

McGill University Libraries



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BENEFACTORS

OF THE

McGill University, MONTREAL.

THE HONORABLE JAMES MCGILL, by his last Will and Testament, under date 8th January, 1811, bequeathed the Estate of Burnside, situated near the City of Montreal, and containing forty-seven Acres of Land, with the Manor House and Buildings thereon erected, and also the sum of ten thousand pounds in money, unto "The Royal Institution for the Advancement of Learning," constituted by Act of Parliament in the Forty-First year of the reign of his Majesty, King George the Third, to erect and establish an University, or College, for the purposes of education, and the advancement of learning in the Province of Lower Canada, with a competent number of Professors and Teachers to render such Establishment effectual, and beneficial for the purposes intended, requiring that one of the Colleges to be comprised in the said University, should be named and perpetually be known and distinguished by the appellation of "McGill College."

The value of the above mentioned property was estimated at the date of the bequest at.....£30,000.

At a meeting called by a number of the influential citizens of Montreal, and held at the Merchants' Exchange, 6th December, 1856, for the purpose of taking into consideration the financial condition of the University of McGill College.—The following Resolution was adopted :

"That an effort ought to be made for increasing the Endowment of McGill College in such a manner as to extend its usefulness, and to place it for the future upon an independent and permanent footing."

Whereupon, in pursuance of the above Resolution, the following Donations were enrolled for Special or General objects connected with the University.—the Royal Institution granting Scholarships in perpetuity according to the value of the Donations.

"The William Molson Hall," being the West wing of the McGill College Buildings, has been erected, through the munificent donation of the founder whose name it bears, together with the Museum Rooms and Chemical Laboratory and Class Rooms.

The Honorable John Molson, } Thomas Molson, Esq., } William Molson, Esq., } £5,000.
for the foundation and maintenance of the Chair of English Language and Literature.	
John Gordon Mackenzie, Esq.,.....	£500.
Ira Gould, Esq.,.....	500.
John Frothingham, Esq.,.....	500.
John Torrance, Esq.,.....	500.
James B. Greenshields, Esq.,.....	300.
William Busby Lambe, Esq.,.....	300.
Sir George Simpson, Knight,.....	250.
Henry Thomas, Esq.,.....	250.
John Redpath, Esq.,.....	250.
James McDougall, Esq.,.....	250.
James Mitchell, Esq.,.....	250.
James Torrance, Esq.,.....	250.
Honorable James Ferrier,.....	250.
John Smith, Esq.,.....	250.
Harrison Stephens, Esq.,.....	200.
Henry Chapman, Esq.,.....	150.
Mr. Chapman also founded a Gold Medal to be given annually for the greatest general proficiency in the graduating class in Arts.	
John James Day, Esq.,.....	150.
Honorable Peter McGill,.....	150.
Thomas Brown Anderson, Esq.,.....	150.
Peter Redpath, Esq.,.....	150.
Thomas M. Taylor, Esq.,.....	150.
Joseph Mackay, Esq.,.....	150.
Augustus N. Heward, Esq.,.....	150.
Donald Lorn MacDougall, Esq.,.....	150.
Honorable John Rose,.....	150.
Charles Alexander, Esq.,.....	150.
Moses E. David, Esq.,.....	150.
William Carter, Esq.,.....	150.
Thomas Paton, Esq.,.....	150.
William Workman, Esq.,.....	150.
Hon. Alexander T. Galt,.....	150.
Luther H. Holton, Esq.,.....	150.
Henry Lyman, Esq.,.....	150.
David Torrance, Esq.,.....	150.
Edwin Atwater, Esq.,.....	150.
Theodore Hart, Esq.,.....	150.
William Forsyth Grant, Esq.,.....	150.
J. R. Chamberlain, Esq.,.....	150.
Robert Campbell, Esq.,.....	150.
Alfred Savage, Esq.,.....	150.
James Ferrier, Esq., Jr.,.....	150.
William Stephen, Esq.,.....	150.
N. S. Whitney, Esq.,.....	150.
William Dow, Esq.,.....	150.
William Watson, Esq.,.....	150.
Edwards, Major,.....	150.
Honorable Charles Dewey Day,.....	50.
John R. Esdaile, Esq.,.....	50.

CALENDAR

OF THE

1862-1863

McGill University,

MONTREAL.



Founded by Bequest of the Hon. James McGill, in 1811; Erected into a University by Royal Charter in 1821; and Re-organised by an Amended Charter in 1852.

SESSION OF 1862-63.

MONTREAL:

PRINTED BY J. C. BECKET, 38 GREAT SAINT JAMES STREET.

1862.

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ACADEMICAL YEAR.—1862-63.

1862.

- September 1—Autumn Term of *High School* commences.
“ 1—Session of *Normal* and *Model Schools* commences.
“ 6—Session of *Faculty of Arts* commences.
“ “—Matriculation Examinations in Faculty of Arts.
“ “—Supplemental Examinations in Faculty of Arts.
“ 24—School Examinations of the University.
October 7—Session of *Faculty of Law* commences.
“ 22—Quarterly Meeting of Corporation.
November 4—Session of *Faculty of Medicine* commences.
“ 17—Winter Term of High School commences.
December 15—Class Examinations in Arts.
“ 20—Normal and Model Schools close for Christmas vacation.
“ 22—College Classes close for Christmas vacation.

1863.

- January 5—Classes re-commence after Christmas vacation.
“ 28—Quarterly Meeting of Corporation.
February 2—Spring Term of High School commences.
April 10—Sessional and B. A. Examinations in Arts commence.
“ 16—Summer Term of High School commences.
“ 22—Quarterly Meeting of Corporation.
May 1—Classes in Arts, Medicine and Law close for *Summer vacation*.
“ 4—Annual Meeting of Convocation.
July 1—Summer Term of High School ends, and classes close for *Summer vacation*.
“ 1—Normal and Model Schools close for *Summer vacation*.
“ 22—Quarterly Meeting of Corporation.

1862-63

M^CGILL UNIVERSITY, MONTREAL.

VISITOR:

His Excellency The Right Hon. Viscount Lord Monck, Governor General of
British North America, &c.

CORPORATION.

GOVERNORS:

The Hon. CHARLES DEWEY DAY, LL. D., President.

The Hon. JAMES FERRIER, M.L.C.

THOMAS BROWN ANDERSON, Esq.

DAVID DAVIDSON, Esq.

BENJAMIN HOLMES, Esq.

ANDREW ROBERTSON, M.A.

CHRISTOPHER DUNKIN, M.A., M.P.P.

WILLIAM MOLSON, Esq.

ALEXANDER MORRIS, M.A., D.C.L., M.P.P.

The Hon. JOHN ROSE, M.P.P.

PRINCIPAL.

JOHN WILLIAM DAWSON, LL.D., F.G.S., &c.

FELLOWS:

REV. CANON LEACH, D.C.L., LL.D., Vice-Principal and Dean of the Faculty
of Arts.

HENRY ASPINWALL HOWE, M.A., Rector of the High School.

J. J. C. ABBOTT, B.C.L., Dean of the Faculty of Law.

BROWN CHAMBERLIN, M.A., B.C.L.

WALTER JONES, M.D.

W. B. LAMBE, B.C.L.

SIR WILLIAM E. LOGAN, LL.D., F.R.S., F.G.S.

GEORGE W. CAMPBELL, M.A., M.D. Dean of the Faculty of Medicine.

REV. D. FALLOON, D.D., LL.D., Principal of St. Francis College.

The Governors of the College are the members of the "Royal Institution
for the advancement of Learning," and are nominated by His Excellency the
Governor General, under the Act 41st Geo. 3, chapter 17.

SECRETARY, REGISTRAR, AND BURSAR,

WILLIAM CRAIG BAYNES, B.A. Office, Burnside Hall. Office Hours, 10 to 2.
Residence, Centre Building M^CGill College.

OFFICERS OF INSTRUCTION.

ARRANGED IN THE ORDER OF STATUTORY PRECEDENCE.

