "helle" used?

5. *Tri* *clases* *contingunt* *et* *hinc* *indium* *et* *ocasa* *describit*: What was the object of this organization? How many different assemblies of Livy and Dionysius as to the number of senators be recorded? The three assemblies at Rome were arranged on different principles.

6. How does Livy mention his authorities for this period? When they differ, how does he set? Why is his account of the regal period considered to be in the main fictitious? What portions of his history are certain?

C. Translate into Latin:

The Sempronius Gracchus descended from a very noble family, would not suffer Scipio Asiaticus to be carried to prison. The latter when he was Praetor, subdued Gaul; in his first consulship he conquered Spain and in his second Sardinia. When he was captively imprisoned by the people, Sempronius swore that he was not desirous of death and that, if he were banished, he would go into exile along with him. Upon this he was acquitted.

(Assigned for a Fleet or Special Class.)

HORACE: Odes, Books III, IV.

TRIMETER: TWO HEVENS.

A. Translate:

Illic dies arto retentive festis
 Condit substrictum pice stovocellit
 Amphoras fessum. Libero lassimias
 Consona Tullio.
 Senu, Naxerac, cyathos arid
 Nopitri onatum et rigiles lacertas
 Parter in laetas; proci: canis este
 Clamor et ius.
 Mites civiles super arte curas;
 Occidet Padi Cutilovis agmen,
 Molus infestus ubi iustissis
 Dissidet armis.
 Servit: Hispaniae vates hostis omis
 Cantaber sera doctissis estans;
 Jam Scythas haec madidantur arm
 Cedere campis.
 Neglegens se qua nepulis laborat
 Parvo privatus minime cavere:
 Duxa perennata oupe lassas homo et
 Lique scervit.

B. Translate:

Vixit facies ante Agamemnonia
 Multi; sed omnes Illecebrabiles
 Uroreque ignotique laeta
 Noctis, omnes quia vate serpo.
 Paullum sepulchre dicit inerte
 Celum virgus. Non ego se meis
 Charis barato re alio,
 Tunc duo patris labores
 Impune, Loli, capere iudic
 Oblivione. Est enim in
 Remigis proleus et securis
 Temporis dabilem recta,
 Vindex avare foveis, et nobis
 Accens ad se cunctis pecunia.
 Conspice per vixit nam
 Sed quodiam bonis atque fides
 Iudex honestum proculi nulli,
 Reperit alic deos accentiam
 Vixit, per obstantes catervas
 Expulsi sua victor arma.

1. What Greek constructions are found in these extracts?
2. *Proleus agulus dicit inerte*
Celum virgus.

What is the normal construction for *inerte*? What other verbs of similar meaning to *dicit* are found in Horace with this case?

1. Translate lines 17, 18, (A) according to another reading.
4. *Illic dies arto retentive festis?* What day is meant?
5. Show how the date of the first extant is fixed.

et galles in fustem pacis venirotar. calculisque maritimus, sedam veteri et provido duct, barbarum academiæ panisibus, ideo actum loco numerum fieri in hinc munitum offerri, et solus pararetur: nam equiti cogitationem non exercitio si detecta corpora oblectaret, skill prædatorum multitudine, distimulatio tactum intellecta, restans de ille, quæ in multitudine conculcator, totis exercitibus comas dilaceraturus verpedit. hœc omnia delegis etiam pame abora colles erant elocenter adtingentes suscipienda pedum orribilibus, pars in phœnicio portigebatur ad explicanda equitum tenas. disque poeto prior Carthago secum cohortes et arcibus regum pro curvibus, medio sextam legionem consistit, cui acriter per potum alius ex castris tris milia tetarorum impericacra, sua cum aquila, quasi eadem legio spectareim.

1. What powers did the promiscular *imperio* confer on Asagrac?
2. The source of Roman terrene, terrene equities.

MATHEMATICS.

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

GEOMETRY.—FIRST YEAR.

TIME: THREE HOURS.

1. The opposite angles of a quadrilateral inscribed in a circle are together equal to two right angles. (The figure you have used has certain equiangular triangles. What are they?)

2. Give one enunciation containing the four props. of BK. III. that begin with the 26th, and prove any one of them.

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

4. If two triangles have one angle of the one equal to one angle of the other, and the sides about these angles proportional, the triangles shall be equiangular, &c.

5. By means of the 8th prop. of BK. VI. and using your knowledge of the three means between two given quantities, represent in a diagram the mean between two given lines.

6. Equal parallelograms that have one angle of the one equal to one angle of the other, have the sides about these angles reciprocally proportional, and conversely, &c.

7. If $a : b :: c : d$; $b : c :: d : e$; $c : d :: e : f$, &c., prove that one antecedent is to its consequent as bc . Also if $a : b :: c : d$, $ac \pm ab :: bc \pm ab :: ac \pm cd :: bc \pm cd$.

8. The perpendiculars from the angles of a triangle on the opposite sides pass thro' the same point.

9. If an equilateral triangle be inscribed in a circle, the sum of the squares of lines drawn from any point in the circumference to its angles is equal to twice the square of the side of the triangle.

10. Produce the diameter of a given circle to a point P, so that the tangent PQ may be equal to a given line.

ALGEBRA.—FIRST YEAR.

TIME: THREE HOURS.

1. If

$$(a + 2\sqrt{-1})^4 = m + n\sqrt{-1}, \text{ find } m \text{ and } n \text{ in terms of } a \text{ and } b.$$

2. Find the product $(x^2 - 2)(xy + y^2) \times (x^2 + y^2)$, and the quotient of $a^3 - b \div a(\frac{1}{2} - b)$.

3. Show that $\frac{3\sqrt{3} + \sqrt{3}}{\sqrt{3} - \sqrt{3}} = 9 + 3\sqrt{3}$, and find the square root of $37 - 30\sqrt{3}$.

4. Show that $a\sqrt{a}\sqrt{a}\sqrt{a} \dots$ to infinity $= a^{\frac{1}{2}}$.

5. From a full jar containing x gallons of nitric acid, 4 gallons were drawn off, and water added to fill up the jar. 4 gallons of this mixture were then drawn off; and it was now calculated that there were 9 gallons of pure acid in the jar. Find how much it holds.

6. Solve the following simultaneous equations:

$$\left. \begin{aligned} (x) \quad x + 4y - 7 &= 0 \\ x^2 + y^2 &= 10 \end{aligned} \right\} \left. \begin{aligned} (y) \quad x + 3\sqrt{x+y} - 18 &= 0 \\ x^2 - y^2 &= 9 \end{aligned} \right\}$$

7. Form the equation, clear of fractions, whose roots are $-1, 0, \frac{1}{2}$; fern also the equation whose roots are one-third of those of the equation, $x^2 - x^2 + 2x + 7 = 0$.

8. Sum the series $\frac{n-1}{n} + \frac{n-2}{n} + \frac{n-3}{n} + \dots + \frac{n-n}{n}$; and show that if P and Q are the p th and q th terms respectively, then $n(P - Q) = p - q$.

9. Investigate the sum of an infinite Geometric Series ($r < 1$), and show that if $a + ar^2 + ar^4 + \dots + \infty$ is times the series, $a - ar + ar^2 - \dots$, each continued without limit, then

$$r = \frac{n-1}{n+1}$$

10. Given that $1^2 + 3^2 + 5^2 + \dots + n^2 = \frac{1}{3}(2n + 1)(n + 1)n$, sum n terms of the series, $1, 4 + 3, 5 + 3, 6 + 3, \dots$

11. Show algebraically that the Arith. Geoml. and Harml. means between a and b , are in the order of magnitudes, Arith. Geoml. Show also that if $a > 1$, $a^4 - b^4 > 4a^3 - 4b^3$.

12. If $\frac{a}{b-c}, \frac{b}{c+a}, \frac{c}{a+b}$ are in Harml. Progression, then a, b, c are also in Harml. Progression.

GEOMETRY.—SECOND YEAR.

TIME: THREE HOURS.

1. Similar polygons are to one another as the squares of their homologous sides; prove this. Also, if one side (containing the right angle) of a right-angled triangle is triple the other, and perpendicular is let fall from the right angle on the hypotenuse, one of the segments of this last is one-tenth of the whole.

2. If two triangles having two sides of the one proportional to two sides of the other can be joined at one angle, so as to have their homologous sides parallel, the remaining sides shall be in a straight line.

3. The rectangle contained by the diagonals of a quadrilateral inscribed in a circle is equal to the sum of the rectangles contained by the opposite sides.

4. In a parabola, the tangent at any point bisects the angle between its focal distance and its distance from the directrix.

5. In a parabola the square of the ordinate is equal to 4 times the rectangle of the focal distance and the abscissa: prove this for rectangular co-ordinates.

6. BDC is a triangle, its exterior angle CDH formed by producing BD, being bisected by a line meeting BC in F; prove $DF^2 = BF \cdot FC - BD \cdot DC$.

7. Given a circle and a chord of it bisected in P. Find the locus of which P is the pole, and show that if tangents be drawn to the circle from any point in it, their chord of contact passes thro' P.

8. Two circles (external to each other, suppose) are touched by a third in F and Q. Show that the line PQ passes thro' a fixed point, and define the point.

9. Divide a given angle into two parts, so that their cosines may be in the ratio of $m:n$.

10. Prove, by the infinitesimal division of the arc, that the area of a sector of a circle = $\frac{1}{2} ar \times \text{rad.}$, and hence infer the area of the circle.

TRIGONOMETRY AND ALGEBRA.—SECOND YEAR.

TIME: THREE HOURS.

1. Express the other five chief Trigonometrical functions of A in terms of $\cos A$.

2. Find the angle subtended at the centre of a circle of radius 66 ft by an arc 100 ft. in length. Also, if the length of an arc of 60° were made the unit of circular measure, what would be the measure of an arc equal in length to the radius.

3. Show the relation of the six functions of $(90^\circ \pm A^\circ)$ to the functions of A° .

4. Take any angle PAX, and make PA spin round. Explain hence the meaning of general values of angles corresponding to given functions. Also, if for $\phi = \pi$, show that the general value of the angle is $n\pi + \phi$.

5. Assuming any one of the fundamental formulae for $\sin(A \pm B)$ or $\cos(A \pm B)$, prove either of the other pair.

6. Deduce the values of $\sin 2A$, $\cos 2A$, $\tan 2A$ in terms of functions of A. Prove also $\tan A = \frac{1 - \cos 2A}{1 + \cos 2A}$.

7. Given a and A of a triangle right-angled at C: find the other two sides, writing the logarithmic equation in each case.

8. Prove $\cos A = \frac{b^2 + c^2 - a^2}{2bc}$ when A is obtuse; and mention some steps in the further employment of this result.

9. Given the three sides a, b, c, of a triangle: show, without drawing a perpendicular, how the angles are found, writing the logarithmic equations in each case.

10. Using the ordinary notation for the triangle ABC, prove $\frac{a+b-c}{a+b+c} = \cos \frac{A}{2} \tan \frac{B}{2}$.

11. The greatest number of combinations that can be made of 26 things, taken r at a time, is when $r = n$: of $(26+1)$ things, when $r = n+1$.

12. In what scale of notation is $3036 = 7565_r = 10$.

13. Show that, mathematically, $\frac{0}{0}$ is indeterminate. Illustrate factly.

14. A and B bet on the throw of 2 cents, A showing first. Which ever first throws both heads wins; they throw alternately and A starts 15 to B's 83. Show that B has the best of the bet.

EXTRA MATHEMATICS.—SECOND YEAR.

TIME: THREE HOURS.

1. The sum of the plane angles that form a solid angle is less than four right angles. Show also that regular solids can have for their faces only regular plane figures of 3, 4, or 5 sides.

2. If $a + ix + x^2 + x^3, \&c.$, be any series in ascending powers of x , the coefficients $a, b, c, \&c.$, being finite, x may be taken so small that any term shall exceed the sum of all that follow, and the sum of the series may be made so differ in magnitude from a by a quantity less than any specified quantity.

3. In the expansion of a^x (in the investigation of logarithms), a^x is assumed = $1 + Ax + Bx^2 + Cx^3 + \&c.$ Having found the series equal to A, show how B, C, D, $\&c.$, are found.

4. Two wheels (radii r and r_1) are connected by a tight band which passes over the circumferences and crosses between them. The distance of their centres is d . Prove the length of the band:

$$= 2\sqrt{d^2 - (r+r_1)^2} + 2(r+r_1)\left(\pi - \cos^{-1} \frac{r+r_1}{d}\right).$$

5. Prove $(\cos \phi + i - 1) \sin \phi = \cos \phi + i - 1 + i \sin \phi$, when ϕ is an integer, positive or negative.

$$6. \text{ Prove } 2 \cos x = \frac{x\sqrt{-1} - x\sqrt{-1}}{1} + \frac{x\sqrt{-1} - x\sqrt{-1}}{1}$$

$$\text{and } 2\sqrt{-1} \sin x = \frac{x\sqrt{-1} - x\sqrt{-1}}{1} - \frac{x\sqrt{-1} - x\sqrt{-1}}{1}$$

$$7. \text{ Prove } \frac{\pi}{8} = \frac{1}{1.3} + \frac{1}{5.7} + \frac{1}{9.11} + \&c.$$

8. If $\sin \alpha = \frac{1}{3}$, prove (see 4) $\alpha = \frac{\pi}{6}$, and thereafter proceed to obtain Machin's series for computing π .

PHYSICS.

Examiner J. G. MacGibbon, D. Sc.

MATHEMATICAL PHYSICS.

APRIL 17TH.—10 A. M. TO 1 P. M.

1. Define average velocity.—A lamp-lighter walks at the rate of 5 miles an hour, requires 30 seconds to light a lamp, and lights 60 lamps which are 20 yards apart. Find his average velocity.

2. Either A: Two races leave the starting point of a circular five-mile race course at the same moment, the one going at the rate of a mile in 2 min. 50 sec., the other at the rate of a mile in 3 min. Find their relative velocity at the end of 5 minutes.

Or B: A particle starts with a northerly acceleration of 4 ft. per sec., and a north-westerly initial velocity of 6 ft. per sec. Find its velocity after 5 seconds.

3. Define angular velocity, angular acceleration, radian.—Prove that the linear velocity of a particle is equal to the product of its angular velocity into its distance from the axis of rotation. Find in radians the angular velocity of a wheel which turns 60 in its 250 times per minute.

4. Find the magnitude of the resultant of two forces in terms of the magnitudes of the component forces and the angle between them.

5. Either A: A force does work upon a particle initially at rest against an independent force of smaller magnitude. Show that the work done in moving the particle through a given distance is equal to the particle's gain of Kinetic and Potential Energy.

Or B: How does the magnitude of the absolute unit of work done depend upon the magnitudes of the simple units?—Reduce 40 foot-pounds to absolute yard-ton-minute units.

6. Enunciate and prove the proposition called the "polygon of forces."—State in some case form the condition or conditions of the equilibrium of a particle on which more than three forces are acting.

7. Either A: Three forces act perpendicularly to the sides of a triangle, at their middle points, and are proportional to the sides on which they act respectively. Show that they must be in equilibrium.