	<i>Residence.</i>
JOHN WILLIAM DAWSON, LL.D., F.G.S.—Principal, and Professor of Natural History.	East Wing, M'Gill College.
REV. CANON LEACH, D.C.L., LL.D.—Vice-Principal, Dean of the Faculty of Arts, Professor of Logic and Moral Philosophy, and Molson Professor of English Literature.	7, University Avenue.
HENRY ASPINWALL HOWE, M. A.—Rector of the High School, and Emeritus Professor of Mathematics and Natural Philosophy.	1 Prince of Wales Terrace.
J. J. C. ABBOTT, B.C.L.—Dean of the Faculty of Law, and Professor of Commercial Law.	505, St. Catherine Street.
GEORGE W. CAMPBELL, M.A., M.D.—Dean of the Faculty of Medicine, and Professor of Surgery.	63, Great St. James Street,
ARCHIBALD HALL, M.D.—Professor of Midwifery and Diseases of Women and Children.	1 Radegonde Street,
WILLIAM FRASER, M.D.—Professor of the Institutes of Medicine.	12 Little St. James Street.
WILLIAM SUTHERLAND, M.D.—Professor of Chemistry.	31, Great St. James Street.
WILLIAM E. SCOTT, M.D.—Professor of Anatomy	—9, Bonaventure St.
WILLIAM WRIGHT, M.D.—Professor of Materia Medica and Pharmacy.	175 Craig Street.
ROBERT P. HOWARD, M.D.—Professor of the Theory and Practice of Medicine.	11 Bonaventure St.
REV. A. DESOLA, LL.D.—Professor of Hebrew and Oriental Literature.	1, Pres de Ville Place.
HON. WILLIAM BADGLEY, D.C.L.—Professor of Public and Criminal Law.	McGill College Avenue.
FREDERICK W. TORRANCE, M.A., B.C.L.—Professor of Civil Law.	13, Bellevue Terrace.
P. R. LAFREYAYE, B.C.L.—Professor of Jurisprudence and Legal Bibliography,	Upper St. Urbain Street.
R. G. LAFLAMME, B.C.L.—Professor of Customary Law, and Law of Real Estate.	1, Cornwall Terrace.
CHARLES SMALLWOOD, M. D., LL. D.—Professor of Meteorology.	St. Martin's, Isle Jesus.
CHARLES F. A. MARKGRAF.—Professor of German Language and Literature.	9 Dorchester St.
D. C. M'CALLUM, M.D.—Professor of Clinical Medicine, and Medical Jurisprudence.	152, Craig Street,
MARK, J. HAMILTON, C.E.—Professor of Road and Railway Engineering.	58 Gabriel Street.
ALEXANDER JOHNSON, LL.D.—Professor of Mathematics and Natural Philosophy.	4, Place St. Sophie M'Gill College Avenue.
REV. GEORGE CORNISH, B. A.—Professor of Classical Literature.	East Wing, M'Gill College.

JONATHAN BARBER, M.R.C.S.L.—Professor of Oratory.	} 39, Little St. } James Street.
PIERRE J. DAREY, M.A.—Professor of French Language and Literature.	} 25, Belmont St.
ROBERT CRAIK, M.D.—Professor of Clinical Surgery.	— 123, Craig Street.
P. STERRY HUNT, Sc.D., M.A., F.R.S., &c.—Professor of Applied Chemistry and Mineralogy.	} 58, St. Gabriel St.
P. A. GIBSON, M.A.—Classical and Senior English Master of High School.	} 172, Sherbrooke } Street.
DAVID RODGER, M. A.—Mathematical Master of High School.	} 407, St. Catherine } Street.
HORACE NELSON, M.D.—Demonstrator of Anatomy and Curator of Medical Museum.	} 27, Little Saint } James St.
JAMES DUNCAN.—Drawing Master of High School.	— 74, St. Lewis St.
JAMES KEMP.—Junior English Master of High School.	— St. Simon St.
JOHN ANDREW.—Elocution Master of High School.	} St. Catherine St. } cor. St. Simon.
JOHN MARTLAND, B. A.—Classical and Senior English Master of High School.	} 5, Tecumseth } Terrace.
JOHN M. REID.—Junior English Master of High School.	— Cote St. Antoine.
JOHN JOHNSON, B.A.—Classical and Senior English Mas- ter of High School.	} 4, Place St. } Sophie.

UNIVERSITY BUILDINGS.

- College Buildings*, North side of Sherbrooke Street, at the head of McGill College Avenue, contain the Class-Rooms of the Faculty of Arts, and the residences of the Principal, the Resident Professors and Students, and the Secretary. To these buildings have recently been added, by the liberality of William Molson, Esq., the Hall bearing his name, which contains the Convocation Room and Library of the University, and suites of apartments for a Museum and Chemical Class-Room and Laboratory.
- Burnside Hall*, corner of Dorchester and University Streets; contains the Class-Rooms of the Faculty of Law, the Class-Rooms of the High School Department, and the Office of the Secretary.
- Building of the Medical Faculty*, Côté Street; contains the Class-Rooms, Library and Museum of the Faculty of Medicine.
- Normal School Building*, Belmont Street; contains the Class-Rooms of the McGill Normal and Model Schools, under the joint control of the Superintendent of Education and the University.
- The University Gymnasium*, on University Street, near Burnside Hall.

GENERAL ANNOUNCEMENT.

The Tenth Session of this University, under its amended charter, will commence in the Autumn of 1862. The Classes in the Faculty of Arts will open on the 6th of September, those in the Faculty of Law, on the 7th of October, those in the Faculty of Medicine, on the 4th of November, those in the High School Department, on the 1st of September, and those in the McGill Normal School on the 1st of September.

The courses of Study in the University, and the distinctions which it offers, may be summed up as follows :—

1. *The Faculty of Law.*—The lectures in this Faculty comprise a complete course of legal study, with special reference to the Law of Lower Canada, and lead to the degrees of B.C.L. and D.C.L.

2. *The Faculty of Medicine* embraces in its lectures and demonstrations all the necessary and important branches of a Medical education, leading to the degree of M.D.

3. *The Faculty of Arts.*—The undergraduate course in Arts offers a thorough Classical and Mathematical training, with adequate provision for the study of Logic, Mental and Moral Science, Natural Science and Modern Literature, leading to the degrees of B.A. and M.A. Ample provision has also been made for Honour studies, and many facilities are offered to enable students in Law and Medicine to take the degree of B.A. Partial courses of study are provided for students not desirous of taking the whole course.

4. *The Special Course of Engineering*, connected with the Faculty of Arts, offers to students of that profession the necessary scientific training, and the diploma of Graduate in Civil Engineering and Surveying.

5. In the *High School Department*, the course embraces a good English education in all its branches, with the French and German languages, and the Classical and Mathematical instruction necessary to enter the University.

6. *The McGill Normal School*, affiliated to the University, provides the training requisite for Teachers of Elementary and Model Schools. Teachers trained in this school are entitled to Provincial diplomas.

7. *St. Francis College*, Richmond, is an affiliated College of the University; and its matriculated students may prosecute any part of their course of study under the Faculty of Arts, and may be admitted to examination for the degree of B.A.

8. *School Examinations of the University*.—Under regulations, of which copies may be obtained on application to the Secretary, the University has appointed examinations for pupils of any school or academy; on passing which, such pupils will be entitled to Junior or Senior School Certificates of the University. It is hoped that these examinations may exercise an important influence in encouraging good schools, in elevating the standard of education, and in inducing young men about to enter into business, to pursue a longer and more thorough course of preparatory study.

Details of the terms and course of study, in the several Faculties, in the High School Department, and in the Normal School, will be found under the proper heads.

The regulations of the University have been framed on the most liberal principles, with the view of affording to all classes of persons the greatest possible facilities for the attainment of mental culture and professional training. In its general character the University is Protestant, but not denominational; and while all possible attention will be given to the character and conduct of students, no interference with their peculiar religious views will be sanctioned.

Arrangements have been made for receiving a number of Students in Arts as boarders in the College buildings, and for placing such resident students under the immediate superintendence of the Rev. Professor Cornish, to whom application may be made. Board may be obtained in the city at from \$12 to \$16 per month. The Principal, the Deans of the several Faculties, and the Rector of the High School, will do all in their power to aid students and pupils in procuring suitable lodgings, and generally to promote their comfort and welfare while connected with the University.

FACULTY OF ARTS.

The Principal (ex-officio.)

Professors—LEACH.

HOWE.

DE SOLA.

DAWSON.

MARKGRAF.

SMALLWOOD.

Professors—HAMILTON.

JOHNSON.

CORNISH.

BARBER.

DAREY.

HUNT.

Dean of the Faculty—REV. CANON LEACH, D.C.L., LL.D.

LIBRARIAN—Professor Markgraf.

The session of this Faculty extends from Sept. 6th to May 1st.—The classes of Students recognised under the following regulations are:—(1.) *Undergraduates*, matriculated for the whole course of study for the degree of B.A., extending over four years, except in the cases specified in Section 1st. (2.) *Students in Special Courses*, matriculated and studying for the diploma in such special courses. (3.) *Partial Students*, matriculated and taking two or more courses of lectures. (4.) *Occasional Students*, not matriculated, and taking one course of lectures.

Fee for each Session, for Undergraduates and Special Students, \$20. Fee for Gymnasium, \$2. Engineering, \$10 extra. Fee for Partial and Occasional Students, \$5 for each course of lectures.—Matriculation, \$4, required only in the year of entrance.

§ 1. MATRICULATION AND ADMISSION.

Candidates for Matriculation as Undergraduates, are required to present themselves to the Dean of the Faculty, on or before the 6th of September, for examination; they may, however, enter after the commencement of the Session, if, on examination, found qualified to join the classes.

The subjects of examination for entrance into the first year, are as follows: Latin Grammar; Greek Grammar; Cæsar's Commentaries; Sallust; Virgil, Æneid, 1st book; Xenophon's Anabasis, 1st book; Arithmetic; Algebra, to Quadratic Equations; Euclid's Elements, 3 books; Writing English from dictation. In Classics the amount of knowledge, rather than the particular authors studied, will be regarded.

Candidates may be admitted to the standing of students of the second year, provided that they be found qualified on examination. Students of other Universities desirous of continuing their studies in this Faculty, may be admitted, on the production of certificates, to a like standing in this University, after examination by the Faculty.

Candidates for Matriculation as students in any Special Course or for partial Courses of Study, will be examined in the subjects necessary thereto, as may from time to time be determined by the Faculty. For special Courses of Engineering, Agriculture and Commerce, see Section 7, Page 21.

Persons desirous of entering as partial or occasional students, must apply to the Dean for entry in his Register, and must procure from the Secretary tickets for the lectures they may desire to attend.

Every Student is expected to present, on his entrance, a written intimation from his parent, or guardian, of the name of the minister of religion, under whose care and instruction it is desired that the Student shall be placed, and who shall thereupon be invited to place himself in communication with the Faculty on the subject. Failing any intimation from the parent, or guardian, the Faculty will assume the duty of establishing such relations.

§ 2. SCHOLARSHIPS AND BURSARIES.

Sixteen Scholarships have been placed by the Governors at the disposal of His Excellency the Governor General. These entitle the holders to exemption from tuition fees. Application must be addressed to His Excellency, through the Provincial Secretary. Previously to being matriculated, those presented to the said Scholarships will be examined as to their fitness to enter upon the Course of Study. By command of His Excellency, four of these Scholarships will be offered for competition in the Matriculation examination of the ensuing session.

Eight other Scholarships will be granted by the Governors from time to time to the most successful Students who may present themselves as candidates.

One or more Normal School Bursaries in the Faculty of Arts will be offered for competition to students of the third or fourth years.—They entitle the holder to an annual sum of \$100, for a term not exceeding two years, under condition of practising the art of teaching in the High School Department, and of teaching for three years in some public School or Academy in Lower Canada, after taking the degree of B.A. and a diploma as a teacher of an Academy.

§ 3. COURSES OF STUDY.

I. FOR THE DEGREE OF B. A.

Undergraduates are arranged, according to their standing, as Students of the First, Second, Third and Fourth Years; and as such must attend all the courses of lectures appointed for their year, and those only, except by special permission of the Faculty.

First Year—Classics, English Literature, Mathematics, History, Elementary Chemistry.

Second Year—Classics, French or German, Logic, Mathematics, Botany, Elocution.

Third Year—Classics, French or German, Rhetoric, Mathematical and Experimental Physics and Astronomy, Zoology.

Fourth Year—Classics, Intellectual and Moral Philosophy, Natural Philosophy and Astronomy, Mineralogy and Geology.

Undergraduates are required to study either French or German for two years, (viz., in the second and third years), taking the same language in both years. The Sessional Examination in these languages at the end of the third year, will in future count for the B. A. Examination. At the beginning of the second year the student must state which language he selects as obligatory. No change can afterwards be made without the special permission of the Faculty. In addition to the obligatory, there are other Lectures, attendance on which is optional, intended for the benefit of those desiring a more complete knowledge of these languages.

The Lectures in Modern Languages will be so arranged that Students competent and desirous to take in the same year the ordinary Lectures in French, and the advanced in German, or *vice versa*, may do so.

Students intending to join any Theological school, may take Hebrew instead of French or German.

Students of the third or fourth years, matriculated in the Faculties of Law or Medicine of this University, or entered as candidates for honours, will be entitled to the following exemptions.

Privileges of Law and Medical Students.

In the Third Year, Law and Medical Students of this University may omit Zoology and Experimental Physics, and Medical Students may omit Rhetoric also. They will also be excused from attendance on Lectures in Modern Languages and Classics, provided that the Professors therein shall be of opinion that they will be able to pass the ordinary Sessional Examinations in these subjects without the aid derived from the Lectures.

In the Fourth Year, they may omit Geology or Experimental Physics. They will have the same privilege with regard to Classics as in the Third Year.

To be allowed these privileges in either year, they must produce certificates of attendance on a full course of Professional Lectures in that year.

Privileges of Honour Students.

Candidates for Honours in the Third Year are allowed the same privileges as Professional Students with regard to Modern Languages.

Candidates for Honours in the Fourth Year are allowed the same privileges as Professional Students for all subjects except those in which they are candidates.

No Student shall be considered a Candidate for Honours who has not attended a full Course of Lectures in the subject in which he wishes to be a candidate.

II. FOR THE DIPLOMA OF GRADUATE IN CIVIL ENGINEERING,

First Year—Drawing, Mensuration, Surveying, Mathematics of the second year and Experimental Physics with the ordinary Mathematics and Physics of the third year, English Literature, French or German, Chemistry.

Second Year—Drawing, Engineering, Higher Mathematics and Physics, Geology and Mineralogy, French or German.

For details of the above courses of study see Sections 7th and 8th.

§ 4. EXAMINATIONS, PRIZES, AND HONOURS.

A preliminary examination of each class will be held at the Christmas vacation, with classification as at the Sessional Examinations. Students who do not pass this examination will be required at the close of the session to submit to an extra examination on the subjects of the preliminary one, previous to the Sessional Examinations.

At the Sessional Examinations the Faculty will award the following distinctions:—

1. Prizes and Certificates of Merit to those Matriculated Students who may have distinguished themselves in the studies of a particular class, and who have attended all the other classes proper to their year.

2. General Honours of first or second rank to those Matriculated Students who show a high degree of proficiency in all the studies proper to their year.

3. Special Honours of first or second rank, to those Matriculated Students who have successfully passed the honour examinations in any class in which studies for honours have been provided, and have also passed creditably the ordinary examinations in all the subjects proper to their year.

4. The Chapman Gold Medal to the Student who, being among those who have taken honours of the first rank in the subjects appointed for the year, shall, in the ordinary examination for the degree of B. A., show the greatest proficiency in the greatest number of subjects.

5. The Prince of Wales Gold Medal to the student who shall have passed creditably the examinations for the degree of B. A., and taken the highest honours of the first rank in a subject to be from year to year determined by the Faculty.

Students who pass the sessional or degree examinations, will be arranged at the close of the session according to their answering, as 1st class, 2nd class, or 3rd class: and in this, as well as in the examinations for honours, those who are equal will be bracketed together.

The names of those who have graduated or taken honours or prizes, will be published in the order of their merit; and with mention, in

the case of students of the first and second years, of the schools in which their preliminary education has been received.

Failure in two or more subjects at the sessional examinations will involve the loss of the session. The Faculty may permit the student to recover his standing by passing a special examination at the beginning of the ensuing session. But such permission will not be granted except in cases of sickness, or for other special reasons. For the purposes of this regulation, Classics and Mathematics with Physics, will each be regarded as two subjects.

§ 5. DEGREES.

The subjects appointed for the B. A. examinations of the Session of 1862-63 are—Classics, Moral Philosophy, English Literature, Mathematical Physics and Astronomy, Geology, French or German. But the Student must have passed the sessional examinations in the other subjects of the course.

Bachelors of Arts of at least three years standing, are entitled to the degree of Master of Arts, after such examination and exercises as may be prescribed by the Corporation. The exercise at present appointed is the preparation of a Thesis on any literary, scientific or professional subject, to be selected by the candidate, and approved by the Faculty.

Candidates for the degree of Graduate in Civil Engineering will be examined in the subjects proper to the course of Civil Engineering, in the same manner as the candidates for the degree of B. A.

§ 6. ATTENDANCE AND CONDUCT.

All Students shall be subject to the following regulations for attendance and conduct:—

1. Attendance upon all the Classes of the Faculty shall be imperative equally, except upon those announced by the Faculty as optional.

2. A Class-book shall be kept by each Professor and Lecturer, in which the presence or absence of Students shall be carefully noted; and the said Class-books shall be submitted to the Faculty at all their ordinary meetings during the Session.

3. Professors shall note the attendance immediately on the commencement of their Lectures, and shall omit the names of students entering thereafter, unless satisfactory reasons are assigned. Absence or tardiness, without sufficient excuse, or inattention or disorder in the Class-room, if persisted in after admonition by the Professor, shall be reported to the Dean of Faculty, who may reprimand the student, report to his parents or guardians, or refer to the Faculty, as he may decide.

4. While in the College building, or going to or from it, students are expected to conduct themselves in the same orderly manner as in the class-rooms. Any Professor observing improper conduct in the

class-room, or elsewhere in the building, will admonish the student, and if necessary report him to the Dean.