Or B: A thread 12 ft. long, has its ends fastened at points A and B in the same horizontal line, 8 ft. apart. At C and D, points which are 4 ft. and 5 ft. respectively from A and B, weights are attached. Obtain the equations necessary to determine the ratio of the weights that CD may be horizontal.

8. Explain clearly what centrifugal force is.—The bob of the conical pendulum is often said to be in equilibrium under its own weight, the tension in the string, and the centrifugal force. Criticise this statement.

9. Either A: The velocity in any direction of the centre of mass of a system of particles is equal to the sum of the products of the masses of the particles into their respective velocities in the same direction, divided by the sum of the masses of the particles.

Or B: If two spheres impinge directly, the velocity of each, relative to the centre of mass of the two, is during impact, reversed in direction and diminished in the ratio of the coefficient of restitution to unity.

10. The moment of a couple measures its rotating power about all axes perpendicular to its plane.

(Additional for First Class.)

APRIL 21ST.—3 TO 4.30 P. M.

N. B.—Answer only four questions.

1. Prove the law of the composition of simple harmonic motions in one line and of one period.

2. Determine the loss of kinetic energy due to the direct impact of two spheres whose coefficient of restitution is e .

3. A particle inside a uniform, thin, spherical shell of gravitating matter is not attracted in any direction.—The potential inside such a shell is constant.

4. Find the potential at a point due to particles of masses $m_1, m_2, m_3, \&c.$, at distances $r_1, r_2, r_3, \&c.$ from the point.

5. Show the importance of determining the moment of Inertia of a body.—How would you find the value of this quantity in the case of a straight, uniform, indefinitely thin rod about an axis through one of its end points perpendicular to itself?

6. A uniform beam rests with one end on a horizontal pavement and the other projecting over a fence, the beam being in a plane perpendicular to that of the fence. Obtain equations sufficient to determine its position when on the point of slipping down.

EXPERIMENTAL PHYSICS.

APRIL 17TH.—10 A. M. TO 1 P. M.

N. B.—Answer only twelve questions.

1. Define stress, strain.—What is the relation between stress and strain within the limits of perfect elasticity.—Comment on the extent of these limits in the case of steel, pumice, oxygen.

2. Determine the law of the increase of pressure with the depth beneath the surface of a heavy incompressible fluid.

3. Explain why the motion of a cloud of small watery particles is nearly the same as that of the surrounding air.—Why in some cases do clouds ascend instead of descending?

4. What experiments would you make to determine the law of the increase of the volume of a gas with temperature?—Show that by properly choosing one zero of temperature this law may be made to take a very simple form.

5. What different modes of experiment were necessary to prove Heat to be a form of energy, subject to the law of Conservation? Give some account of experiments made for this purpose.

6. Why do pieces of melting ice stick together readily? What property of ice renders it possible to make snow balls out of cold dry snow?

7. State and explain Thomson's Law of the Degradation of Energy.—Give a nice illustrative instance.

8. Place a magnet on a cork in the ocean. Why does it not start for the North or the South Pole?—Define the strength of a magnetic field.—What is the form of the equipotential surfaces in a uniform field?

9. How would you study experimentally the distribution of an electric charge over the surface of a conductor?—Sketch the results of such studies already made.

10. An insulated charged sphere is placed inside an insulated metal vessel? State fully what happens. The vessel is then touched with the finger. What happens in this case? Finally the sphere is allowed to touch the inside of the vessel. What will be the charge finally left upon the hollow vessel?

11. Determine the energy of a charged conductor in terms of the quantity of the charge and the potential of the conductor.

12. Show that every small portion of a current-bearing conductor is acted upon in a magnetic field by a force perpendicular to the plane containing both that portion of the conductor and the lines of force of the part of the field in which it is situated.

13. Describe an experiment showing that the rotation of a tri-dimensional conductor in a magnetic field may cause induction of currents.

14. What is the result of the interference of two waves in the same direction, of the same length and amplitude, and with phases differing by half a wave-length? How would you show this interference experimentally in the case of two sound waves?

15. How does the wave-theory account for the difference in the quality of sounds? Describe experiments testing the accuracy of this explanation.

(Additional for First Class)

ARAB THE.—4.20 to 6 p. m.

N. B.—Answer only four questions.

1. Draw roughly a diagram containing the isothermal and the adiabatic lines for steam in presence of water, and the ocean line.—Show that an adiabatic increase of the pressure of steam in presence of water causes evaporation of some of the water.

2. State the Second Law of Thermodynamics.—What is a reversible thermodynamic engine? Show that such an engine has the greatest efficiency possible.

3. Deduce from the Kinetic theory of gases that if two gases are at the same temperature and pressure, the number of molecules in unit of volume must be the same for both gases.—How would you test this result experimentally? Has it been tested?

4. Describe the essential structure of an attracted disc electrometer? Show how the difference of potential of the disc of such an electrometer is proportional to the square root of the attraction between them, if their distance is kept constant.

5. How found the force exerted by a long straight current on a magnetic pole to be inversely as the distance of the pole. Prove from this result that the force exerted by the pole on each element of the current is inversely proportional to the square of the distance of the pole.

6. If a magnetic field is so mapped out by lines of force that they indicate the intensity as well as the direction of the forces of the field, the electromotive force produced in a linear conductor by motion in the field will be proportional to the number of lines of force cut by the conductor per second.—How is a permanent current obtained by sending a coil of wire in a magnetic field; and on what does its strength depend?

ASTRONOMY.

ARAB THE.—10 A. M. TO 1 P. M.

N. B.—Answer only twelve questions.

1. A mirror turns on an axis which ought to be perpendicular to its plane? How could you find out whether it is or not.

2. A convergent pencil of rays is incident directly on a convex spherical mirror. Deduce the formula expressing the relation between the radius and the distances of conjugate foci. By what convention of signs does this expression take the most convenient form?

3. Find the geometrical focus of a divergent pencil of rays incident directly on a spherical reflecting surface.

4. Describe Galileo's telescope, showing by diagram the course of the rays of light.—Why can it not be used for microscopic observations? How would you fit up an ordinary astronomical telescope for such observations?

5. Show that the deviation produced by a prism has its least value when the incident and emergent rays make equal angles with the faces of the prism.

6. Describe the spectroscope.—Why are spectra produced by different prisms not directly comparable?—How would you compare them?

7. How is the effect of atmospheric refraction on the apparent positions of the heavenly bodies determined?

8. How would you measure the length of a degree of latitude at any given place?

9. Show how to determine the position of the First point of Aries.—Describe the character of its motion, and the observations by which its motion is made evident.

10. Show how to obtain the parallax of the Moon. Given its parallax its distance may be found.

11. Sketch the results of spectroscopic research in regard to the physical constitution of the Sun?

12. How would you find the times of the beginning and ending of a lunar eclipse?

13. What methods would you employ in determining the masses of the Earth, the Moon, and Jupiter, respectively?

14. Show how the orbit of a meteor swarm is determined.—What relation are meteor swarms found to have to comets?

15. How does aberration affect the apparent position of a star; (1) in the ecliptic, (2) at the pole of the ecliptic, (3) at intermediate positions?

ETHICS.

Examiner..... PRINCIPAL RESS, D. D.

TIME: THREE HOURS.

1. What special difficulties beset the study of Mental Philosophy? In what do they originate? To what consequences have they led?
2. Point out the relation in which the Active and Moral Powers stand to the Intellect.
3. Define the terms, *will saluta mavis*. Is a motive anything external, or is it merely the mind in a particular state? Illustrate and assign reasons for your answer.
4. Enumerate the laws of the Will. In what way are its power be strengthened? How is it weakened and enslaved?
5. What are the fundamental elements in Conscience? What are its adjuncts before an act is performed? What after its performance? Explain the phrase—*The Moral Sense*. What theory does it involve? Criticise the theory.
6. In what does Virtue consist according to the Epicureans? Stoics? Aristotle? The Cyrenaics? Thomas Aquinas? William of Ockham?
7. What effect had the writings of Hobbes on the progress of Ethical Science?
8. Name some of the philosophers who place virtue in Utility,—in Relation,—in the nature of Duty.
9. How are Virtues and Duties distinguished?
10. In what does Duty originate? Enumerate the principal classes of Rights and the corresponding Duties.
11. In case of conflicting Duties, what rule should be applied?
12. How may Duty be approximately ascertained by the Light of Nature? Show by its method that *truth* is a Duty.
13. What are the characteristics of Innate Truths? Show that according to these tests, belief in the Existence of God is an Intuition. Unfold the contents of this Intuition.
14. On what necessary truths are the Teleological arguments for the Existence of the Supreme Being based?

LOGIC AND PSYCHOLOGY.

Examiner..... PROFESSOR LYALL, LL.D.

PSYCHOLOGY.

1. What is so important to be ascertained in the relation between Sense and Intellect—Mind and Matter? Admitting Sensation to be a fact in thought, how is it to be distinguished from thought itself?
2. What is the import of Intuition? How may it be said to be above, and independent of, Experience? What is the special importance of this view at the present day? Give some particular account of the Idea of Cause, with the theories that have been advanced on the subject of Causation.

3. State the Laws of thought, and show what function they perform in mind; dwelling more particularly on the last in the enumeration, and showing its presence in the arrangements of the Cosmos.
4. What do we designate as the Practical Processes? Give some account of Generalization, with some examples of the process. Show how we may be said to generalize in every true instance of reasoning, and at the very instant of reasoning.
5. What is the particular "modus" on the subject of Perception, and what theories have been referred to in order to its solution? Give Sir W. Hamilton's doctrine of "Immediate Perception," and show what exception may be taken to this doctrine.
6. What view did we take of Memory? How may it be justified, and to what practical uses may it be turned?
7. Give Aristotle's, Hume's, and Brown's, classifications severally, of the laws of Dissociation and Association. What simpler view may be taken of this subject, and to what single law may these laws be reduced?
8. Give some account of the phenomenon, or faculty, of Imagination. Show how it has generally been regarded, and in what more especially the poetic Imagination may be said to consist.

LOGIC.

9. What is the logical import of a Concept? How is it distinguished, psychologically, from a Notion? Distinguish both from a Judgment, and show when a Judgment becomes a Proposition.
10. In what relations do Concepts mutually stand to each other? How do we get the "five Predicables" of Aristotle? In other words, what is the philosophy, or rationale, of the Predicables; and what are the highest classifications of thought—the "Categories" of Aristotle?
11. What is Sir W. Hamilton's view of the reasoning process? How does the view we have just given differ from this, and from the view generally given of the process of reasoning?
12. What is the Inductive, as distinguished from the Deductive, process; or is there in reality any distinction between these, as regards reasoning? What great mistake seems to be perpetuated in respect to these so-called processes?
13. How are Syllogisms distinguished according to the fundamental laws of thought? Give Examples.
14. State the rules as regulating the procedure in each of these modes of Syllogistic reasoning, and give a scheme of the fallacies as violating one or other of these rules, or as extralogical.
15. How do you reduce a syllogism from the 2nd and 3rd Figures, respectively, to one in the 1st? Explain this, either according to the Mainstem lines, or without these, from the nature of the syllogism itself.
16. Show how it may be better to retain a syllogism in the 2nd or 3rd Figure, instead of reducing it to one in the 1st; pointing out the special uses of the 3rd Figure particularly.
17. What is the Doctrine of Method? How do you distinguish between the Analytic and Synthetic Methods, both in the case of Science, and in the instance of reasoning?
18. Give the rules of Definition, Division, and Probation, respectively.
19. Show how the rules of Definition and Division arise out of the very nature of Concepts, in their relation of Subordination and Co-ordination.
20. What are Probations, considered in respect of their Matter, Form, and Degree of Cogency?

METAPHYSICS.

Examiner..... J. G. SCHEEMAN, M. A., D. Sc.

APRIL EXE.—10 A. M. TO 1 P. M.

A.—HISTORY OF PHILOSOPHY.

1. Name and *briefly* characterize the earlier Greek schools which were especially concerned with the problem of Substance.
2. Why does Heraclitus make an epoch in the history of Greek philosophy? Show his relation to preceding and succeeding systems.
3. Develop in its historical connections the system of Theophrastus. Compare it with the atomistic philosophy of modern times.
4. Describe the function of the Sophists in the development of Greek thought.
5. What is the relation of the Platonic ideas to the world of *sensu*?
6. State and examine the arguments by which Aristotle seeks to establish the existence of the absolute spirit.
7. * Scholasticism brought thus another principle into the world, different from that of the ancient church. (Schopenhauer). What was it? And how could Scholasticism introduce it?
8. Describe (a) the starting point, and (b) the method of Descartes. Why is he called the 'father of modern philosophy'?
9. Trace the development of Cartesianism in Malebranche and Spinoza.
10. State carefully the answers of Locke and Berkeley to the question, What is the objective world?

B.—SELECT DIALOGUES OF PLATO.

N. B.—Only four of the following questions, which are intended for candidates for First Class, are to be answered.

1. What are we to understand by the sign or oracle of Socrates? Had it anything to do with his condemnation?
2. What positions are maintained in the *Protagoras* regarding (a) the unity of Virtue, (b) the teachableness of Virtue, (c) the identity of Virtue and Knowledge?
3. Express the Platonic doctrine of Recollection. What application is made of it in the *Phaedrus*?
4. Trace the relation between Passion and Reason indicated in the *Symposium*.
5. "Knowledge is Perception." Reproduce the criticism in the *Theaetetus* on this definition of knowledge.
6. "Not-being is not the opposite of Being, but only the other." What is the meaning, and what the significance of this determination of the *Sophist*?

ENGLISH LITERATURE.

Examiner..... J. GOULD SCHEEMAN, M. A., D. Sc.

APRIL EXE.—3 P. M. TO 6 P. M.

N. B.—Answer only twelve questions. Candidates for First or Second Class should select three of the questions marked with an asterisk. Extra marks will be given for all relevant quotations from the authors studied.

1. Give the general characteristics of English Literature in the thirteenth and fourteenth centuries, mentioning a list of the more important works, but omitting all details.
2. Describe the plan of the *Canterbury Tales*.
3. Quoted from the *Prologue* four lines in description of each of the following: the Prioress, the Clerk of Oxenford, and the Poore Parson; and reproduce in your own words the description of the Merchant.
4. The following extract is from the *Knights Tale*. You are required (1) to turn it into good modern prose (2) to parse the words italicised, and (3) to scan the lines that are numbered:

It is ful fair a wox to bore him evens,
 For al day watche wek of most sovyn.
 Ful lissel cowt Arctur of his felawes, 667
 That was so welk to herken at his sawe,
 For in the brache he syneth row ful stille, 669
 Whan that Arctur hadt comed at his fille,
 And sawge al the rounde luntir,
 Into a stadle he fel al sodynly, 672
 As don the lovers in here queynte games,
 Now in the tropp, row down in the brass,
 Now up, now com, so sober in a well,
 Right as the *Frisch*, scrilly fir to yelle,
 Now i schyneth, now i reynoth faste, 677
 Right so gyt gery Venis occunte
 The heros of hire folk, right as hie lay
 In gowd, right an chaungith sche army.