5. Every student is required to attend regularly the religious services of the denomination to which he belongs, and to maintain without, as well as within the walls of the College, a good moral character.

6. When students are brought before the Faculty under the above rules, the Faculty may reprimand, report to parents or guardians, disqualify from competing for prizes and honours, suspend from classes, or report to the Corporation for expulsion.

7. Injuries to the furniture or building will be repaired at the expense of those by whom they have been caused, in addition to such other penalty as the Faculty may see fit to inflict.

8. The proportion of times of absence, from necessity or duty, that shall disqualify for the keeping of a Session, shall in each case be determined by the Faculty.

9. All cases of discipline involving the interests of more than one Faculty, or of the University in general, shall be immediately reported to the Principal, or in his absence, to the Vice-Principal.

§ 7. COURSES OF LECTURES.

ENGLISH LITERATURE.

MOLSON PROFESSORSHIP.

Professor, Rev. Canon Leach, D.C.L., LL.D.

3rd Year's Students, Tuesday and Thursday, 11 to 12.

2nd Year's Students, Monday and Friday, 10 to 11; Wednesday, 11 to 12.
First term of the Session.

1st Year's Students, Monday and Friday, 11 to 12, Wednesday 12 to 1.

First Year.—Affinity of Languages—History of the Origin and Successive Improvements of the English Language—Its Constituent Elements. Text-books, Latham's Handbook; Klipstein's Anglo-Saxon Grammar.

Grammar of the English Language—Text-books, Crombie and Latham.

Second Year.—History of English Literature and Criticism of Literary Works—Early English Literature before the time of Queen Elizabeth—English Literature in the age of Spenser, Shakespeare, Milton, &c.,—in the age of the Restoration and Revolution,—in the Eighteenth and Nineteenth Centuries—Text-book, Spalding's History of English Literature.

The Lectures on the above subjects will be constantly accompanied with exercises in the practice of composition.

Third Year.—Exercises in the English Language, Written and Oral—Eloquence, its History, Uses, Kinds—Processes of Rhetorical Argumentation and Persuasion—Classification and Exposition of Rhetorical Figures—Style and its Laws.—Different species of composition and the rules applicable. Text-book, Whately's Rhetoric.

LOGIC, INTELLECTUAL AND MORAL PHILOSOPHY.

Professor, Rev. Canon Leach, D.C.L., LL.D.

4th Year's Students, Tuesday, Wednesday and Thursday, 10 to 11.

2nd " Monday and Friday, 10 to 11; Wednesday, 11 to 12.

Logic, (2nd Year's Students—Second term of the Session.) History of Logic: its sphere and its advantages as a Practical Science—Origin and Functions of Language—Import and Classification of Names and Propositions—

Mental Operations involved in the process of Reasoning,—Doctrine of Syllogism—System of Notation &c. Application of Logic, in dealing with Fallacies, in Division and Definition, in Induction, &c. Text-book, Thompson's Outlines of the Laws of Thought.

Intellectual Philosophy, (4th Year's Students)—Mental Phenomena—Different Classifications of Mental Phenomena—Unity of the Human Mind—Volition—Consciousness—Sense and Sensation—Perception—Memory and Imagination—Understanding—Reason.

Moral Philosophy.—Philosophy—History of Philosophy, Oriental, Greek, Modern—Moral Philosophy and Moral Science—Moral Systems, Systematic Morality, with Polity and International Law. Text-book, Whewell's Elements of Morality.

Honour Course.

Hours to be arranged on the formation of the Class.

Logic.—(Second Year,) Mill's Logic, Books I. and III. The last ten Lectures of Sir W. Hamilton on Logic.

Intellectual and Moral Philosophy.—(Third Year) Sir W. Hamilton's Lectures on Metaphysics, from the XXth to the XLVth, both inclusive—Tennemann's History of Philosophy.

B. A. Honour Course.

Moral Philosophy, and English Literature.—Stewart's Philosophy of the Active and Moral powers of Man—Translations into English of any passages that may be prescribed from the Poetic of Aristotle, and from any of the books of Cicero de Oratore.

ORATORY AND ELOCUTION.

Professor, J. Barber, M. R. C. S. L.

2nd Year's Students, Thursday, 11 to 12.

General Elements of Speech—Constituents of Speech, compared with those of Song and Recitative. Radical and Vanishing Concrete of Dr. Rush—Thorough understanding of this necessary to a correction of the faults of Speech—Relation of Alphabetic Elements to this movement. *Expressive* Elements of Speech. Pitch and its modification, with oral examples. Time of the Voice. Rythm of Speech. Force and its modifications—Abruptness—Quality of Voice. Emphasis, its varied and numerous forms, with oral examples, &c. Extempore Speaking—the means of acquiring it.

HISTORY.

The Lectures will be delivered in the ensuing Session by the Professor of Classical Literature.

1st Year's Students, 11 to 12 on Wednesday.

This course will include a series of Lectures on Ancient History and Chronology, with the aid of text-books and exercises.

CLASSICAL LITERATURE.

Professor, Rev. G. Cornish, B. A.

4th Year's Students,	Monday and Friday,	11 to 12.
3rd	" Tues., Wed. & Thurs.,	10 to 11.
2nd	" { Monday and Friday,	9 to 10.
	{ Tues. Wed. and Thurs.	12 to 1.
1st	" { Tues. Wed. and Thurs.	9 to 10.
	{ Monday and Friday,	12 to 1.

GREEK.

First Year.—XENOPHON.—ANABASIS, LIB. I.
HOMER—LIB. V. & VI.
Greek Prose Composition.

Second Year.—HERODOTUS.—LIB. I.
EURIPIDES.—HECUBA.
Greek Prose Composition.

Third Year.—DEMOSTHENES.—DE CORONA.
SOPHOCLES.—ANTIGONE.
Greek Prose Composition.

Fourth Year.—THUCYDIDES.—LIB. II.
ÆSCHYLUS.—PROMETHEUS VINCTUS.

LATIN.

First Year.—CICERO.—ORAT. IV. IN CATILINAM.
VIRGIL.—ÆNEID, LIB. VI., OR BUCOLICA.
Latin Prose Composition.

Second Year.—HORACE.—EPISTOLÆ & ARS POETICA.
TACITUS.—GERMANIA & AGRICOLA.
Latin Prose Composition.

Third Year.—JUVENAL.—SATT. I., III., VIII. & X.
TAGITUS.—HISTORIÆ, LIB. I. OR
HORACE.—SATIRÆ, LIB. I.
Longer Exercises in Latin Prose Composition.

Fourth Year.—PERSIUS.—SATT. II., V. & VI.
TERENCE.—HEAUTONTIMOROUENOS.
Honour Course.

Third Year, (Monday and Friday, 10 to 11.)

I. GREEK.—SOPHOCLES.—PHILOCTETES.
EURIPIDES.—ALCESTIS.
PLATO.—CRITO.
ÆSCHINES.—ORAT. CONTRA CTESIPHONTEM.

II. LATIN.—LIVY.—LIB. XXI.
CICERO.—PRO MURENA.
CICERO.—DE SENECTUTE.
TERENCE.—ANDRIA.

III.—Composition in Greek and Latin Prose.

B. A. Honours in Classics, being the Honour Course for Students of the Fourth Year, (Monday and Wednesday, 2 P. M.)

Candidates for B. A. Honours in Classics will be examined in the following subjects :—

I. GREEK.—ÆSCHYLUS.—SEPTEM CONTRA THEBAS.
ARISTOPHANES.—RANÆ.
ARISTOTLE.—DE RHETORICA, LIB. I.
THUCYDIDES.—LIB. VII.
PINDAR.—OLYMPIA.

II. LATIN.—PLAUTUS.—TRINUMMUS.

TERENCE.—ADELPHI.

CICERO.—EPP. AD ATTICUM, LIB. I.

TACITUS.—HISTORIAE, LIB. I.

LUCRETIVS.—LIB. V. & VI.

III. Retranslation into Greek, and Original Composition in Latin Prose.

IV. Questions in Grammar, History and Geography.

In the work of the Class the attention of the Student will be directed to the Collateral subjects of History, Antiquities and Geography, also to the Grammatical structure and affinities of the Greek and Latin Languages; and to Prosody and Accentuation.

Candidates for Honours in Classics will be examined in all the subjects of each year respectively.

The examination for Honours of the Third Year, and the examination for B. A. Honours, in Classics, will each extend over two days, in the morning from 9 to 1, and in the afternoon, from 3 to 6.

Classical subjects for B. A. examination, 1863.

I. GREEK.—THUCYDIDES.—BOOK, II.

ÆSCHYLUS.—PROMETHEUS VINCTUS.

II. LATIN.—TACITUS.—AGRICOLA.

TERENCE.—HEAUTONTIMOROUENOS.

III.—Composition in Greek and Latin Prose.

FRENCH LANGUAGE AND LITERATURE.

Professor, P. J. Darey, M. A.

3rd Year's Students,	Elementary Course,	Wed. 9 to 10,	Friday 12 to 1.
"	"	Advanced "	Mon. 12 to 1, Wed. 11 to 12.
2nd "	"	Elementary "	Mon. 11 to 12, Wed. 10 to 11.
"	"	Advanced "	Tuesday and Friday 11 to 12.
1st "	"	(Voluntary.)	Tuesday and Thurs. 12 to 1.

The French Language being of especial importance in Lower Canada, much attention is bestowed upon it; and every effort is made to train the students to read, speak and write it with accuracy and taste. The etymological and idiomatical parts of the language are carefully investigated.

The Student enters upon the regular French course at the beginning of his second Collegiate year; but a voluntary course is provided in the first year for the benefit of Students altogether ignorant of the language on their entrance, and also of those who desire to keep up their previous knowledge with a view of taking a higher standing in the work of the succeeding years. In the second and third years the work is arranged as follows:—

Second Year.—The Elementary Course will consist of reading, oral and written translation from both languages, elements of Grammar and dictation. Text books:—Student's Companion to the Study of French, Chapsal, Littérature Française.

The Advanced Course will include French Grammar, reading, oral and written translation, and composition. Text books:—Poitevin, cours théorique et pratique de Langue Française, Chapsal, Littérature Française.

Third Year.—The Elementary Course will include oral and written translation, dictation, French Grammar and composition. Text books:—Poitevin, Grammaire Française, Chapsal, Littérature Française.

The Advanced Course will continue French translation and composition, with *viva voce* translation of English authors into French, and will include Lectures upon the French Literature of the 17th and 18th centuries.

Text book :—Théâtre classique.

The varieties of style will be illustrated by lectures and readings in the best authors, and the lectures will be delivered in the French Language.

GERMAN LANGUAGE AND LITERATURE.

3rd Year's	Students.—	Elementary Course,	Mon. 12 to 1,	Wed. 11 to 12,
"	"	Advanced	Wed. 9 to 10,	Fri. 12 to 11,
2nd	"	Elementary	Tuesday and Friday	11 to 12,
"	"	Advanced	Mon. 11 to 12,	Wed. 10 to 11,
1st	"	(Voluntary,)	Thursday and Friday	12 to 11,

In the Elementary Course the text-books will be Ollendorff's Grammar by Adler, and Adler's Progressive German Reader, with Sections 1st and 2nd for the second year, and selections from the 3rd, 4th and 5th Sections for the third year. The exercises of the class, calculated to familiarize the Student with the peculiarities of the German Language in orthography, grammatical forms and construction, will consist of translations, oral and written, reading and analysis, writing from dictation and composition.

Special regard will be had to the affinities of the German with the English.

In the advanced course the theory of German Grammar will receive greater expansion, and the Exercises will comprise select readings in German prose and poetry, composition in the various styles of writing, and translations from English writers. The text-books for this course will be made known at the commencement of the Session.

During the two years of the advanced course a Series of Lectures will be delivered on the following subjects :—History of the Germanic Nations and Germanic Dialects—The Nature of the latter, and their affinity with other Indo-European languages—History of German Literature from the earliest periods, the Gothic of Ulphilas and the Old-High-German of Notker and Otfried, down to the classical age of Goethe and Schiller,—to close with a brief notice of the state of German Literature at the present day.

The lectures in the first year are voluntary, and are intended as preparatory to the work of the second year.

HEBREW AND ORIENTAL LITERATURE.

Professor, Rev. A. DeSola, LL.D.

Monday and Wednesday, 1 to 2, and 2 to 3.

The course will comprise lectures on the History of the Hebrew Language and Literature in particular, with a general notice of the other Oriental Languages, their genius and peculiarities. Comparative Philology, affinity of roots, &c., will also receive due attention, while the portions selected for translation will be illustrated and explained by reference to Oriental manners, customs, history, &c.

Junior Class.—Grammar. The Text-book employed will be Gesenius' Hebrew Grammar, with exercises in Orthography and Etymology.

Reading.—Translation and Grammatical Analysis of Historical portions of the Scriptures—Syntax—Mishlé Shualim—Fables, &c.

Senior Class.—Introduction to the Study of Hebrew Poetry—its spirit and characteristics. Lowth and Sarchi as Text-books. Translations from the Psalms, Lamentations, and Isaiah. Ancient compared with modern Hebrew Poetry; the productions of Halevi Gabirol, &c. Grammar, Exercises, &c., continued.—The Chaldee Language, Grammar, Mebo Halashon Aramith of J. Jeitteles. The Chaldee portions of Scripture. Targum of Onkelos and T. Yerushalmi.

SPANISH LANGUAGE AND LITERATURE.

Rev. Professor DeSola.

Extra Fee for this Class, \$5.00.

The study of the Spanish Language on this Continent, being generally pursued with special reference to commercial purposes, it will be sought to impart in this Course a practical knowledge of the Castilian, the richest and most harmonious of the Peninsular Languages—as well as an acquaintance with its Literature.

Ollendorf's Spanish Grammar by Valazquez and Simonné, and the Reader M. Valazquez, are the text-books employed in the Junior Class, who will also be exercised in composition by both written and oral exercises. In the Senior Class Fernandes' Exercises, continuation of Grammar and Composition, Cervantes' Don Quixote, Quintana Vida del Cid, and Marianas Historia will be the subjects of study. Besides a special comparison with the Portuguese language, a general notice, literary and historical, of the Bascuense and other dialects will be given.

MATHEMATICS AND NATURAL PHILOSOPHY.

Professor, Alexander Johnson, LL.D.

3rd and 4th year's Students,	Tuesday and Thursday,	12 to 1.
“ year's Students,	Mon., and Fri.,	9 to 10, Wed., 12 to 1.
2nd “	Tuesday, Wed., and Thursday,	9 to 10.
1st “	Every Day except Saturday,	10 to 11.

MATHEMATICS. (*First year*)—Arithmetic.—Euclid, Books 1, 2, 3, 4, 6, with definitions of Book 5, (omitting propositions 27, 28, 29 of Book 6), Galbraith and Haughton's Edition.—Colenso's Algebra, Part 1 to end of Quadratic Equations.—Galbraith and Haughton's Plane Trigonometry to end of Solution of Plane Triangles—Nature and use of Logarithms.

MATHEMATICS. (*Second year*)—Arithmetic, Euclid, Algebra and Trigonometry as before.—Remainder of Galbraith and Haughton's Plane Trigonometry.—Chief properties of Conic Sections treated Geometrically, (Drew)—Solid Geometry, (elementary propositions.)

MATHEMATICAL PHYSICS AND ASTRONOMY.—(*Third year.*)—Galbraith and Haughton's Mechanics, Hydrostatics, Optics, and Astronomy.

EXPERIMENTAL PHYSICS.—(*Third and Fourth year.*)—1. *Light.*—Theories.—Reflection.—Refraction.—Dispersion.—Interference and Diffraction.—Double Refraction.—Polarization.—Optical Instruments. 2. *Heat.*—Dilatation of Solids, Liquids, and Gases.—Specific and Latent Heat.—Radiation and Conduction of heat. 3. *Electricity.*—Frictional and Voltaic. 4. *Magnetism.*—Text-book—Lardner's Hand-books.

In connection with the above, Lectures, illustrated by Apparatus, will be delivered on the following subjects;—

Statics and Dynamics.—Properties of Matter.—Composition and Resolution of Forces.—Centre of Gravity.—Mechanical Powers.—Friction.—Strength of Materials.—The Arch.—Laws of Motion.—Instantaneous Forces.—Accelerating and Retarding Forces.—Falling Bodies.—Motion on Inclined Planes and Curves.—Centrifugal Force.—Pendulum.—Rotation.—Collision.—Projectiles and Molecular Forces.

Hydrostatics and Hydrodynamics.—General properties of Fluids.—Equilibrium and pressure of liquids and gases.—Pressure of the Atmosphere.—Equilibrium of floating bodies.—Specific Gravity.—Capillary Attraction.—Laws of Motion of Liquids.—Instruments and Machines.

Acoustics.—Theory of Undulations.—Production and Propagation of Sound.—Vibration of Rods and Plates.—Vibration of Fluids.—Musical Sounds.

Astronomy, (For Engineering Students especially.)—Historical Sketch—General account of phenomena of Universe.—Astronomical Instruments.—Methods of finding Mean time; setting a Transit Instrument in the Meridian; and ascertaining Latitude and Longitude.

Honour Course.

4th Year—	Tuesday, Wednesday, Thursday,	11 to 12.
3rd “	—Monday, Friday,	11 to 12.
2nd “	—Monday, Wednesday, Friday,	12 to 1.
1st “	—In connection with Ordinary,	10 to 11.