- * 5. Give an outline of the *House of the Dead*.
6. Write short notes on the *Falls of Princes*, *The Red Flower Maid*, *The King's Quest*, *The Game and Playe of the Chase*, and *Thorpilias*.
- * 7. What does Spenser intend to represent in the *Fairie Queene* by Uss, Gloriam, Archibingo, Sans loy, Duessa, and Prince Arthur?
- * 8. Describe the discipline to which the Redeemesse Knight is subjected in the *House of Holiness*.
9. Write an abstract of any two (but not more than two) of the following of Bacon's *Essays*: Of Death, Of Marriage and Single Life, Of Superstition, Of Studies.
10. Name any differences between Shakespeare's earlier and later works, illustrating from *Rome & Juliet*, *Henry IV*, *Macbeth*, and *The Winter's Tale*.

11. Explain :

We'll not carry coals. God-gil' good-den. How heavy hangs upon the cheek of night. More than price of cats. O single-sold just, solely singular for the singleness. Nialobepious'd' covers draw love. Hood my unman'd blood, bating in my cheeks. O, here will I set up my everlasting rest.—(*Romeo and Juliet*)

My old lad of the castle, Sword-and-buckler Prince of Wales. Saint Nicholas' clerks. Hot livers and cold purses. The devil rides upon a fiddlerstick. To see his livery.—(*Henry IV.*)

* 12. Make a comparative estimate of Prince Hal and Henry IV., supporting your views by reference to all the plays in which either appears.

* 13. How does Shakespeare succeed in justifying to us King Henry V.'s break with Falstaff ?

14. Inscribe a comparison between Juliet and Perdita.

15. Explain :

Of kerfs and gallowlasses is supplied. Present fears are less than horrible imaginings. Trammell up the consequence, and catch with his sorrow success. Memory, the waster of the brain, shall be a fane and the receipt of reason a Brebeck only. Sleep that kais up the rarell'd steaks of care. Here's a farmer that banged himself on the exposition of plenty. Clampus me to the utterance. And some I see that two-fold hairs and tretle sceptres carry.—(*Audell*)

Affection ! thy intention stabs the centre. Will you take eggs for money ? The sea flag-dragged it. O Proserpina feq the flowers now, that frighted thou'st fall from Di's waggion. T'hou art a tall fellow of thy hands.—(*The Winters Tale*.)

16. "Macketh wastes himself in vayne, imaginative ronzom."—(*Doowda*.)

Illustrate this by reference to the play.

17. What is the theme of *Paradise Lost* ? And how is it treated ?

18. Reproduce in your own words Satan's first speech in Book I, or the description of the Limbo of Vanity in Book III.

19. Name the poem from which each of the following lines of Milton is taken :

- Better to reign in Hell than serve in Heaven.
- License they mean when they cry Liberty.
- The only daylight that makes sin.
- O forest flower, no sooner blown than blasted.
- Casting a dim religious light.
- So sinks the day-star in the ocean bed.
- Lap me in soft Lycian airs.

20. "In reading *Paradise Lost*, one has a feeling of vastness." *
* His [Milton's] imagination without compassions, like Shakespeare's, in the kindling flesh of a single epithet, but loves better to diffuse itself. Witness his descriptions * * * He loved epithets (*She stands fast*) that suggest great reaches, whether of space or time.—(*Lowell*.)

Give examples of these characteristics from your readings in Milton's poetry, usually noting any contrasts in Shakespeare that may occur to you.

HISTORY.

Examiner..... PROFESSOR FERRIS.

TIME: THREE HOURS.

Answer only one question of the first six divisions. Do not take 5, if you can answer 6.

1. (a.) Describe the Lombard invasion of Italy. How long did the Lombard Kingdom last ? What were the circumstances which led to its overthrow ?

(b.) Who were the Norsemen ? What were their most important exploits ?

2. (a.) Give the leading features of the Anglo-Saxon constitution.

(b.) Origin and growth of the House of Commons. (*Henry III. to Edward III.*)

3. (a.) Describe the civil and ecclesiastical policy of William Conqueror.

(b.) Narrate the chief events in the reign of Philip IV. of France.

4. (a.) Give an account of the feudal system, its origin, growth, and the causes of its destruction.

(b.) What was the question dealt with at the Synod of Whitchy ? How was it decided ?

5. (a.) What was the condition of the Turkish Empire under Soleyman the Magnificent ?

(b.) What was the condition of the Byzantine Empire under the administration of the Palaeologi ? How long did they rule ?

6. (a.) Where and by whom was the foundation of the Turkish power laid in Europe ?

(b.) Give a brief account of the reign of Charles XII of Sweden ?

Explain the following passages :

7. "The Emperor had the mortification to see all his projects overturned by the Prince whom he had most trusted, and was compelled to sign a treaty at Passau, by which the captive princes were restored to liberty, and a free exercise of their religion secured to the Protestants."—(*Taylor*.)

8. "The treaty of Wallingford abolished the evils of the long anarchy."—(*Green*.)

9. "It is as the victory of Bouvines that England owes her great charter."—(*Green*.)

10. "Raised as feudalism really was by the terrible bloodshed and confiscations of the civil war, it had never seemed so powerful as in the years which followed Towton."—(*Green*.)

Write brief notes on any two of the following subjects :

11. The Constitutions of Clarendon. The Privileges of Oxford. The Administration of Richelieu. The Pontificate of Gregory VII. The Early History of Russia. The Early History of Prussia. Jeangiz Khan. Caliph Omar.

POLITICAL ECONOMY.

Examiner.....PROFESSOR FORBES.

TIME: THREE HOURS.

1. Give a few of the leading points in connection with the theory of Political Economy as a science.
2. What was the Mercantile theory? What were its effects on trade and commerce?
3. Define wealth, money, capital.
4. Discuss the proposition, "A demand for commodities is not a demand for labour."
5. What are the three classes amongst whom wealth is distributed? What is their relation to the three requisites of production? What do you call the share which each receives?
6. What is Socialism? Describe the systems proposed by St. Simon, Fourier, and Owen.
7. State Ricardo's theory of Rent. The Malthusian theory of population.
8. Discuss briefly the "Wages Fund" theory.
9. What would be the effect of expanding the whole of the business of the country on what are called "Strictly Cash principles"?
10. What is the Metayer system of land tenure? What is the Cottier system? What system prevails in our own country?
11. What are Adam Smith's reasons of taxation? State some of the difficulties in the way of their application.
12. State some of the advantages and disadvantages of direct taxation.
13. Give a few of the leading arguments for and against the doctrine of protection.

CHEMISTRY.

Examiner.....GEORGE LAWSON, LL.D.

INORGANIC CHEMISTRY.

PART I.—20TH DECEMBER, 1882.

TIME: THREE HOURS.

1. Distinguish between Chemical Affinity and Cohesion. What is meant by the terms: (1) Atom; (2) Molecule; (3) Mechanical Mixture; (4) Chemical Compound.
2. "The relative weights according to which bodies combine are invariable for each combination." Cite experiments to illustrate this.
3. Illustrate, by Nitrogen Oxides, the Law of Multiple Proportions.
4. History and Chemical Properties of Oxygen.

3. What are the principal forms or compounds in which Sulphur exists in nature, and in what ways have they probably been produced as the results of chemical changes.

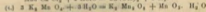
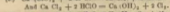
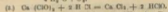
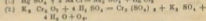
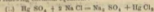
6. Give a brief account of Chlorine, its history, preparation and chemical properties, and compare it with the other Halogen elements.

PART II.—20TH APRIL, 1883.

TIME: THREE HOURS.

1. Explain precisely and briefly what is meant by the respective terms *Base, Acid, Neutral, Reaction*. What is the theoretical constitution of a Metallic Salt? When two salts are brought together in solution a change commonly takes place; what is usually the nature of the change? Give the precise formulae of five sulphates, two of them soluble, two insoluble, and one sparingly soluble.

2. Give a brief verbal explanation of the precise meaning of each of the following chemical equations:—



3. What are the principal sources of the Potash of commerce? What is the composition and what are the chemical properties of Caustic Potash: how is it prepared, and how may it be purified? In what way would you distinguish a potash salt from a salt of ammoniac acid? In what form does potash exist in soils, in plants, and in the ashes of plants?

4. Give a brief description of the chemical properties of each of the Oxides of Iron that form salts. What is the chemical composition of the principal iron ores, and what is the most injurious impurity? Explain briefly the theory of reduction of iron ores in the blast furnace. In what way is the percentage of iron in an ore ascertained?

5. What is the chemical composition, and what are the properties, of Silica and of Silicic Acid? Illustrate the constitution of Silicates by reference to some of the more common minerals. What is the chemical composition respectively of ordinary samples of the following substances: Brick Clay, Slate, Gypsum, Iron Ferruginous Slag, Feldspar? What chemical changes take place in the burning of bricks?

6. What explanation can you give of the following phenomena, based on the chemical characters of the substances concerned:—(1) The occurrence of Salt in the Sea. (2) The extensive deposition of Calcium as Carbonate in the Earth's Crust. (3) The occurrence of certain Metals in nature in the form of Sulphides. (4) The extraction of Phosphorus from the soil by plants, and the formation of Bone Earth in animals.

7. Give in outline a classification of Metallic Bases according to the solubility or insolubility of the Sulphides, Phosphates and Carbonates. Show in what way the Alkaline Earth Metals in solution are distinguished from each other. In what way is a salt of Aluminium distinguished from a salt of Zinc? How are Antimony and Arsenic in solution to be distinguished from each other?

8. Describe the process of Manufacture of Carbonate of Soda from sea-salt, representing by chemical equations the successive stages of the process. What is the difference between Carbonate and Bicarbonate of Soda, and how is the amount of the Carbonic Acid in it ascertained? In what plants is Potash replaced by a Sodium compound, and what is the chemical composition of such compound?

9. What is the chemical nature of the action of Nitric Acid upon metallic Copper? Upon metallic Tin? What chemical changes take place in the action of HCl and HNO₃ upon metallic Platinum? Finish the following chemical equation: $\text{--Na} + \text{H}_2 \text{O} =$

10. What is the reason why Gold and certain other Metals occur in nature in the metallic state instead of in combination? What metals or metallic compounds are usually associated with Gold in nature? Describe the process for separating gold from quartz in Nova Scotia. Give tests by which you would readily distinguish gold from other metals, alloys or sulphides.

All chemical reactions are to be shown by equations, with verbal explanations only where necessary.

Of Part II, five Questions only to be answered. All are of equal value.

ORGANIC CHEMISTRY.—SECOND YEAR.

TIME: THREE HOURS.

1. Illustrate the mode of formation, and the structure, of Organic Molecules, by explaining the atomic composition of Marsh Gas, and the nature of the chemical action of Chlorine upon it; also the manner in which Hydrocarbons containing several atoms of Carbon are generated. Prove that C is a tetrad.

2. What is meant respectively by the terms *Proximate Analysis* and *Elementary or Ultimate Analysis*, as applied to organic compounds? Give, by way of example, a process or method of Proximate Analysis.

3. Describe the process for Determination of the proportions of Carbon and Hydrogen in an organic substance. How is the proportion of Oxygen ascertained?

4. Describe the process for determining the amount of Nitrogen in an organic substance. (Will and Verostrapp.)

5. Show by graphic formulae that C₈H₁₈ and its homologues are saturated Hydrocarbons.

6. What is the constitution of an Alcohol? What is meant when it is said that Acetic Acid is a derivative of alcohol? What is the connection or relation between a Compound Ether on the one hand, and Acetic Acid and Alcohol on the other?

7. What is an Amide? An Amine? A Phosphine? An Arzine? Sulphide?

8. Describe the processes for preparing Ether and Absolute Alcohol.

9. Describe the process for preparing Acetic Ether.

Six questions to be answered.

ORGANIC CHEMISTRY.—FOURTH YEAR.

TIME: THREE HOURS.

1. Show the constitutional relation between Members of the Methane Series of saturated Hydrocarbons, and the Alcohols and Fatty Acids.

2. What is Boxylic Acid? Point out the way in which it is formed, and its relation to the so-called nascently of matter.

3. What are the Diatomic Alcohols (Glycols)?

4. What is Cyanogen, preparation, composition, properties. Hydrocyanic Acid.

5. Give a full account of Methyl Alcohol, with respect to its preparation and properties, and, briefly, the composition and properties of Methyl Oxide and Chloroform.

6. Give a history and description of Formic Acid, preparation and properties.

7. Give mode of preparation, chemical and physical properties, and laboratory uses of Ether.

8. Describe Trimethylamine, with regard to its chemical constitution and properties.

MEDICAL CHEMISTRY.—FIRST YEAR.

TIME: THREE HOURS.

1. Explain the theoretical constitution of Metallic Salts.

2. What is Black Oxide of Manganese? Compare salts of Mn O, Manganates, and Permanganates.

3. Describe fully the process for Detection of Arsenic in the contents of a stomach.

4. What is the chemical nature of animal Fat, and what is the composition of common soaps?

5. Compare the "Aromatic Compounds" with the bodies forming the "Fatty Soaps." Illustrate the chemical characters of Benzol.

6. Explain the theoretical constitution of the Natural Alkaloids, and give a process for separating an Alkaloid from Opium or Cinchona bark.

7. Describe the process for preparing Chloroform.

8. Notice the principal impurities of Water, and give tests for them. Six to be answered.

The following additional questions to be substituted by Students of Pharmaceutical Chemistry for two of the preceding.

9. What is caustic Potash? From what is it obtained? What are its usual impurities? How may it be purified? What are its properties?

10. What are the differences between (1) Limestone, (2) Burnt Lime, and (3) Slaked Lime? How is Lime Water prepared? To what change is it liable?

MEDICAL CHEMISTRY.—SECOND AND THIRD YEARS.

TIME: THREE HOURS.

1. What is the composition of pure Water with respect to the volume and weight of its constituents? What are the most important physical properties of Water? What are its chemical properties in relation to Non-Metallic and Metallic Oxides? In what way is the presence of organic matter in water determined?
2. Compare carefully Corrosive Sublimates and Calomel, giving of each the composition, mode of preparation, solubility or insolubility in water, alcohol and ether; action of albumen, and tests for Mercuric and Mercurous salts.
3. In what way may the action of Water upon lead pipes or cisterns be ascertained? Give tests for lead in solution.
4. Give an account of the chemical changes involved in the process of Fermentation (alcoholic). Compare with respect to their exact chemical composition and theoretical composition; (1) Ethyl Alcohol, (2) Aldehyde, (3) Acetic Acid, (4) Ether, (5) Ethyl Acetate.
5. Give an outline of the process for systematic examination of Liquid Portion of Urine and Urinary Deposits.
6. Give a special test respectively for (1) Strychonia, (2) Morphine, (3) Nicotine.
7. Give tests for Hydrocyanic Acid, and estimate percentage present in a solution (giving necessary arithmetical calculation)

Six to be answered

PRACTICAL CHEMISTRY, (LABORATORY).—SECOND YEAR.

TIME: THREE HOURS.

1. Write a brief account of the regular work done by you in the Laboratory during the session, in systematic order for Bases.
2. A salt solution gives no precipitate to H, S (pale or alkaline), no precipitate to Na, HPO₄ and (NH₄)₂HO and is not volatile. What Bases may it contain, and what additional tests are required to detect them? [Information not bearing directly on the point will lessen the value of the answer.]
3. In what way may the following bases be distinguished from each other: Ba O, CaO, Sr O, Mg O.
4. In what way are Arsenic and Calcium compounds to be definitely distinguished from each other.
5. How would you ascertain the perfect purity of Distilled Water.

CHEMICAL LABORATORY.—THIRD AND FOURTH YEARS.

TIME: Two Hours.

Give a brief account of the Chemical Laboratory work done by you during the Winter Session.

MINERALOGY.

Essayer GEORGE LAWSON, LL. D.

THIRD AND FOURTH YEARS.

50th DECEMBER, 1882.

TIME: THREE HOURS.

1. Define what is meant by the term Mineral or Mineral Species.
2. Explain what is meant by (1) amorphous, (2) crystalline, (3) crystallized.
3. Define the terms (1) face, (2) edge, (3) angle, (4) principal axis, as applied to crystals.
4. What is meant by "cleavage-plane," and "fracture-surface"?
5. What is meant by hardness, and in what way is it determined? Give an example of each degree of hardness.
6. Explain the mode of determining the specific gravity of a mineral, and give the calculation of an actual determination made by yourself.

19th MARCH, 1883.

TIME: THREE HOURS.

1. Give a sketch of the general system of Classification of Minerals into Orders and Families.
 2. Point out the special characters by which the Minerals enumerated in the following list may each be most readily recognized, and give the chemical composition of each.
- (Select ten only.)

1. Quartz.	9. Hornblende.
2. Opal.	10. Kautlin.
3. Orthoclase.	11. Calc-Spar.
4. Albite.	12. Barytes.
5. Scapolite.	13. Gypsum.
6. Thauasite, (or another specimen.)	14. Malachite.
7. Fossil Mica.	15. Pyrolusite.
8. Serpentine.	16. Common Coal.

BOTANY.

Essayer GEORGE LAWSON, LL. D.

PART I.—12th DECEMBER, 1882.

TIME: THREE HOURS.

1. Describe the Minute Structure or Anatomy of a Leaf.
2. Give a full account of the Modes of Cell Development, describing the successive changes that take place in the formation and growth of new cells.
3. Describe the principal modifications of the General Structure of Plant Stems.

4. Give a statement of the principal facts, and the theory, of Phylotaxis, or leaf-arrangement on the plant-axis.

5. What is the precise meaning of the term Inflorescence as used by botanists? Give an account of the principal kinds of Inflorescences in Plants, indicating some characteristic of natural orders or large groups.

6. Give an exposition of the relations of the several Floral Verticils to each other.

PART II. 30th APRIL, 1892.

1. Trace the Development of the Ovary into a perfect seed, and give a description of the anatomical structure of a seed, noticing all its parts.

2. Compare the process of Fertilization in the Higher Flowering Plants with that of Ferns, Mosses, Fungi and Algae, with special reference to the time of embryonic separation from the parent plant.

3. Compare several of the more common Fruits, so as to show their relation to each other in homological structure.

4. Give a general synopsis of the great groups of the Vegetable Kingdom according to the Natural System of Classification, so as to show the principle upon which the system is founded.

5. Point out the essential differences between the two following Natural Orders: Ranunculaceae, Rosaceae.

6. Give a general account of the Natural Order Leguminosae, (Fabaceae), noticing structural characters of the order, modifications of structure in different groups, and geographical distribution.

7. Give a similar account of the Compositae (Asteraceae).

8. Refer the genera *Agave*, *Nymphaea*, *Ficus*, *Pinus*, *Juniperus*, *Lilium*, *Avena*, *Apuleia*, *Ficus*, to their respective Natural Orders, and arrange the Natural Orders into the following groups:

- | | |
|--------------------------|------------------------|
| 1. Polypetalous Exogens. | 4. Gimnaeeae Endogens. |
| 2. Gymnosperms. | 5. Acrocoxae. |
| 3. Petaloidous Endogens. | 6. Thallogaeae. |

Six to be answered.

MEDICAL BOTANY.

PART I.

The following additional questions were required to be answered by those who did not answer the December paper given above:—

1. Give a description of the anatomy of an ordinary parenchymatous cell, and enumerate the usual cell contents.

2. Describe the following forms of vascular tissue, viz: Spiral Vessels, Pitted Vessels, Lactiferous Vessels, Scleriform Vessels.

3. Give a minute description of the parts, and their arrangement, in the several verticils of any one of the following flowers: (1) *Daucocarp*, (2) Sweet Pea, (3) *Lebelia*, (4) Rose, (5) Apple blossom, (6) Mustard.

PART II.

1. Describe carefully the process of Impregnation in Plants, with special reference to the development of the Follicle Tube, and the changes in the events which result in the production of an Embryo.

2. Explain the meaning of the following terms applied to Fruits and Seeds or their parts: a Achene, b Follicle, c Legume, d Caryopsis, e Sarcoporus, f Apocarpous, g Kaulaminosa, h "Inferior" and "Superior" as applied to the ovary.

3. Point out the essential distinctions (avoiding unnecessary descriptions) between the following great divisions of the Vegetable Kingdom: 1 Angiospermous Exogens, 2 Gymnosperms, 3 Endogens, 4 Acrocoxae. Give examples of natural orders belonging to each, distinguishing in cases of Angiosperms, between the polypetalous and gymnosperms.

4. Give the essential characters of the Natural Order Ranunculaceae, and notice some of the more important Materia Medica Plants that belong to the order.

5. The same with Cruciferae.

6. Compare Umbelliferae, Dipsacae, Compositae.

7. Compare Solanaceae, Scrophulariaceae, Labatae.

8. Compare Liliaceae and Amaryllidaceae.

Seven questions only to be answered.

GERMAN.

Examiner..... PROFESSOR J. LECHT, M.A.

THIRD YEAR.

TIME, THREE HOURS.

Translate: I. Schiller's *Wilhelm Tell*, Act I, Scene I.

Alpenjäger.—Es dämmert die Höhen, es zittert der Sicg,
Nichtگران dem Schützen auf schwindlichem Weg;
Er schießet verwegen
Auf Felsen von Eis;
Da prangt kein Frühlings,
Da grünet kein Reis!
Und, unter den Flüssen ein verblühtes Meer,
Erkennt er die Süden der Menschen nicht mehr;
Durch des Ries nur der Wolken
Erhöhet er die Welt,
Tief unter des Wassers
Das grüne Feld.

I. Richter's *Napoleon* macht eines *Capitän*es—Mitten in dem Kampf Ross flüchtlich die Muskeln für das Nonjourn vom Thron herabwird wie former Kirchengang. Er wurde sanfter bewegt—er schaute um den Horizont herum und über die weite Erde, und er dachte an seine Jugendfreunde, die nun glücklich und besser als er, Lehrer der Erde, Vater glücklicher Kinder und gesunde Menschen waren, und er sagte: "O, ich könnte auch wie ihr diese erste Nacht mit trockenem Augen verschlummern, wenn ich gewollt hätte.—Ach, ich könnte glücklich sein, ihr thansere Eltern, wenn ich eure Neugeburt und Leben erblickt hätte!"

Im süberhafes Erkennen an seine Junglingszeit kam es ihm vor, als riehte sich die Larve mit seinen Zügen im Tottenhause auf—endlich wurde sie durch den Aberglauben, der in der Neujahrsnacht Geister und Zaubern erblickt, zu einem lebendigen Jüngling.

III. *Wald's Fall.*—

Strafächer—Vor dieser Tunde war ich Jüngling, wie heut,
Das selbe Vollhaare freudig überlockend;
Da kam daher von Eifersucht, ohne Bang,
Der Vogt mit seiner Rindiger gelitten.
Vor diesem Hause hielt er wackernd an;
Doch ich erlaub' mich schnell und unerschrockt,
Wie sich's gebührt, trat ich dem Herrn entgegen,
Wie aus des Kaisers reichliche Mantel
Vorstell' zu Lande. "Wessen ist das Haas?"
Frugt' er beiseitend, denn er wusst' es wohl.
Doch schnell besonnen ich erzwang' ihm so:
Dies Haas, Herr Vogt, ist meines Herrn des Kaisers
Und erwe, und mein Leben—Da versetzt er:
"Ich bin Rezent im Land an Eures Saatz.
Und will nicht, dass der Herr Hinger komo
Auf seine eigne Hand, und also frei
Hilf'el, als ob er Herr wie in dem Lande;
Ich werd' mich unterzucht, auch dann zu sehen."
Dies sprach, als er stetiglich von dannen
Ich aber hielt mit kühnerer Seele,
Das Wert behaltend, das der Bäte sprach.

IV. *Jarch's Gastfreundlichkeit*—So dachte sich mein wackerer Wirth
im Engelstahl. Und als ich mich bei Tagesanbruch zur Arbeit an-
schickte, fasste er meine Hand mit den Worten: "Wessen will die ehre
wieder von dannen ziehn? Weilt' bei mir und eold willkommen." Und
als ich erwiderte: "Ich sage auch Dank für den guten Wirth, den ihr
mir bereith, aber ich würde auch gar last fallen," da ergiff er meine
Hand von Neuem, flüste etlich in seine Spieluhr voll aufgeschütztes
Korn und Weizen, in die Gerölle mit Vorwissen aller Art anrethet, in
die Keller voll alten und junges Weizen, in die Ställe endlich we-
ren hoch stattlicher Kühe aus vollen Kruppen frassen; und da ich das
alles mit Bewunderung betracht' hatte, sagte er: "Jetzt hast du alles
gesehn."

QUESTIONS.—1. *Just* has in other senses. Critique the construction
of this clause. Which is the order of words in a dependent relative clause,
and what position do such clauses occupy in the sentence? Take for
example: "The man who had lost his money a few weeks ago has killed
himself."

2. The *infinitive* accent may be placed on *unselected* particles to
express contrast. Prove this by translating: "Dieser junge Mann hat nicht
erzogen, sondern vielmehr erzogen." *Wie* was nicht nur *gratia*, sondern
auch *benefic.*

3. *Be, vor, vor, vider.* State what meanings these prefixes impart to
verbs; give instances. Establish the difference between *haben, werden,*
sein, bleiben. What kind of derivatives *ab-* do you form by means of the
suffixes: *ber, es, keft, aus.* Give illustrations.

4. Write down the *Genit. sing.,* and the *Nom. plur.* of: *Dieser, Sein,*
Neuer, Macker, Wolf, Nauff, Gerath. Distinguish between: *Daselb,*
Daselb, Dieser; der Edel, die Edel; der Knabe, die Knabe. Mention
the plural of: *Lab, Rath, Tod, Hauptmann.*

5. *Decline* in the 4 cases *sing.* and *plur.*: *Das grünele Feld (L.)*
Einen lebendigen Jüngling (H.) Mit *kommoder* Seite.

6. *Verdienen* *Hause...* *ca.* (III.) Parse the word *ca.* and account
for its position. In what case may such particles precede the *unselected*
part of the verb; apply it to the foregoing sent. Translate: I am copy-
ing a German letter. The German letter I was copying. When I was
copying the German letter.

7. After which verbs does an *obj.* and *acc.* stand, and explain the manner
form? Mention instances. Explain the nature of the inflexion of *sub-*
converted into *sub.* in words like: A stranger, the rich (pl.), the bene-
ficial! When is the *acc.* *unselected.* Write an ex.

8. *Es gibt; es ist.* Explain and illustrate the use of these expres-
sions. Write the *prim.* *tenues* of the verbs to which they belong, and
trace: We are rich. You are wrong. It gets dark. What has become
of him. He was long to Germany.

9. *Wessen* in the *Haus—dieser* *is used* *as usual* (III.). Parse *wessen,*
mention its correspond. relative form. State when *denn,* *etc.* is sub-
stituted for *er, sie, es;* take for ex.: Shall I send him the carriage,
(*Wagen, n.*) Yes, send it *sofort.* *Wass?* To what class of verbs does
it belong? The *passives* of certain verbs is substituted for their *past*
part. Explain, giving exs.

10. Compose a sent. showing the relative position of the order of the
adv. of time, the *negat. n. acc.,* the *verb* (*temp. sep.*) the *direct object*
(*nom. or pron.*). Write the same sent. placing the object, or the *adv. of*
time first, and point out the change in the construction.

11. How may *inversion* be effected in a German sent. Illustrate by
short exs. *Dieser* *Man* *ist* *unvors,* *den* *er* *hat* *nicht* *gesehen.* Why
is the natural order observed in this sent.

12. The *Pass. Office* (*Part. f.*) is closed. *The doors are being opened—*
have been opened—will not be opened yet. Explain in what respect the
English and *German* possess differ. *Active* verbs may assume the form of
positive impersonal verbs; take for ex.: *We are not allowed to leave*
the room.

13. Write down the *3rd past. a. t.* the *imperf.* and *past part. of:* *schreiben,*
coleren (II.); *essen, eiden, thun, sprechen* (III.) Certain verbs reject the
split in the *past part.* Which place do you assign the *prop. ca.* in the
sent.: *We have no time to go on.*

14. Mention the *first four periods* of German literature and their
characteristic features. Which are the *principal works* of the *1st* and
2nd periods, and who is their *metrical form.* What is the *Heldend.*
name the *dialect* in which it is written. What is usually called the *Old*
High German Language.

15. *Translation into German*—

The *olden* *lebhaft* says so: His house was furnished in the most
beautiful style. The richest people do not always give more well-
beg. The more the better. You have been told a hundred times. He
is obliged to travel all the year round. When I was in Germany I met
many *Novo Scandinav.* The work of which you speak is being published
in England. Come whenever you like. Say nothing but the truth.
 bidding her friends farewell, and end.

FOURTH YEAR.

TIME: THREE HOURS.

Translate: I. Schiller's *Marie Stuart*—II Act, 4th Scene.