MATHEMATICS.—(*First Year.*)—Mulcahy's Modern Geometry, first five chapters.—Wood's Algebra.—Young's Theory of Equations.—Hind's Plane and Spherical Trigonometry.

MATHEMATICS.—(*Second Year.*)—Theory of Equations and Trigonometry continued.—Salmon's Analytic Geometry, first thirteen chapters.—Hall's Calculus, Chapters 1, 2, 3, 4, 6, 7, of Diff. Cal., Chapters 1, 2, 3, 4, 5, of Integ. Cal.

MATHEMATICAL PHYSICS.—(*Third Year.*)—Todhunter's Statics, (omitting Chap. 13.)—Sandeman's Dynamics of a Particle. Chap. I.—Chap. II.—Chap. III., Sects. 1-24.—Chap. V., Sects. 52-53.—Chap. VI. Miller's Hydrostatics. omitting Sects 5, 6, and Appendix.—Walton's Mechanical Problems.—Griffin's or Parkinson's Optics.—Hymer's Astronomy, (selected course.)

B. A. Honour Course.

PURE MATHEMATICS.—Hind's Plane and Spherical Trigonometry.—Young's Theory of Equations.—Hall's Differential and Integral Calculus.—Boole's Differential Equations, (selected course.)—Gregory's Examples of the Calculus, (omitting last 2 chapters.)—Salmon's Conic Sections.—Leroy, Géométrie des Trois Dimensions, (or Gregory's Solid Geometry.

MECHANICS.—Todhunter's Statics.—Sandeman's Dynamics of a Particle.—Griffin's Dynamics of a Rigid Body.—Besant's Hydrostatics and Hydro-dynamics.—Walton's Mechanical Examples.—Walton's Examples in Hydrostatics.

OPTICS.—Griffin's or Parkinson's Optics.—Lloyd's Wave Theory of Light.

ASTRONOMY.—Hymer's Astronomy.—Sir John Herschell's Outlines of Astronomy, Chaps. 12, 13, 14.—Godfray's Lunar Theory.

Newton's Principia, Lib. I., Sects 1, 2, 3, 9, and 11.

HEAT.—Lardner's Hand-book.

ELECTRICITY. } Lardner's Hand-book.
MAGNETISM. }

Students will be examined in the above courses (Ordinary and Honour) both by papers and vivâ voce. The examination for B.A. Honours will continue for *three* days from 9 to 1, and 3 to 5 each day; the vivâ voce examination taking place on the last two days between the hours of 3 and 5 P. M.

The examinations for Honours in the other years will continue for *two* days

Engineering Students may be candidates for Honours.

At every examination (whether Ordinary or Honour) in the first two years Students are liable to examination in all the subjects of the previous course; and in the last two years in all the subjects of the third and fourth years.

NATURAL HISTORY.

Professor, J. W. Dawson, LL.D., F. G. S.

4th year's Students, Monday and Friday 10 to 11.

3rd " " Tuesday and Thursday 9 to 10.

2nd " " " " 10 to 11.

Honour Course, Monday and Friday 12 to 1, and other days as arranged.

I. BOTANY.—(Second year's Students.)

1. *Vegetable Histology*, or the Study of the Elementary Tissues of Plants, with a description of the Microscope and its uses in Botanical investigations.
2. *Vegetable Anatomy and Physiology*, or the Structure and Functions of the Nutritive and Reproductive Organs of Plants.
3. *Vegetable Nutrition*, and general Phenomena connected with Plant life.
4. *Taxological Botany*, or the Classification of Plants—with descriptions of the more important Natural Orders, special notices of the Flora of Canada, and instructions for collecting and determining Plants.
5. *Geographical Botany*, or the distribution of Plants over the Globe.

Text-Books.—Gray's Botanical Text-Book.—Gray's Manual.

II. ZOOLOGY AND COMPARATIVE PHYSIOLOGY.—(Third year's Students.)

1. *General Views of Animal Life*, and of the relation of the animal to the plant.
2. *Animal Histology*.—The elementary cell and its metamorphoses.—Microscopic examination of tissues.
3. *Functions of Animals*.—With especial reference to the physiology of the lower animals.
4. *Principles of Classification*.—Type or homology.—Analogy and adaptation.—True nature of the species, genus, and other groups in Zoology.
5. *Descriptive Zoology*.—The Radiata, Mollusca, Articulata and Vertebrata, illustrated by typical examples, and as far as possible by Canadian species.—Notices of Geographical distribution of animals.

6. *Instructions and Illustrations* in collecting and preserving specimens and determining species.*Text-Books.*—Synopsis by the Professor. Agassiz and Gould's Principles. Dallas' outline of Zoology. Owen's Lectures.

III. GEOLOGY AND PALÆONTOLOGY.—(Fourth year's Students.)

1. Introductory sketch of the present conditions of the surface and interior of the earth, and its relations to its organized inhabitants.
2. *Physical Geology*.—Composition of Rocks and their structure on the small scale.—Origin of Rocks, aqueous, volcanic, plutonic, metamorphic.—Arrangement of Rocks on the large scale; stratification, elevation and disturbances, denudation.
3. *Chronological Geology and Palæontology*.—Data for determining the relative ages of formations. Classification according to age. Fauna and flora of the successive periods. Geology of British America.
4. *Practical and Economical Geology*.—Methods of observation and of making geological surveys. Applications of the science to Mining, Engineering, and Agriculture.

Text Book.—Lyell's Elements of Geology.

IV. PRACTICAL AND HONOUR COURSE,—*Students of the Fourth year and Special Students.*

Students entering for Honours must have passed creditably the examinations in Elementary Chemistry, Botany, Zoology and Experimental Physics; and should know the Elements of Drawing. Students entering for practical purposes will be required only to satisfy the Professor of their fitness for the studies of the class.

The course will consist of demonstrations and explanations on the following subjects, with such modifications as may be found necessary to suit the future pursuits of students. Examination, determination, and description of specimens. Use of the Microscope in original investigation. Preparation of Specimens for study and preservation. Special studies in the Zoology, Geology, and Palæontology of British America, with field work when practicable. Students will be required to read such of the following books as may be appointed:—Owen's Lectures on the Invertebrate Animals; Jones' Animal Kingdom; Lyell's Principles and Elements; Owen's Palæontology; Murchison's Siluria; and for local information, Logan & Hunt's Geology of Canada; Dawson's Acadian Geology; Lyell's Travels in North America. Books of reference will be furnished from the College Library.

CHEMISTRY AND MINERALOGY.

Professor,—T. Sterry Hunt, M.A., F.R.S., &c.

Students of the First Year—Tuesday and Thursday, 11 A.M.

Students of the Fourth Year—Monday and Friday, 10 “ “

CHEMISTRY, ORDINARY LECTURES.—(*Students of the First Year, and Special Students.*) A course of about forty-five lectures, to commence Nov. 4, and continue till April 10—comprising an Elementary Course of General Chemistry. It will include the principles of Chemical Philosophy, the History of the Elements and their combination, the principles of Organic Chemistry, and the History of the most important groups of Organic Compounds.

Especial attention will be given, so far as the limits of the Course permit, to the Chemistry of Building Materials, the working of Metals, Bleaching, Dyeing, Gas Making, Soap and Candle Making, Brewing, Distilling, &c. The Course of Organic Chemistry, will have particular reference to the Theory of Agriculture, and to the Physiology of Plants and Animals.

Text-Books.—Silliman. Wilson. Gregory.

CHEMISTRY, PRACTICAL COURSE.—(*Special Students.*) Practical instructions in Analytical Chemistry will be given in the Laboratory of the University. The amount of time to be devoted to this course will depend, in a measure, upon the requirements of the students. At present it is proposed to devote to it the mornings of each Tuesday and Thursday, during the Course of Chemical Lectures.

Text Books.—Fresenius' Qualitative Analysis, Croft's Manual, Bolley and Paul's Technical Analysis.

MINERALOGY.—(*Students of the Fourth Year.*) The course of Mineralogy will consist of sixteen Lectures, commencing on the 1st of November, and will embrace the principles of Classification, the Chemical and Physical characters of Minerals, including Crystallography, the methods of determining species, and Descriptive Mineralogy; with special reference to those species most important in Geology or useful in the Arts.

Text Books.—Dana's Elements or Dana's Manual of Mineralogy, Nichol's Mineralogy.

AGRICULTURAL CHEMISTRY.

Professor Dawson.

A course of Lectures on this subject is delivered at the Normal School, and special Lectures and instructions will be given to such students as may send themselves.

COMMERCIAL LAW.

Professor J. J. C. Abbott, B.C.L.

This class is accessible to Matriculated Students in the third or fourth year.)
Monday and Wednesday, 4 to 5.