Elizabeth.—Was ist der Mensch! Was ist das Glück der Erde!
 Wie weit ist diese Königin gebracht,
 Die mit so stolzen Hoffnungen begann,
 Die auf den höchsten Thron der Christenheit
 Berufen worden, die in ihrem Sinn
 Drei Kronen schon auf's Haupt zu setzen meinte!
 Welch andre Sprache führt sie jetzt, als damals,
 Da sie das Wapp'n England's angenommen
 Und von den Schmiedehämmern ihres Hof's sich Königin
 Der zwei britann'schen Inseln nennen liess!
 —Verräth! Mylord, es schneidet mir in's Herz,
 Wehmuth erregt mich, und die Seele blühet,
 Dass Iraculus nicht fester steht, das Schicksal
 Der Menschheit, das entsetzliche, so nahe
 An meinem eignen Haupt vorüberzieht.
 Tablet.—O Königin! Dein Herz hat Gott gerührt,
 Gehorche dieser himmlischen Bewegung!
 Schwer büsst sie fürwahr die schwere Schmach,
 Und Zeit ist's, dass die letzte Prüfung eule!
 Zeih' du die Hand, der Tiefgefällenen!
 Wie eines Engels Lichterscheinung steigt
 In ihres Kerkes Gräberstube hinab.—

II. Lessing's *Nathan der Weise*. III Act, 4th Scene.

Nathan.—Im! Im!—wunderlich!—Wie ist
 Mir denn!—Was will der Sultan? was? Ich bin
 Auf Geld gefasst und er will—Wahrheit. Wahrheit!
 Und will sie so,—so haar, so blank,—als ob
 Die Wahrheit Müsse wäret!—Ja, wenn noch
 Erhalte Müsse, die gewogen ward!—
 Das ginge noch! Allein so reue Müsse,
 Digger der Stempel mach, die man auf's Best
 Aufschließen darf, das ist ein doch son nicht!
 Wie Geld in Stark, so strickt man in Kauf
 Auch Wahrheit ein? Wer ist denn hier der Jude?
 Ich oder er?—Doch wie! Soll' er auch wohl
 Die Wahrheit nicht in Wahrheit fordern? Zwar,
 Zwar der Verdacht, dass er die Wahrheit nur
 Als Falle brauche, wir' auch gar zu klein!
 Zu klein!—Was ist für einen Grossen denn
 So klein!—Gewiss, gewisse, er setzte mit
 Der Thüre so ins Haus! Man geht doch, hört
 Doch erst wenn man als Fremde sich nahet.—Ich muss
 Echnahme gehn!—und wie? wie das!—So ganz
 Stockfuss sein zu wollen,—geht schon nicht.—
 Und ganz und gar nicht Jule, geht noch minder.

III. Schiller's *Marie Stuart*—IV Act, 9th Scene.

Steuersbury.—Der Gott, der dich durch seine Wunderhand
 Viermal erhielt, der heut dem schwachen Arm
 Des Greises Kraft gab, eines Wächternden
 Zu überwältigen—er verleiht Vertrauen!
 Ich will die Schminke der Gerechtigkeit
 Jetzt nicht erhasen; jetzt ist nicht die Zeit,
 Du kannst in diesem Sturme sie nicht hören.
 Dies Eine nur vermah'! Du stirbst jetzt
 Vor dieser lebenden Maria. Nicht
 Die Lebende hast du zu fürchten. Zittre vor
 Der Todten, der Bestaunten. Sie wird
 Vom Grab erstehen, das Zweifelsängstliche,
 Ein Rachegeiz in deinem Reich herumgeln
 Und dieses Volk's Herzen von dir wenden,
 Jetzt kost' der Briten die Gefährliche
 Er wird sie rächen, wenn sie nicht mehr ist.
 Nicht mehr die Feindin seines Glaubens, nur
 Die Enkeltochter seiner Könige,
 Des Hasses Opfer und der Eifersucht,
 Wird er in der Reimartzen erlösen!
 Schnell wirst du die Verkündung erfahren.

QUESTIONS.—1. Point out peculiarities either in the derivation, declension or construction of: *Angewonnen, Iraculus, Tiefgefällenen, kind* (1); *Grause, ganz und gar, minder* (II).

2. Write a conditional sent. beginning the protasis with *non*, and the verb in a comp. tense. State the relative position of the verbs, and the form of construction the apodosis assumes.

3. Describe, giving ex., how dependent clauses are connected with principal ones. Which is the place of the inflected part of the verb in a comp. tense, in such subord. clauses. Give an ex.

4. A man, who has learned much, is useful to his fellow-beings. That the electric light is used, is well known to me. I knew that you are diligent. Since he has been at College, he has been constantly busy. Translate these sent., and point out the substantive, the adjective, the adverbial clause.

5. Write, *subditi, subis, subditi, subis, ubi, ubi, ubi, ubi*. Write a sent. with each of these affix, showing the prep. that some govern, and the case that others require without preposition.

6. Klein Roland. Ein nach Kenntnissen begieriger Jüngling. Comment on the words in italics. Translate: A man dissatisfied with his lot (Schicksal), is always unhappy.

7. Idiomatic expressions.—Auf die lange Bank schieben. In den Tag hinaus leben. Es fährt sich gut auf dieser Strasse. Thae so bei Leibe steht. Es sind Nachrichten eingegangen. Dieses Tuch steht ein Die Zeitung ist eingegangen. Willen Sie darauf eingehen? Ich kann nicht von der Stelle. Er will es geliebt haben.

8. What tense do you substitute for the English perfect or comp. tense? Take for ex. How long have you been studying German? I have been studying it those two years.

9. Classify the following verbs: *relinquo, abigo, hincis, x, miseret, amplexus, amplexus, vertebat, amplexus, amplexus*. Give the n. sg., and the Impf. and past part of each verb.

19. English verbmaster governs two objects in the accusative, or the 2d. object may be a *part. pres.*; what is the corresponding form in German. Take for ex. : The people elected his president. I have always considered him as honest man. I have heard him saying you. He took his end approaching.

11. *Ein Leben loben, Thürken weinen.* What is to be remarked concerning such expressions. The *part. pres.* may depend on a verb, a noun, or the prepos. of How is it expressed in German. Translate. The necessity of celebrating one's mind. It began raining. He speaks of travelling in Europe.

12. Translate into German :

What mostly troubled him was an uncertainty about the manner of his father's death. It was given out by Claudine that a serpent had stung him; but young Hamlet had ahead suspicion that Claudius himself was the serpent, in plain English, that he had murdered him for his crown, and that the serpent who stung his father did now sit on the throne.—*Take from Shakspeare.*

FRENCH.

Examiner PROFESSOR J. LECHE, M.A.

THIRD YEAR.

TIME: THREE HOURS.

Translate: I. (a) Voltaire's "Charles XII."—Tout cela s'était fait à la vue de la flutte d'assise, qui n'avait osé s'avancer. Copentague intimidable envoya aussitôt des députés au roi pour le supplier de ne point bombarder la ville. Il les envoya à cheval, à la tête de son régiment de gardes; les députés se mirent à genoux devant lui; il fit payer à la ville quatre cent mille rixdales, avec ordre de faire vite sur un camp toutes sortes de provisions, qu'il permit de faire payer fidèlement. On lui apporta des vivres, parce qu'il fallait obéir; mais on ne s'attendait guère que des vainqueurs daignassent payer; ceux qui les apportaient furent bien étonnés d'être payés généralement et sans délai par les modestes soldats de l'armée. Il régna depuis longtemps dans les troupes suédoises une discipline qui n'avait pas peu contribué à leur victoire; le jeun qui en arguaient envers la sévérité. Un soldat s'est pas osé refuser le paiement de ce qu'il avait, encore moins aller en retraite, peu même sortir du camp. Il voulait de plus que dans une victoire ses trouges se dévouassent les morts qu'après en avoir eu la permission; et il parvint aisément à faire observer cette loi.

(b) Dès que le camp de Suedobom fut bébété aux retranchemens, ils s'avancèrent le lendemain au point du jour avec un gros régiment français qui donna un visage de mortifié. Les Russes se firent leur pendant une demi-seure sans quitter le revers des fossés. Le roi assigna à la droite du camp, d'être le quartier d'un car; il espérait le rencontrer, ne sachant pas que l'empereur lui-même avait été chercher ses quarante mille hommes, qui devaient arriver dans peu. Aux premières décharges de la mousqueterie ennemie, le roi reçut une balle à la gorge; mais c'était une balle morte qui s'arrêta dans les plis de sa cravate noire, et qui ne lui fit aucun mal. Son cheval fut tué sous lui. M. de Spaur n'a dit que le roi avait été blessé d'un autre cheval, et dit : "Ce général ne fut faire ses exercices;" et continua de combattre et de donner les ordres avec la même présence d'esprit. Après trois heures de combat, les retranchemens furent forcés de tous côtés.

II. Serbie: Le verre d'eau.—Bolognoli.—Où... les jours et il fallait conduire ma femme au bain! Mais maintenant je tiens à venir! Je suis désolé de partir! Je n'en ai pas le temps... Je n'ai pas le moment à moi... membre de la chambre des communes et grand seigneur français... je parle le matin et j'écris le soir... En vain le ministre wîng nous accablé de ses triomphes, en vain il doutait en ce moment l'Angleterre à l'Europe... moi avec quelques amis, je continuai la lecture; et les vances ont souvent troublé le sommeil des vainqueurs. Lord Marlborough, à la tête de son armée, se tenait devant un discours de Henri de Saint Jean, on un article de notre journal l'Examinateur. Il a pour lui le prince Eugène, la Hollande et cinq cent mille hommes... J'ai pour moi, Swiss Frier et Artillery... A lui l'épée, à moi la pique... Nous verrons un jour à qui la victoire... Lillistre et avare maréchal vers les galères, lui éprouva le trépas et qui rempli le sien... moi je veux la paix et l'industrie, qui, mieux que les conquêtes, doivent assurer la prospérité de l'Angleterre.

III. Orléans: Caractères de Charles I.—Le 27 Mars 1645, Charles I. monta sur le trône, et aussitôt il convoqua un parlement... Toute l'Angleterre se livrait à la joie et à l'espérance; et ce s'étaient pas seulement ces espérances vagues, ces vœux tumultueux qui éclataient au début d'un nouveau règne; celles-ci étaient sérieuses, générales, et semblaient bien fondées. Charles fut un prince de moeurs graves et pures, d'un caractère reconnu, appliqué, instruit, frugal, peu enclin à la prodigalité, résolu sans hauteur, digne sans arrogance. Il méritait dans sa vieillesse la dévotion et la vénération; tout en lui annonçait un caractère élevé, droit, ami de la justice; ses manières et son air imposaient aux courtisans, et plaisaient au peuple; ses vertus lui avaient valu l'estime des gens de bien.

Questions:

1. Tout cela s'était fait. (1) Write this sent in the neg. interrog. form giving your reason for choosing from the ordinary form of construction. Parse fait; write the 2d pers. pl. of its Indic. pres., and comment on its termination.

* 2. Illustrate the use of *est* as: (a) partitive art.; (b) as prepos.; (c) in prepos. In what cases is *de* used for *est*, and which words reject it? Write short exs.

* 3. This young man speaks without making mistakes. This young man speaks without making any mistakes. Translate these sentences, and explain why the art. is used in the one and not in the other case.

* 4. Tross by invitation that the seasonal mil is not a continued form of *mile*. Write a sent. with each word, and give the equivalents of: One thousand miles. Thousands of miles. When does each take in it?

5. Explain the position of the *adj.* in the sent.: We have studied the French language. Here is a small white house. His friend is a tall man, but he is not a great man. How does the *adj.* agree if it refers to two nouns of different genders? Ex. Do you see any difference in the following sent.: Un d'entre des ouvriers et des ouvrières anglais, and... des ouvriers et des ouvrières anglaises.

6. Mention three *adj.* that are invariable, and three others that remain invariable even before *les*, *nommés*. Write the form of *Attive*, *malin*, *benéfique*, *favorable*, *libre*, *divers*, *explicite*, *explicite*, *vaquer*, *fruit*, *experte*, *long*, *gaud*. Also, the plur. of: *bleu*, *rapide*, *monnaie*, *signal*, *sol*, *ciel*.

7. Instructive verbs require an object either with *de* or *à*; by which process. In you substitute each object? Take for ex: I remember the account of... I wish to sail. Do you remember it? The merchant answers (to) his letters.—He has answered them.

† 8. Distinguish between: *Il lui fait montrer ce qu'il a fait et il fait lui montrer* . . . When does the object pron. follow the verb; give an ex. Transl.: He recommended me to them. He recommended him to me. Account for the difference in the relat. position of these pron.

9. What difference is there between: *caci and celui-ci*; *que?* and *qu'il?* *qui est-ce que?* and *qu'est-ce qui?* Illustrate by giving short exs.

† 10. Which relative pron. never begins a sent. ? How many is sometimes rendered *que?* Take for ex.: How many people there are in this Hall! When is it translated *ceux/qui?*

11. Name and write down the pr. relative clauses of: *absent, folioit, déjeunement* (L. a); *sachant, furent* (L. b); *time, écriv, verrons, vint* (IL).

† 12. Les retranscrits nous furent forcés de tous côtés. Explain the agreement of the past part. forcés. Transl.: Many new houses have been built (active v.). The two friends have been (reflect.) each other. *Two* is often used adverbially. Mention an instance.

13. We have just finished. Write this sent. in idiomatic French, and mention other similar forms.

* 14. Write down the 3d pers. sing. Indic. pres., and the present part. of: *manger, parer, rejeter, espérer, essayer*. Which persons of a verb take the circumflex accent?

* 15. *Il y a*. Illustrate the various meanings this expression admits of. What word is used in speaking of temperature? Point out the difference between: *il est et c'est*.

16. Translate into French: Say what is true, do what is good. Day and night must be differently employed; the former in work, the latter in rest. He who is content is happy. What is useless is too dear. Whatever he may do, he cannot succeed. There is only one God. One must rise early. The French language is spoken in the whole of Europe. On this occasion my fellow-traveller was a most agreeable and intelligent Breton gentleman. I learned that having begun life with a moderate competence, he had become a timber-merchant, and was now one of the richest men in the Province. He certainly deserved to succeed, for I never saw a man so anxious to please.

FOURTH YEAR.

TIME: THREE HOURS.

Traduisez: I. Racine: *Atthalie*.—Acte I. Scene II.

Joad.—Deux infidèles rais tout à tour Font bravé :

Il faut que sur le trône un roi soit élevé,

Qui se souviene un jour qu'un rang de ses ancêtres

Dieu l'a fait remonter par la main de ses pères,

La tiré par leur main de l'oubli du tombeau,

Et de David éteint rallumé le flambeau

Grand Dieu ! si tu te prévois qu'indigne de sa race,

Il doive de David abandonner la trace,

Qu'il soit comme le fruit en naissant arraché,

Où qu'un souffle éternel dans sa fleur a séché !

Moi et ce même enfant, à tes ordres docile,

Doit être à tes desseins un instrument utile,

Fais qu'un juste héritier le sceptre soit remis ;

Livre en mes faibles mains ses puissants ennemis ;

Ceulx dans ses conseils sans refus créelle :

Deigne, seigneur, moi Dieu, ser Mathan et ses elle

Répandre cet esprit d'imprudence et d'erreur,

De la chute des rois fassent avant-coureur !

(Questions marked † to be omitted by the Pupils; those marked*, by the Seniors.)

II. Molière: *L'Avare*.—Cléante.—J'ai découvert sous main qu'elles ne sont pas fort accommodées, et que leur diablerie conduira à de la peine à étendre à tous leurs besoins le peu de bien qu'elles peuvent avoir. Figurez-vous, ma sœur, quelle joie ça peut être que de relever la fortune d'une personne que l'on aime; que de danser adroitement quelques petits secours aux modestes nécessités d'une vertueuse famille; et concevez quel plaisir ça m'est de voir que, par l'avarice d'un père je sois dans l'impudence de goûter cette joie, et de faire éclater à cette belle aucun témoignage de mon amour.—Cléante.—Quelle grande dépense est-ce que je fais? Harpagon—Quelle? Est-il rien de plus scandaleux que ce somptueux équipage que vous promettez par la ville? Je querchilles peuvent venir; mais c'est encore pis. Voilà qui crié vengeance au ciel; et à vous prendre depuis les pieds jusqu'à la tête, il y aurait là de quoi faire une bonne constitution. Je vous l'ai dit vingt fois, mon fils, toutes vos manières me déplaisent fort; vous donnez furieusement dans le marquis; et, pour aller ainsi vêtus, il faut bien que vous me débordiez.

III. *Atthalie*.—Acte II. Scene V.

Atthalie.—Dans ce désordre à mes yeux se présente
Un jeune enfant couvert d'une robe éclatante,
Tel qu'on voit des Hébreux les peuples revêtus.
Sa vue a ranimé mes esprits abattus.
Mais lorsque, revenant de mon trouble funeste,
J'admireis sa douceur, son air noble et modeste,
J'ai senti tout à coup un homicide acier
Que le traître en mon sein a plongé tout entier.
De tant d'objets divers le désordre assemblage
Peut-être de hasard vous parait un ouvrage;
Moi-même quelque temps, honteux de ma peur,
Je l'ai pris pour l'effet d'une sombre vapeur.
Mais de ce souvenir mon âme possédée
A deux fois en dormant revu la même idée;
Deux fois mes tristes yeux se sont vu retracer
Ce même enfant toujours ainsi paré à son peccar.
Laissez donc des horreurs dont j'étais poursuivi,
J'allais prier Dieu de vœux sur sa vie,
Et chercher du repos au pied de ses autels;
Que ne peut la frayeur sur l'esprit des mortels!

Questions:

1. Vous donnez furieusement dans le marquis. (II.) Comment faut-il traduire *donner* dans les phrases idiomatiques qui suivent: Ce monsieur se donne des airs. Cette peste donne sur la cour. Le soleil donne dans la croix. J'ai donné dans le piège. *Donner* jouer. *Donner* le jour.

2. *Il doive* (8^e ligne; part. I.) Faites l'analyse de ce verbe. Quelles sont les conjonctions compos. qui sont suivies du subjonctif, et qui exigent en outre la particule *se*. Citez un ex. Indiquez par des exs. la distinction entre *quoique* et le *pron. indéf. qui que*.

3. Quelle est la construction ordinaire dans la proposition affirmative? Prenez pour ex.: The Romans imposed their laws on (à) the conquered nations. Dans quels cas mettez vous le complément *indirect* avant le complément *direct*. Citez deux exs.

4. Quand l'inversion du *sujet* peut-elle avoir lieu? Mentionnez au moins quatre cas en donnant un ex. à l'appui de chaque cas. Qu'est-ce que la construction de *périphrase*; prenez pour exs. les phrases: *My brother sent me yesterday this telegram.* The exams. will take place in the library.

5. Expliquez les fêtes qui se trouvent dans les phrases suivantes et corrigez-les : Il a accompli et se servir de ses avantages. Les bûches à vaporiser et reissement d'Angleterre en 25 jours. Il est utile et chéri de son parents. Donnez-lui ce qu'il a besoin. Toi et moi sont accablés.

6. Deux substantifs, peuvent-ils avoir le même complément ? Pourquoi la phrase qui suit, est-elle incorrecte ? Son évènement et son obsolescence pour son maître.

7. Les colonnes se construisent en bois ou en pierre brédere. Les Lignes se construisent de chair ou de poisson, cras. Expliquez l'accord des adjs. *dur* et *cras*. Nommez quelques adjs. qui sont invariables lors qu'ils précèdent le substantif. Donnez un ex. Traduisez : A positive evil ; a certain news. A dishonest man ; a rude man. A poor author ; a needy author. A little man ; a mean man.

8. Expliquez la règle concernant le mot *test*, adj et adverb, et citez les exceptions. Établissez la différence entre *unique* et *qui est*, et donnez des ex.

9. *Quoique*, *cependant*, *quoique*, *en*. Donnez l'origine de ces mots. Montrez-en l'emploi en écrivant des phrases courtes.

10. Faites l'analyse des verbes suivants et donnez le temps primitif. *prévoir*, *naître* (I) ; *paraître*, *ajuster* (II) ; *consentir*, *paraître* (III) ; *croître*, *croître*, *naître*, *naître*.

11. L'enfant doit obéir et respecter ses parents. L'aspère vous voit et que je pourrai vous parler. C'est des affaires irlandaises dont il s'agit. Corrigez ces phrases, et dites pourquoi elles ne sont pas correctes. Traduisez : To grow old, to be sick, and to die, are the greatest evils of life.

12. Expliquez l'accord des parts. passés dans les phrases qui suivent. Corrigez où il y a erreur. Les fleurs que j'ai vu croître. Les fleurs que j'ai vu cueillir. Ces personnes se sont adressés à la reine. Ces personnes se sont adressés des lettres. Ce les ai invités d'assumer. Le pen d'égalité que vous lui avez montré l'a indigné contre vous.

13. Quand la forme verbale ou est, accompagnée d'un adjectif est-elle invariable ? Citez un ex. Mentionnez les verbes qui sont peus d'*adjectif verbal*. Indiquez la distinction entre les mots *faisant* et *faisant* ; *excellent* et *excellent* ; *président* et *président* ; *diffract* et *diffract*.

14. Mentionnez et classifiez les ouvrages de Racine et de Molière. Quels services signifiés ce dernier a-t-il rendus à la France ? Pourquoi, Molière, doit-il être placé au-dessus de Racine ?

15. Traduisez en Français.—Would you know whether the tendency of a book is good or evil, examine in what state of mind you lay it down. Has it attempted to abate your admiration of what is great and good, and to diminish it you the love of your country and your fellow-creatures ? Has it addressed itself to your pride, your vanity, your selfishness, or any other of your evil propensities ? Has it distorted the sense of right or wrong the Creator has implanted in the human soul ? If so—throw the book into the fire, whatever name it may bear on its title page.—Southey.

(For Senior Students, instead of Extracts I. and III.)

Traduisez : Corneille *Le Cid*—Acte II, Scène IX.

Clémence :

Sire, ne souffrez pas que sous votre puissance
Régne devant vos yeux une telle licence,
Que les plus valeureux avec indignité
Soient exposés aux coups de la férocité.
Qu'un jeune audacieux triomphe de leur gloire,
Se baigne dans leur sang, et brève leur mémoire.
Un si vaillant guerrier qu'on vient de vous ravir
Essait s'il n'est vengé, l'ardeur de vous servir.
Enfin, mon père est mort, j'en demande vengeance,
Plus pour votre intérêt que pour mon obéissance ;
Vous perdez en la mort d'un homme de son rang ;
Vengez-la par une autre, et le sang par le sang ;
Immolez, non à moi, mais à votre couronne,
Mais à votre grandeur, mais à votre personne,
Immolez, sire, Sire, au bien de tout l'État.
Tout ce qu'engourdisse un si grand attentat.

Don Diègue :

Sire, ainsi ces chevaux blanchissent le haras,
Ce sang pour vous servir prodigué tant de fois,
Ce sang, jadis l'honneur d'une armée couronnée,
Descendant au tombeau tout chargé d'infamie,
Si je n'essais produit un fils digne de moi,
Digne de son pays, et digne de son roi.
Il m'a prêté sa main, il a tendu le cou,
Il m'a rendu l'honneur, il a lavé ma honte.
Si montrer du courage et du ressentiment,
Si venger un soufflet mérito un châtiment,
Sur moi seul doit tomber l'éclat de la tempête ;
Quand le bras a failli, l'on en prend le site.
Qu'un homme crime ou non, ce qui fait nos débats,
Sire, j'en suis le site, il n'en est que le bras.
Si Clémence se plaint qu'il a tué son père,
Il ne l'eût jamais fait si je n'essais pu faire,
Immolez donc ce chef que les ans vont vieillir,
Et consacrez pour vous le bras qui peut servir ;
Aux dépens de mon sang aristocratique Clémence,
Je n'y résiste point, je consens à ma peine ;
Et loin de murmurer d'un rigoureux décret,
Monstrant sans déshonneur, je mourrai sans regret.

HEBREW.

Examiner PRINCIPAL BOMB.

TIME: THREE HOURS.

1. Translate 2 Sam. : 24, 14.
2. Analyse the words, varyimér, nipp'lah, b'yád, rabbim, éppólah. Conjugate the verbs.
3. Write the absolute and construct dual of yád and the absolute masculine and feminine singular of rabbim.
4. Account for the Degrah-forte in the letter ph. in nipp'lah, and for the falling away of hlolem in this word and for its presence in éppólah.
5. Explain fully the import of the small circle or asterisk over the first letter of rabb'im.
6. Write out in full the future tense in kal of the verb záphal.
7. Methog and Sillac have the same form. How can they be distinguished?
8. In what circumstances does var conjunctive quiesce in Sherek?

EXAMINATIONS FOR HONOURS.

I.—HONOURS IN CLASSICS.

GREEK.

For Greek Papers, see Appendix.

LATIN.

Examiner JOHN JOHNSON, M.A.

I.

PLAUTUS: TRUENENS. TERENCE: HEAUTONTIMORCHENOS.
VIRGIL: GEORGICS I, IV.

TIME: THREE HOURS.

- A. Translate: Trin. III. 3, vv. 6-32.
1. Write notes on syntax or forms, where you think necessary.
 2. *d. Pul quamquam domi cupio, operari.*
 - a. Quam magis speo, minus placet hominis facies.
 - c. Recipere et ad recurrere petere re vocant.
 - d. Nam exedificasset me, aperire foret, ex hinc aedibus.
 Translate and point out peculiarities of syntax.
 3. *a. Spondeo et mille auri Philippum doctis: Account for cases.*
 What is the value in our money?
 - a. Care sis tibi ne bubullu in te cottidi crebri croquet: Translate and write a note on cottidi.
 - c. Sana tecum tua, precepta neque habet mea modestia: Translate and explain.
 4. Give the meaning and derivation of:
 Perendinum, promus, inconciliare, elmita, actulum.
 5. Scan vv. 8, 9, 16, of extract, explaining difficulties.
- B. Translate: Haast. V. 2, vv. 1-30.
1. What unusual phrases are found in this passage?
 2. *Loricis hae sunt: esse paltare ostium?* Account for hae. What is the opposite to paltare ostium in Greek and in Latin? Where does the action of Terence's plays take place?
 3.
 - a. At hae demum qui tam facile poteris Perseverare illi quae solent quis spernem.
 - b. Satis pot prostrae nos Syri permissa haec induxerunt: Decem minus quae mihi dare pollicentur est.
 - c. Quae propter hanc res nesciquam neglecta est mihi.
 Write grammatical notes, where you think explanation is needed.

4. Hodie enim actores Heautontimoroumenae;
Duplex quae ex argumento facta est simpliciter.
Two explanations are offered for the latter statement.
5. ACTA LUDIS MEGALENSIBUS: Give an account of these.
- C. Translate: Geor. IV, vv. 223-250.
1. Omnia fove:
Show the construction of this sentence. Some editions read *ere fove*: translate and explain.
2. Scollis et lucifragis congesta cubilia blattis.
What difficulties are there in the construction and scansion of this line? How are they surmounted?
3. a. Ter sunt conati imponere Pelio Ossam.
b. Sisyppa torquentem Balearis verbera fœdas.
c. Dædalus in stagnis rimantur pectus Capseid.
d. Ille (sc. sol) etiam eximium miserans Cæsare Romanis,
Cum caput obscura nitidum ferrugine tædit.
Write explanatory and geographical notes on these lines.
4. Scen: Glauco et Panopee et Ino Melicertae—
Partitioesque present verbs, et quatuor adverbs.
5. How is the time of the composition of the Fourth Georgic fixed?

II.

HORACE: EPICLES I., II., AND PONTICA. JUVENAL: SATIRES,
VII, VIII, XIV. CICERO: DE ORATORE, I, II.
TACITUS: GERMANIA, AGRICOLA.

TIME: THREE HOURS.

- A. Translate: Hor. Epist. I, 18, vv. 41-63.
1. Alter rixator de laux saepe capitea.
What is the similar proverb in Greek?
2. a. Ad inum
b. Tæraz erit.
3. Alter in obsequium plus aequo pronus et imi
Derisor loci.
c. Easis, die, sodes, molier lex an peronorum
Nominis quae regem recte facilius offert.
Write explanatory notes on words in Italics.
3. a. Quis circum pagas et circum compita pagax
Magna coronari consuevit Olympia?
b. Vina bibes iterum Turo diffusa palustres
Inter Mistarnas Sinuessaesque Petriana.
c. Haec ego procurare et idoneis impero et non
Iavens.
Point out peculiarities of Syntax.
4. The date of Horace's birth can be fixed by a passage in the Epistles.
- B. Translate Juv. Sat. XIV, 189-209.
1. a. Vitis diversam ter ingredietur,
Ad pagam qui rhetorica descendit ab umbra
Summae ne pereat qua villa tessera venit
Frumenti.
b. Rufam qui toties Ciceronem Alibrega dixit.
Explain the references.

2. a. Cupidus silvarum, aptaque bibendus
Festibus Aspidum.
b. Et domibus Circae Nysaeque ferantur
Pectora vestra, duas non admittentis curas.
Write geographical notes. Who are meant by *domibus Circae Nysaeae*?
3. A brief sketch of Juvenal's life.
- C. Translate: Cic. De Orat.
- a. I. §§ 181-183 to objects of
b. II §§ 358, 359.
1. a. Quæ . . . pater paratus delidisset.
b. De ordine . . . de capite hominis consulari.
Explain the technical terms.
2. Uti sit laetum conditum. What were the closing ceremonies?
3. a. Quoniam philosophia in tres partes tributa.
b. Pila bene et duodecim scriptis Index.
Write explanatory notes.
4. a. Quin constat agruendo rursi testamentum.
b. At video Anopum, et paulum irruerit, explodi.
Translate these lines and parse *irruerit*.
5. What changes did Gorgias introduce into Rhetoric? Where was he born and when did he flourish?
- D. Translate: Tac. Germ. Chap. XXVI.
1. Focum agitare et in usuras extendere ignem:
Discuss the meaning of this passage. Why is the fact mentioned, though the Germans had no money?
2. Agri pro numero cultorem ab universis in vices occupantes,
quos max inter se secutus dignationem partiantur.
Explain this arrangement. Translate with the reading *vices* for *vici*.
3. Antanini perinde nomen ac bene ignorantur. Illustrate this statement from our language.
4. Quippe regno Aesacia acriter est Germanorum libertas.
Translate and explain.
5. The date of the *Germania* may be determined by internal evidence.

PHILOLOGY AND COMPOSITION.

TYPE: THREE HOURS.