The subject of Lecture on Mondays will be the general Principles of the Law of Contracts.

On Wednesdays the subjects will be Agency, Bailments, Partnerships, Bills and Notes, and Insurance.

Persons taking tickets for this course, as occasional students, will also have access to the Lectures on Public Law.

METEOROLOGY.

Professor Charles Smallwood, M.D., LL.D.

A short course of lectures on this subject is expected to be delivered in the course of the session. Details will be made known by advertisement.

§ 8. SPECIAL COURSES OF STUDY.

SPECIAL COURSE OF ENGINEERING.

Extending over two Sessions and entitling to the degree of Graduate in Civil Engineering.—(Fee \$30 per Session.)

MATRICULATION.—Students matriculating in this course will be examined in Arithmetic, Algebra, to Quadratics inclusive, Euclid, Books I. to V., def. of V., B.VI., Plane Trigonometry (especially Solution of Triangles), Writing English from dictation. If unable fully to pass this examination, they may, at the discretion of the Professor of Engineering, be allowed to join his class for a preparatory session; and may, if found qualified, obtain the diploma at the end of two years.

COURSE OF STUDY.—(*First Year.*)—Mensuration.—Surveying.—Drawing—Mathematics, (Ordinary and Honour) of Undergraduates of the Second Year.—English Literature.—French or German.

(*Second Year.*)—Engineering.—Drawing.—Higher Mathematics and Physics.—Geology and Mineralogy.—French and German.

CIVIL ENGINEERING.

Professor, M. J. Hamilton, C. E.

Junior Class, Monday and Wednesday. 2 P.M.

Senior " Tuesday, Thursday and Friday, 2 P.M.

Drawing daily, during the afternoon.

FIRST YEAR.

I. *Drawing.*—Descriptive Geometry, Bridge Drawing, Plotting of Plans and Sections, &c.

II. *Surveying &c.*—Construction, Adjustments, and Practical Application of the various instruments required for Engineering operations; Land Sur-

veying, Laying Out and Parting off Land ; Surveying for Public Roads and Railways ; Levelling, Laying down Curves, Half-Widths, &c. ; Measurements and Calculation of Earthwork, Construction and Application of Tables for Earthwork.

SECOND YEAR.

I. *Drawing*.—A more extended course, including Perspective, Isometric Projection, Construction of Physical Maps, Application of Descriptive Geometry to Stone Cutting, &c.

II. *Engineering*.—Excavation and Embankment, Quarrying and Blasting, Tunnelling, Construction of Public Roads ; Construction of Railways, including Gradients, Permanent Way, Rail Laying, Practice of Draining, Theory of the Arch, Stability of Structures, Nature and Mode of Application of Materials in Construction, Strength of Materials, Preparation of Mortars and Cements, Foundations, Piling, Cofferdams, Retaining Walls ; Bridge Building in Stone, Brick, Iron, and Wood ; Construction and use of Stationary and Locomotive Engines ; Efficiency of Labor, Preparation of Specifications and Estimates. When practicable, the classes of both years will go out with the Professor for field-work on Saturdays, at 9 A. M.

For the details of the course of study in Mathematics, Mathematical and Experimental Physics, Chemistry, Geology, English Literature and French, see previous pages of the Calendar.

The Student will not be required to pass an Examination in the *Honour Mathematics and Physics* of either year, if he do not desire it ; but special proficiency in the ordinary Mathematics and Physics, and also in Chemistry and Geology, will be expected.

If at the end of his Junior Year the Student shall pass the Examination in Mathematics, but shall be found deficient in Mathematical and Experimental Physics, the Faculty may either refuse him credit for the year, or require him to attend the ordinary Lectures in Physics during his Senior year.

Graduates in Civil Engineering may attend the Honour Lectures in Mathematics and Physics of the Fourth year, and the Honour Course in Natural History, and compete for Honours ; but will be classed separately from undergraduates.

According to the Act 20th Vic. cap. 37, graduates in Civil Engineering having first passed their preliminary examination, may be received as apprentices by any Land Surveyor in Upper or Lower Canada, and "shall, thereupon, be duly holden to serve as such apprentices during twelve months of actual service," instead of three years, before proceeding to their final examination. The advantages thus obtained, and the opportunity of studying Mineralogy, and Geology, (now required by law of Provincial Land Surveyors,) deserve the attention of persons about to enter on their apprenticeship. In order to derive the full benefits from the Act, the Students should pass their preliminary examination before entering the College.

SPECIAL COURSE OF AGRICULTURE.

This course will include, in addition to the lectures on Elementary Chemistry and Agriculture, the subjects of English Literature, French, Mathematics, Natural History and Natural Philosophy, and will extend over two sessions.

A SPECIAL COURSE OF COMMERCE.

Including the subjects of English Composition, Arithmetic and Algebra, Mathematics and Natural Philosophy, Chemistry, Natural History, Modern Languages and History, in addition to Commercial and Public Law, will be accessible to Students desirous of devoting themselves, for one or two sessions to the collegiate studies more immediately connected with commercial pursuits.

The Library of the Faculty of Arts contains above 3,000 volumes of standard works, selected with special reference to the wants of Professors and Students.

The Apparatus includes Electrical and Pneumatic Instruments of the largest size and most modern construction, several Microscopes, a Telescope, and instruments illustrative of Statics, Dynamics, Hydrostatics, Heat, Optics, Astronomy and Geodesy. The Laboratory is fitted up with the apparatus necessary for the pursuit of practical researches in chemistry.

The Museum consists of:—

1. The general collection in Zoology, including specimens illustrative of the leading types in all the classes of Animals.
2. The general collection in Geology and Palæontology, including specimens illustrative of all the Geological periods.
3. The Holmes Collection of 2,000 Canadian and Foreign Minerals.
4. The Holmes Herbarium, containing specimens of nearly all the plants indigenous to Lower Canada.
5. The Logan Collection of 475 characteristic Canadian Fossils and Rocks.
6. The Couper Collection of 2,400 Canadian Insects.

All these collections are used to illustrate the lectures, or are open to the inspection of Students.

In the Session of 1862-3, the subjects fixed for the competition for the Chapman Medal and Prince of Wales Medal, in accordance with §4, are Mathematics with Natural Philosophy, and Mental and Moral Philosophy with English Literature.

Programme of Lectures in the Undergraduate Course in Arts and Special Course of Engineering.

SESSION 1862-63.

FIRST YEAR.

HOURS.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
9		Classics.	Classics.	Classics.	
10	Mathematics.	Mathematics.	Mathematics.	Mathematics.	Mathematics.
11	English.	Elementary Chemistry.	History.	Elementary Chemistry.	English.
12	Classics.	* French or German.	English.	* French or German.	Classics.
1	* Hebrew.		* Hebrew.		

SECOND YEAR.

9	Classics.	Mathematics.	Mathematics.	Mathematics.	Classics.
10	Logic.	Botany.	French or German.	Botany.	Logic.
11	French or German.	French or German.	Logic.	Elocution.	French or German.
12	† Mathematics.	Classics.	Classics.	Classics.	† Mathematics.
1	* Hebrew.		* Hebrew.		
2	§ Engineering.	§ Drawing.	§ Engineering.	§ Drawing.	§ Drawing.

THIRD YEAR.

9	Mathematical Physics.	Zoology.	French or German.	Zoology.	Mathematical Physics.
10	† Classics.	Classics.	Classics.	Classics.	† Classics.
11	† Mathematical Physics.	Rhetoric.	French or German.	Rhetoric.	† Mathematical Physics.
12	French or German.	Experimental Physics.	Mathematical Physics.	Experimental Physics.	French or German.
2	* Hebrew, § Drawing.	§ Engineering.	* Hebrew, § Drawing.	§ Engineering.	§ Engineering.

FOURTH YEAR.

10	Geology.	Moral Philosophy.	Moral Philosophy.	Moral Philosophy.	Geology.
11	Classics.	† Mathematical Physics.	† Mathematical Physics.	† Mathematical Physics.	Classics.
12	† Geology.	Experimental Physics.	Experimental Physics.	Experimental Physics.	† Geology.
2	Hebrew.	† Classics.		† Classics.	

Practical Chemistry, Tuesday and Thursday at hours to be arranged with the class. *Agriculture*, (at the Normal School), Wednesday, 4 to 5. *Commercial Law*, (rooms of Law Faculty), Monday and Wednesday, 4 to 5, from October 7. Library open every forenoon.

† For Candidates for Honours. § For Engineering Students only. * Optional or voluntary.

FACULTY OF MEDICINE.

The Principal (ex-officio.)

Professors,—CAMPBELL.

HALL.

FRASER.

SUTHERLAND.

SCOTT.

WRIGHT.

HOWARD.

M'CALLUM.

CRAIK.

Demonstrator and }
Curator of Museum. } H. NELSON.