- A. 1. Give an account of the "Experimental Stage" (so-called) in the science of language.
2. Describe the first attempts to classify languages. When and by whom were previous mistakes and the proper method of proceeding pointed out?
3. Discuss the origin and propriety of the names given to the family of languages to which our tongue belongs, and draw up a table showing the Branches and Classes of the North-Western Division of that family.
4. Two theories of the descent of the Romance languages have been maintained. The correct theory may be proved by a simple test. Apply a similar test to Latin, Greek and Sanskrit, and state the result.
5. "How can you prove that Sander's *Horatius* is so old as it is supposed to be?" What is Max Müller's answer to this question?
- B. 1. What are "non-declinatives"? Give examples. What is supposed to be their origin?
2. *Cervus, corvus, crista*. Derive these and give cognate words in Latin and Greek.
3. What words in Greek and Latin are derived from the root *US*?
4. Show by example the changes *Y* has undergone in Greek.
5. Explain the origin of the letter *G*.
6. Show the "affinity" that exists in Latin between certain vowels and consonants, by a comparison of Latin words with their Greek originals.
- C. 1. Illustrate by examples the different methods of forming the superlative in Greek and Latin.
2. How has an unusual termination of the second person singular in the active voice of Greek verbs been explained?
- D. Translate into Latin. When Archias came to the door of the temple with his satellites he found Demosthenes seated. He at first addressed him in language of friendly remonstrance, to persuade him out of his retreat and offered to intercede with Antipater on his behalf. Demosthenes listened for a time in silence to his bland professions but at length replied, "Archias, you never won me by your acting, nor will you now by your promises." When the player found that he was detected, he flung away the mask and threatened in earnest. "Now," said Demosthenes, "you speak from the Macedonian tripod: hence you were only acting; wait a little till I have written a letter to my friends at home. And he took up a roll as to write and, as was his wont, when he was engaged in composition, put the end of the roll into his mouth, and bit it; he then covered his face with his robe and bowed his head.

CLASSICAL LITERATURE.

TIME: THREE HOURS.

- A. 1. State fully the reasons for believing that the Homeric poems were originally handed down by oral tradition.
2. Name the *Cyclic* poets and their works. Quote Homer's remarks on them.
3. The origin and language of Iambic Poetry, and of the earliest writer. What metrical inventions are attributed to him? How far were his works imitated by Roman writers?
4. Different derivations are given for the name of Tragedy; which did Horace adopt? Why was the vocabulary of Bacchus peculiarly calculated to give birth to the drama? What function did the chorus discharge in Tragedy?
5. The three great tragedians were connected directly or indirectly with the house of Salmakis. Why is Aeschylus termed the Father of Tragedy? What is a Trilogist? Which is the only one extant?
6. Why was Athens peculiarly adapted for the cultivation of oratory? How are we able to form an opinion of Pericles as an orator? What improvements did Lycurgus introduce into oratory?
- B. 1. What is the oldest metre in Latin? Where are specimens found? On what is the metre based?
2. Three periods of Roman Classical Literature are distinguished. The earliest literary efforts of the Romans and Greeks were different in form and subject.
3. An account of the *Fescennian* songs and of the origin of the *ambo*!
4. The life and writings of any author previous to Plautus!
5. Classify Latin plays and state in which class those of Terence belong. Give a sketch of Terence's life. Name his plays with cases. How do his prologues differ from most of those of Plautus?
6. What is the origin of the name *Satire*? Who invented it? Give some account of the life and works of its earliest writer. How does his successor criticize his style?
- C. 1. Where are the earliest descriptions of a chorus found? What improvements did Arion introduce? Three styles of choral dances had their representative in the dramatic poetry of a later age. What specimens have we of choral poetry?
2. Give an account of the *Satyric* drama.
3. What is Aristotle's account of the origin of Tragedy and Comedy? What is his definition of the former? What is meant by the *frang* of Sophocles?
4. Point out briefly some differences in the performance of Greek and of modern plays.
- Describe the locality of the Theatre of Demosthenes at Athens. The explanation of a phrase in the *Agamemnon* seems to depend on the situation of the stage. Give the Greek names of the different parts of the theatre.

II.—HONOURS IN MATHEMATICS AND PHYSICS.

MATHEMATICS.

Examiner O. MACDONALD, M. A.

I.

ANALYTICAL TRIGONOMETRY AND THEORY OF EQUATIONS.

APRIL 12—16 A. M.

1. α, β, γ are the sines drawn from the angles of the triangle, ABC to the centre of the inscribed circle; prove $\frac{\alpha^2}{\sin A} = \frac{\beta^2}{\sin B} = \frac{\gamma^2}{\sin C}$.
2. Show how DeMoivre's Theorem is used to find the roots of the equation, $x^n - 1 = 0$; and find all the roots of $x^3 - 1 = 0$.

3. Prove

$$\sin^2 n\theta = \frac{1 - \cos 2n\theta}{2} = \frac{1 - \cos 2\theta}{2} \cos^2 \theta - \frac{\sin 2\theta}{2} \cos \theta \sin \theta + \frac{1 - \cos 2\theta}{2} \sin^2 \theta$$

$$\cos 2n\theta = \frac{1 + \cos 2n\theta}{2} = \frac{1 + \cos 2\theta}{2} \cos^2 \theta - \frac{\sin 2\theta}{2} \cos \theta \sin \theta + \frac{1 - \cos 2\theta}{2} \sin^2 \theta$$

4. If $2 \cos \alpha = x + \frac{1}{x}$, $2 \cos \beta = y + \frac{1}{y}$, $2 \cos \gamma = z + \frac{1}{z}$ what are the exponential values of α, β and γ . Prove also that

$$\cos(\alpha + \beta + \gamma) = \frac{1}{2} \left(\frac{1}{xyz} + \frac{1}{xy} + \frac{1}{xz} + \frac{1}{yz} + x + y + z + \frac{1}{x} + \frac{1}{y} + \frac{1}{z} \right)$$

5. Prove $\sin \theta = \theta \left(1 - \frac{\theta^2}{3!} + \frac{\theta^4}{5!} - \frac{\theta^6}{7!} + \frac{\theta^8}{9!} - \dots \right)$ and

show by comparing this series with the expansion, $\sin \theta = \theta - \frac{\theta^3}{3!} + \frac{\theta^5}{5!} - \dots$

$$\text{that } \frac{\pi^2}{6} = 1 + \frac{1}{4} + \frac{1}{9} + \frac{1}{16} + \dots$$

6. Show that $\cos^{-1} \sqrt{\frac{2}{3}} = \cos^{-1} \frac{\sqrt{6} + 1}{2\sqrt{3}} = \frac{\pi}{6}$.

7. Sum the series, $\sin \theta = \frac{1}{2} \sin 2\theta + \frac{1}{4} \sin 4\theta + \frac{1}{8} \sin 8\theta + \dots$

8. Given $\tan \alpha \cos \alpha = \tan \theta$; prove

$$\alpha = \theta + \alpha \sin 2\theta + \frac{1}{2} \alpha^3 \sin 4\theta + \dots, \text{ where } x = \frac{\pi - 1}{\pi + 1}$$

9. Prove that if in the expression $f(x)$, (powers of x integral and positive), continuous values of x be substituted, the sign of $f(x)$ changes as x passes through a root of the equation, $f(x) = 0$.

10. State and prove Descartes' rule of signs.

11. If $f'(x) = 0$ be the first derived equation from $f(x) = 0$, show that the roots of $f'(x) = 0$ lie between those of $f(x) = 0$; (real roots are supposed).

12. Apply Sturm's Theorem to find the situation of the real roots (if there are more than one) of the equation, $x^3 - 12x - 15 = 0$.

II.

ANALYTICAL GEOMETRY.

APRIL 18—20 P. M.

1. Find the equation to the line which bisects at right angles the line joining the points $(3, 4)$ and $(4, 5)$.

2. Find the length of the perpendicular from the point $(3\sqrt{2}, 5)$ on the line, $y = x \tan 30^\circ - 2$; and state the rule respecting the sign (\pm) of a perpendicular on a line.

3. Find the locus of the equation $2x^2 + 4xy - 3y^2 = 0$.

4. Find the polar equation to a circle (radius, r), & the pole, SX the initial line; and deduce from the equations the conspicuous proposition of Euclid.

5. Change the ellipse, $\frac{x^2}{25} + \frac{y^2}{9} = 1$, from rectangular to oblique axes.

Prove also that when the new semi-axes are equal, they are parallel to the lines joining the ends of the major and minor axis.

6. Suppose the general equation of the 2nd degree, viz.: $ax^2 + by^2 + cx + dy + ey + f = 0$, reduced to the form $a'x'^2 + b'y'^2 + c' = 0$, show how it may be still further reduced to the well-known form of either the ellipse or the hyperbola.

7. Give a short account of how you deal with the general equation when $a' = 0$.

8. Find the equation to the chord of contact of tangents drawn from (h, k) in any conic you please. Prove, also, if (h, k) be a point in the chord of contact corresponding to (h, k) then (h, k) will be a point in the chord corresponding to (h, k) .

9. Find the equation to the tangent to a parabola its focus of the angle it makes with the axis of X. Find also the locus of the intersection of tangents to a parabola; (1) when the sum, (2) when the difference, (3) when the product, of these tangents is constant.

10. Show that if a tangent to a hyperbola meet the asymptotes, it is bisected at the point of contact.

11. If from any point two lines be drawn cutting an ellipse, each making a constant angle with the axis of X, the rectangles of the segments are to each other in a constant ratio.

12. From (h, k) , a point in an equilateral hyperbola tangents are drawn to be conjugate. The chord of contact touches the other branch of the former at the point $(-h, -k)$.

APRIL 20, 19 A. M.

7. $\alpha = 0$, $\beta = 0$, $\gamma = 0$, are the equations to the sides of a triangle, ABC; find the equations to the perpendiculars from the angles on the opposite sides. Find also the equations to the lines joining the feet of the perpendiculars.

8. If $y = f(x)$ be a maximum or a minimum, prove the distinguishing properties of $\frac{d^2y}{dx^2}$ and $\frac{d^3y}{dx^3}$. If there are any exceptional cases, mention them.

9. The greatest isosceles triangle inscribed in an ellipse, with its vertex at the end of the minor axis, has its altitude $= \frac{3b}{2}$ (a and b are the semi-axes).

10. Apply Taylor's Theorem to expand $z = f(x, y)$ when x and y are independent, and receive the increments h and k . Hence show that $\frac{d^2z}{dx^2} = \frac{d^2z}{dx^2} + \frac{d^2z}{dy^2} + \frac{d^2z}{dx dy} + \frac{d^2z}{dy dx}$. Generalize the foregoing in a theorem.

11. Differentiate (1) $\tan^{-1} \frac{\sin x}{1 + \cos x}$, (2) $x^{\frac{m-1}{n}}$, (3) $x^{\frac{m}{n}}$.

12. Integrate (1) $\frac{x^a dx}{\sqrt{x^2-1}}$, (2) $\frac{dx}{(x-1)(x+2)}$, (3) $\frac{dx}{\sqrt{x^2+2}}$.

13. Find formulae of reduction for $\int \frac{x^m dx}{\sqrt{1-x^2}}$, (2) $\int \sin^m \theta d\theta$.

14. Show that $\int_0^1 \frac{x^n dx}{\sqrt{1-x^2}} = \frac{(2n-1)(2n-3)\dots 3 \cdot 1}{2^n n!} \frac{\pi}{2}$.

15. Prove the formula $dA = \frac{1}{2} r^2 d\theta$, and if $r = a(1 + \sin \theta)$ find the area of the last quadrant of the curve.

16. Use the elementary triangle to prove p (the perp. on the tangent from the pole) $= \frac{r^2}{\sqrt{r^2 + \frac{d^2r}{d\theta^2}}}$, and apply the formula to determine p in the last curve.

17. Prove that the radius of curvature is normal to the curve, and find it for the ellipse. Hence find the length of a quadrant of the evolute.

18. Discuss the curve $y^2 = x^2(a-x)$, with reference to asymptotes, greatest ordinates if any, angles at which it cuts the axis of X , &c.

19. Integrate the homogeneous equation, $y^2 + (xy + x^2) \frac{dy}{dx} = 0$; and also, having shown that it satisfies the criterion of integrability, the equation, $\left(1 - \frac{y^2}{x^2}\right) dx - \frac{2y}{x} dy = 0$.

Examiner..... J. G. MacGraw, D. Sc.

APRIL 16TH.—19 A. M. 30 P. M.

1. If $\frac{d\phi}{dt}$ is constant, the acceleration of a particle moving in a plane curve, is wholly in the direction of the radius vector.

2. A particle acted on by no forces moves in a medium whose resistance is proportional to its velocity. Determine the motion.

3. Find an expression for the transmission of a wave along a line of particles, (1) in general, (2) in the special case, in which the particles make simple harmonic vibrations across the direction of propagation.

4. If a body undergoes a non-rotational strain, there can always be found a function of the coordinates of any point of it, whose partial differential coefficients are equal to the component displacements of the point.

5. Find the equation to the form of a flexible, inextensible string, of uniform linear density, whose end points are fixed, and which is in equilibrium under its weight alone.

6. The motion of the centre of mass of a system, acted on by any forces in the same or in different directions, can be collected at the centre of mass, and all the forces were applied at that point in directions parallel to their actual directions.

7. Find the time of oscillation through very small angles of a body which moves about a fixed horizontal axis and is acted on by its weight alone.

8. If X, Y, Z , be the rectangular components of a force, or forces which tend to fixed centres, and are functions of the distances from those centres, $Xdx + Ydy + Zdz$ will be a complete differential.

9. Deduce the general kinetic equations for an extended body from the law of the Conservation of Energy.

10. Find an analytic expression of the conditions of the equilibrium of a fluid.—Apply it to the case of a heavy gas whose temperature is kept constant.

11. A quadrant of a circle is just immersed vertically with one edge in the surface, in a liquid whose density varies in the depth. Find the coordinates of the centre of pressures.

12. Assuming the expression for the efficiency of a perfect thermodynamic engine, of infinitely small range, show that if the absolute value of a temperature be defined to be the reciprocal of the value of Carnot's function for that temperature, the absolute values of any two temperatures will be so set in the ratio of the heat taken in, to the heat rejected, in a perfect thermodynamic engine working with the source and refrigerator at the higher and lower of these temperatures respectively.

13. Obtain an analytic expression of the Second Law of Thermodynamics, and apply it to show that the specific heat at constant pressure is greater than the specific heat at constant volume.

APPENDIX.

1. *ei πρότερον χρίσας μιν ἔπεισ' ὀπίθ' ἕλκυσεν* : Account for the cases.
2. *ἁετωτικὸν ἁετίζεσθαι* : What is the Latin idiom?
3. Καὶ τὰς τῶν οἰκτιρῶν αἰδέσθαι ἁετίζεσθαι ἐπὶ ἀδρόμον, ὃς μάλιστα ἔκτανε κ. τ. λ. Why are different negatives used?
4. *ἀσφίσαντες τῆ δόξῃ αὐ τοῦθ' ὄπισθεν κ. τ. λ.* Show clearly the connection of the verbs in this clause. Turn it into Latin.
5. *ὅς εἰρηνοποιήσας* : What is the force of *ὅς* with a participle?
6. What different accounts are given of the birth of Cyrus the Elder?

II

1. Revolve the following examples of enclitic *ὄπισθεν, αὐ, γένος, ταῖσιν, μένος, θύρῃσι, ἰσχυρῶς*.
2. Decline throughout with accents : *παῖς, ἄσπετος*.
3. What adjectives are declined in the last declension only?
4. Some compound verbs take one augment before the preposition and another before the verb.
5. Each of the following words admits of two or more meanings according to its accentuation, breathing, &c. : *φώνη, αἴα, ὄψων, τάρτα, κτύπος, φρενί, τρυφή, ἄρπυξ*.
6. What parts of the verb are oxytons? Give one example of each.
7. Accentuate, and parse, giving the chief parts : *αὐτοῖσι, ταπεινός, ἰδοκῶν, ἐπιεικῶς, ἄσπετος*.

SECOND YEAR.

XENOPHON: MEMORABILIA, BOOK III. HOMER, ODYSSEY, BOOK IX.

TEXT: TRICE HORUS.

1. Translate: MEM.-III. 7. §§ 6-8, beginning: *Καὶ ἐπὶ γὰρ ἠδελφεὺς ἴππ', ἰσχυρῶσι.*
1. Give the grammatical analysis of *αἰδέσθαι* and *ἁετίζεσθαι* in the text. How does the use of only one article with the two latter adjectives heighten the effect?
2. *Τὶ δὲ αἶα ἀσφίσαντες ὀπίθ' ὄπισθεν ἢ τῶν ὀπίσθεν ἀπὸ ἀπείρου τοῦ ἰούδης* : Account for the use of the participle *ὀπίθ'*; what might have been used instead?
3. What word is superfluous in the last sentence? Give other examples of accessories used like *μάλιστα τῶσιν*.

4. Show the different uses of the genitive by one example of each taken from the extract.
 5. Parse the following words, giving the chief parts of the verbal forms : *πυλάειν, κρατερὴς ὄψων, ἰσχυρῶσι, ἰσχυρῶσι—ὄψων, ἄσπετος*.
 6. *Ἄρα λέγουσ' ἔπεισ' ἡμῶν αἰεὶ ἐπὶ Κίρκῳ δὲ ἄσπετος ἔκτανε* : Translate, and explain the references.
 7. *Εἰς γὰρ μῆν, ἰσχυρῶσι αὐτὸν ἔπεισ' ὄπισθεν, ὄψων ἔκτανε, ἄσπετος* : Translate, and write a note on *ὄψων*.
- B. Translate: Odyss. IX. 376-394.
1. *ἄσπετος* : A reading *ἀσπῆτος* is found, what is the difference? Why is the latter suggested?
 2. *τρυφή* : This word is parsed in two ways : why?
 3. *ὄψων δ' αἰεὶ ταπεινός ὄπισθεν ἔκτανε* : Translate according to a different reading.
 4. What forms in Attic prose correspond to *αἰσχυρῶσι, αἰσχυρῶσι, ἄσπετος, ἔκτανε, ἰσχυρῶσι, ἰσχυρῶσι, ἰσχυρῶσι, ἰσχυρῶσι, ἰσχυρῶσι, ἰσχυρῶσι*.
 5. Parse *τῶσιν, ἰσχυρῶσι, ἰσχυρῶσι, ἰσχυρῶσι, ἰσχυρῶσι, ἰσχυρῶσι, ἰσχυρῶσι*.
 6. Scan first three lines, explaining quantities, when necessary.
 7. Why are the *Odyssey* and *Iliad* supposed to have had different authors?
- C. Translate into Greek: *The King of the Persians swayed the greater part of Greece.—It is necessary to bear what comes from the Gods.—I will be with you three times every year.—Death will free us from all our troubles.—Three dogs got hold of the wolf by the same ear.*

ADDITIONAL FOR A FIRST OR SECOND CLASS.

DEMOSTHENES: OLYNTHIACS.

1. Translate: OI. I. §§ 11-16, beginning: *Εἰ αὖν, τοῖς ἐν εἰσῷ, ταῖσι λέγουσ' ἔπεισ'.*
1. *ἔπεισ' ὀπίθ' ὄπισθεν ἰσχυρῶσι τῶν προτέρων* : Write this clause in full.
2. *ταῖσι εἰσῷ, τοῖς ἐν εἰσῷ, ταῖσι λέγουσ' ἔπεισ' ἰσχυρῶσι τῶν προτέρων* : Translate into Latin.
3. Show the connection of the clauses in the last sentence of the extract and account for the cases of *ἔπεισ', ἰσχυρῶσι, ἰσχυρῶσι, ἰσχυρῶσι*. Parse *εἰσῷ*.
4. Translate: OI. III. §§ 34-36 beginning: *Τὶ δὲ τὸ εἰσῷ αἰεὶ ταπεινός, ἰσχυρῶσι, ἰσχυρῶσι, ἰσχυρῶσι, ἰσχυρῶσι, ἰσχυρῶσι, ἰσχυρῶσι*.
5. *ἰσχυρῶσι (acc. of ἰσχυρῶσι) ταπεινός, ταπεινός ἰσχυρῶσι τῶν Ἑλλήνων ἔπεισ' ἰσχυρῶσι*. Write an historical note.

2. Ταῦτα μὴ εἶναι ἀβήγητα εἰς ἀν' ἀποδοτικῆς, εἰ μάλιστα εἰσέσθαι ἐπιπλάττειν παρ' ἑαυτὸν βλάβη εἰς περιγραφήν αἰρέ γυναικῶν: Translate and account for cases of ταῦτα, περιγραφήν, αἰρέ. What other construction might be used for εἰς ἀποδοτικῆς.

3. Parse, giving chief parts: ἠροῖτόναι, εἰςγένητον, εἰσέσθαι.

II

1. What Epic verbal terminations are found in Odys. ix?

2. Accentuate the words used in Attic prose corresponding to: αἰρωτο, εἰ, ἔπει, ἔπει, κρηθῆ, κρηθῆ, ἔπει, ἀπῆ, εἰ, ἐπεισῆται

3. Put line and accentuate throughout in Attic and Epic: κρηθῆ.

4. What is the Epic accent? Give two examples.

5. Show by a comparison of Greek and Latin what sounds the *Spiritus asper* represents.

6. Parse, giving chief parts, and accentuate the following verbs: αἰρωτο, ἔπει, ἐπεισῆται, πεπλάττειται.

THIRD AND FOURTH YEARS.

DEMOSTHENES: PHILIPPI I. III. SOPHOCLES: ANTIQUON.

A. Translate. Phil. I. §§ 16-18, beginning, Πῶς μὴ οὐκ εἴη τὸ ἀποκρίσασθαι πάλιν ἐπιβουλευτῶν ἐπιβλεπόντων ἀνασταξίαν ἑαυτοῦ.

1. Ἀπῆ' ἔπει εἰς δέξιν α. τ. λ. Supply the ellipse.

2. Ἐπειδὴ ἔπειτα ἀνασταξίαν, ἐπιβλεπόντων, μὴ ἀνασταξίαν περιγραφῆσαί τε. Account for ἐπιβλεπόντων, ἀνασταξίαν. Παναθηναϊσμοῦ and turn the clause into Latin. When is the imperative not used in "commands"? Distinguish τὸ λαλοῦν, τοῖς λαλοῦσιν.

3. Illustrate from the extract the use of εἰ and εἴ.

4. Ἐπει γὰρ εἰ πλείονες εἰς κληθεὶς εἰς τῆς ἀρχῆς χειροτονήσασθαι καὶ εἰς τοὺς ἑταίρους, οὐκ εἰς τὴν πόλιν. Translate and explain. Write a note on τοῦ ἀρχῆς and ἑταίρους.

5. Καίτοι τί ἔπειτα ἐπιβλεπόντων... τὴν τὸν ἀνασταξίαν (ἀνασταξίαν) ἀπῆ τοῦ ἀνασταξίαν ἑαυτοῦ γίνεσθαι. Give an account of the *Dionysia*.

6. Demosthenes mentions several towns taken by Philip: describe their situation.

7. State briefly what Philip had done between the dates of the First and Third Philippics.

B. Translate: Antig. 101-121, beginning.

Τὶ γὰρ παρὰ δόξαν ἀλλοτρίαν ἐπιβλεπόντων εἰσέσθαι

1. Τὶ παρὰ δόξαν παρῆ. Supply the ellipse.

2. καὶ τὸς ἑσθός: what is remarkable in this clause?

3. ἐπὶ δ' ἔπειτα εἰς μὴ λίγος ἑσθός τὸ εἶναι οἰδ' ἂν ἐπιβλεπόντων μὴ ἐπιβλεπόντων λίγος.

Account for the negatives.

4. ἀπῆ' ἐπὶ δ' ἔπειτα οὐκ εἰς δόξαν: Accentuate ἔπειτα and translate accord-ingly.

5. a Write the nom. and gen. sing. of τὸς, εἰσέσθαι, πλεόν.

b Parse: ἐπιβλεπόντων, ἐπιβλεπόντων, ἀνασταξίαν, ἀνασταξίαν.

6. What part of the expense of theatrical entertainments was borne by the Athenian Government and what by individuals? Describe the appearance of the actors and chorus in Tragedy.

7. A brief sketch of Sophocles.

C. Translate into Greek: I will go away, that I may not see the battle. If you had done this, I for my part should have accused you of folly. He told me that his father was suffering from a severe disease. It is being the case, it seemed good to the generals to depart. Remember that you are a man.

ADDITIONAL FOR FIRST OR SECOND CLASS.

D. Translate this extract, not seen before:

ἐπὶ γὰρ ἔπειτα ἔπειτα εἰς Περσῶν
μαρτύριον, εἰς γὰρ ἔπειτα, ἐπὶ τὴν παρὰ
ἐπὶ τὴν ἀνασταξίαν τὴν ἀνασταξίαν πᾶσα,
ἐπὶ μὴ ἐπιβλεπόντων, εἰς ἑσθός, ἀνασταξίαν ἑαυτοῦ
ἀνασταξίαν εἰσέσθαι τὸ καὶ ἀνασταξίαν
ἀνασταξίαν εἰσέσθαι τὸ καὶ ἀνασταξίαν ἑαυτοῦ
ἐπὶ τὴν ἀνασταξίαν ἀνασταξίαν,
εἰς μὴ ἐπιβλεπόντων, ἔπειτα εἰς ἀνασταξίαν
ἐπὶ τὴν ἀνασταξίαν τὸν τὸ ἀνασταξίαν,
ἐπὶ τὴν ἀνασταξίαν ἑπὶ ἀνασταξίαν οὐκ.
εἰς γὰρ εἰ μὴ γὰρ τὸ καὶ ἀνασταξίαν
ἐπὶ τὴν ἀνασταξίαν εἰς ἀνασταξίαν
ἐπὶ τὴν ἀνασταξίαν, ἔπειτα εἰς μὴ εἰς
ἐπὶ τὴν ἀνασταξίαν ἀνασταξίαν ἑαυτοῦ.

B. A. HONOURS.

I.

Æschylus: Agamemnon.

Sophocles: Œdipus Coloneus

Homer: Odysseus, Books, vi-vii, ix.

A. Translate: Agam. vv. 810-835.

6. ἢ μή τις ἀνεγείνηται; τί γὰρ ἔστι τοῦ ἀθανάτου, ὃ ἐξ ἑστέ τῶν ἀθάνατων
 κληραῖοι βέβαιον τὸν ἄριστον ἐπιπέσειν. Whose opinions are these?

2. Ἴστω θεῖος, ἴστω, τί ἀνοσι πονεῖ αἰεὶ. Translate and explain.

3. καὶ καθαρῶ γὰρ καθαρὸν ἰδέσθαι τοῦτο μὴ εἶναι. Translate and
 write a note on the negatives.

4. Distinguish the constructions used with εἶναι.

5. What use does Sophocles make of the fact of our having ideas of
 "equality," "right," &c.?

C. Translate: De Corona §§ 323—324 (Bekker) beginning, εὐδὲ δὲ
 εὐκαρῆς ἀνοσι; ending, ἰδὲναι καὶ ἠμερῶν καὶ νεότητων.

1. αἱ γὰρ ἡμεῖς ἀπὸ τοῦ μὲν Ἑλλήνων ἐκ πείθεω ποσειδάωνος, ἀπὸ δὲ
 τοῦ τοῦ θεοῦ κατὰ εὐφροσύνην ποσειδάωνος ἰσχυροῦ, ἡρώδου κρηναί, εὐ
 τολοῦν ἴστω.... ἀετιόμοισι. Explain the meaning of ἡρώδου
 κρηναί.

2. τὸ δὲ ποσειδάωνος ἰσχυροῦ τὸν αἰεὶν οἰσὶν γρηγορήσας, ἔστω, ἐν
 βουλομένης ἁπάντων ἡ τῶν αἰετῶν, μυστήρια. Translate and explain the
 force of ποσειδάωνος, ἐν βουλομένης α. τ. λ. Similar constructions are
 found in Latin.

3. ἄλλο τι ἔχρησεν ποσειδῶν; καὶ πρὸς ποσειδάωνος γράφει τὸν ἐκείνῳ θεοῦ, καὶ
 ἴστω ἀνοσιχθῆναι; Translate and account for the mood of ἀνοσιχθῆναι.

4. Distinguish ἀνοσι and γρηγορῆ. Describe the method of procedure.

5. Name the months of the Athenian Calendar in order, and denote
 the time in our calendar, corresponding to any one of them. How
 were the days of the month denoted?

MUNRO EXHIBITIONS AND BURSARIES.

Candidates for these Exhibitions and Bursaries must fill up
 this Schedule, so far as it may be applicable to their case; and
 send it to the Principal before October 16th, 1888.

They must send with it a certificate of good moral character,
 signed by a clergyman.

Candidates for Senior Exhibitions and Bursaries, who are
 not already undergraduates of Dalhousie College, must send
 with it also the certificates of standing required by § II, 5, p. 17.

(1) Is it for the Senior or for the Junior Exhibitions and
 Bursaries that you are a candidate?

(2) Have you ever matriculated in Arts at a University?

(3) If so, at what University?

(4) And at what date?

(5) How many academic years have you spent as an under-
 graduate in Arts at any University?

(6) At what University or Universities were they spent?

(7) Give the dates.

(8) Give dates and subjects of any other University classes
 you may have attended.

(9) Have you ever before competed for the Exhibitions and Bursaries for which you are now a candidate?

.....

(10) If so, how often, and when?

(11) Name the last School or Academy attended by you for one school or academic year during either the two years ending Oct. 18th, 1883, (if you are not yet a matriculated student) or the two years preceding the date of your matriculation (if you are)?

.....

(12) Name the Province and County in which your permanent or usual residence either is now (if you are not yet a matriculated student), or was previously to your matriculation (if you are)?

.....

Signature in full

Present address

Date