Dean of the Faculty,—G. W. CAMPBELL, A.M., M.D.

The Course of Lectures by the Medical Faculty of this University for the Session of 1862-63, will commence on the 1st Monday (3rd) of November of the present year, and be continued through the six months following.

These lectures will be delivered in the College Building, Coté Street, which is conveniently situated in the vicinity of boarding-houses and of the Hospitals.

COURSES OF LECTURES.

The number of Professors in the Faculty is Nine; the number of Classes, Ten; two of the classes (often conjoined in European Schools) being held by one Professor.

1. ANATOMY.—(Prof. Scott)—The fresh subject is chiefly employed in the illustration of the Lectures in this branch, aided however, by dried preparations, wax models, plates full size of life, &c. The Dissecting Room is under the direction of the Professor, aided by the Demonstrator of Anatomy. It is open from 8 a.m. to 10 p.m., being lighted with gas. All the usual conveniences are supplied, and the Demonstrator will be in attendance to assist the pupils in their operations.

2. CHEMISTRY.—(Prof. Sutherland)—Inorganic Chemistry is fully treated; and a large portion of the course is devoted to Organic Chemistry and its relations to Physiology. The branches of Physics bearing upon or connected with Chemistry, also engage the attention of the class. For experimental illustration, abundant apparatus is

possessed by the Professor, among which may be enumerated, a powerful Air Pump—Oxy-Hydrogen Microscope—Polariscope—Extensive series of Crystallographical models—Electrical and Galvanic apparatus, &c., &c.

3. MATERIA MEDICA.—(Prof. Wright)—This course is illustrated by a Cabinet of Pharmacological objects; by Plates of Medicinal Plants, (Roque, Stephenson and Churchill)—by an Herbarium, and by the Microscope (Nachét) and Polariscope for examining Crystals.—Analytical experiments for detecting Adulterations, &c., are also shown, and diagrams, with other illustrations, are used.—*Dietetics, Pharmacy, and Therapeutics* are included in the course.

4. INSTITUTES OF MEDICINE.—(Prof. Fraser)—Under which are comprised *Histology, Physiology, General Pathology and General Therapeutics*. The minute Structure and Composition of the various Organs, and the Fluids and Tissues of the Body in health and disease, are explained and illustrated by Microscopic Preparations, Plates and Preparations from the Museum.

5. PRACTICE OF MEDICINE.—(Prof. Howard)—The extensive series of plates contained in the Library, Lebert's recent work, Cruveilhier, Carswell, Hope, Alibert, Willis, Bateman, &c., &c., will be employed; also Morbid Preparations and models of diseased parts.

6. SURGERY.—(Prof. Campbell)—Divided into Principles and Practice, including Surgical Anatomy and Operative Surgery, exhibited on the subject.—Quain's large plates, Maclise, Dalrymple, &c. The various surgical instruments and apparatus exhibited, and their uses and application explained and practically illustrated.

7. MIDWIFERY.—(Prof. Hall.)—Including diseases of females and infants, illustrated by a series of Drawings on a large scale; by humid preparations: by models in wax; and by the use of the artificial Pelvis.

8. MEDICAL JURISPRUDENCE.—(Prof. McCallum.)—Includes Toxicology—the modes of testing for poisons are exhibited, and post-mortem appearances illustrated by plates—Insanity, Public Hygiene, and Medical Police are touched upon.

9. CLINICAL MEDICINE.—(Prof. McCallum.)—Taught by lectures, and at the bed side—Physical Diagnosis taught practically and each pupil invited to take part in it—Examination of the urine, chemically and microscopically explained and illustrated.

10. CLINICAL SURGERY.—(Prof. Craik.)—Taught in a similar manner. For both these Classes ample material is afforded by the cases at the Montreal General Hospital.

Beside the above classes, Students are required to attend one course of Botany and one course of Zoology.

LIBRARY AND MUSEUM.

The Library contains upwards of 3000 volumes, including the most useful books for reference, as well as the recent elementary ones; the works of the older authors as well as the most recent. It is open to the Students without charge, under necessary regulations for the care of the books. The Museum contains a large number, constantly augmenting, of preparations, chiefly pathological; also, wax and papier maché models.

HOSPITALS.

The Montreal General Hospital is visited every day by the Medical officers in attendance. After the visit a large number of out-door patients are examined and prescribed for.

The Operating Room (used also for a Lecture Room) is so constructed as to suit the convenience of the Students in obtaining a good view of the operations going on.

The University Lying-in-Hospital is under the direction of the Professor of Midwifery. Students who have already attended one course of his lectures, are furnished with cases in rotation.

PAST SESSION.

SESSION 1862-63.

The number of Matriculated Students in the past session was 159, of these 92 were from Canada East, 62 from Canada West, 1 from New Brunswick, 2 from Prince Edwards' Island, and 1 from the United States.

The number of Students who passed the Primary Examination, which includes the branches of Anatomy, Chemistry, Materia Medica and Institutes of Medicine, was 22, as follows:—

Mr. ALPHONSE BRODEUR, Varennes, C.E.	Mr. ANTOINE DESAULNIERS, Riviere
" HENRY GRAHAM, Bells Corners, C.W.	du Loup, C.E.
" ELI IVES, Hatley, C.E.	" CHARLES H. PEGG, Arcona, C.W.
" ALB. E. SENKLER, Brockville, C.W.	" THOS. M. ROSS, Lancaster, "
" ALEX. A. FERGUSON, Cornwall, "	" JAS. L. MASON, Montreal, C.E.
" WM. GUSTIN, London, "	" PETER E. BROWN, Lake of Two
" DONALD J. GRANT, Glengary, "	Mountains, "
" JOHN J. MARSTON, L'Orignal, "	" GEORGE WOOD, Frost Village, "
" JAMES H. SAWYER, Kemptville, "	" WM. W. GORDON, Bathurst, C.W.
" H. C. BURRITT, Smith's Falls, "	" WM. W. SQUIRE, Montreal, C.E.
" WM. W. DICKSON, Packenham, "	" EDWARD E. MALLOCH, Ottawa, C.W.
" ROBT. MCINTOSH, Newcastle, "	" HONOR THERIEN, Riviere David, C.E.

At the meeting of Convocation, held May 6th, 23 gentlemen received the degree of M. D., C. M.

The following list contains the names of the Graduates and of their Inaugural Dissertations or Theses.

CHARLES RICHARD NICOLLS, Sur. Major Gren. Guards.	} Montreal, C.E.,	Rheumatic Fever.
JOHN EDWARD MOFFATT, Staff Surgeon, Guards,	} " "	Gout.
HENRY G. H. LAWRENCE, Asst. Sur. Gren. Guards.	} " "	Typhoid Fever.
ARTHUR G. ELKINTON, Asst. Sur. S. F. Guards.	} " "	Pneumonia.
EDWARD LOUIS LUNDY, Staff Asst. Surgeon,	} " "	Syphilis.
ST. JOHN KILLERY, Staff Asst. Surgeon,	} " "	Idiopathic Tetanus.
ROBERT ATKINSON, Staff Asst. Surgeon,	} " "	Disease of the Liver.
THOMAS B. P. O'BRIEN, Staff Asst. Surgeon,	} " "	Rheumatism.
JAMES LISTER,	Belleville, C.W.	Chronic Hydrocephalus.
FRED. JOHN AUSTIN,	Montreal, C.E.	Acute Peritonitis.
RICHARD MAURICE BUCK,	Sarnia, C.W.	{ Correlation between the Physical & Vital Forces.
WILLIAM S. DEBONALD,	Berthier, C.E.	{ Pneometer.
EDWARD HENRY TRENHOLME,	Trenholmsville, C.E.	{ Correlation between the Psychical and Physical Forces.
CHARLES HOWARD CHURCH,	Aylmer, C.W.,	Strangulated Hernia.
FRANCIS LEWIS MACK,	St. Catherines, C.W.,	Cancer.
JOHN ALEX. STEWART,	Charlottetown, P.E.I.	Epilepsy.
DAVID BEATTIE,	Aylmer, C.W.,	Bronchotomy.
JOHN WHERRY,	Quebec, C.E.,	Hæmorrhage.
ALFRED BELLEV,	" "	Acæmia.
GEORGE ASHBOLD CHESLEY,	Cornwall, C.W.	Scarlatina.
JAMES GORDON STROWERIDGE,	Brantford, "	Inflammation.
DONALD PETER CAMPBELL,	Glengarry, "	Epilepsy.
JOHN HARKNESS,	Matilda, "	Hydrophobia.

FRANCIS WINNIETT DIGBY, Brantford, C.W., passed his examination, but not being of age, could not receive his Degree till next Convocation.

PRIZES.

The three prizes granted by the Governors were awarded as follows :

For the best Thesis, RICHARD MAURICE BUCKE, Sarnia, C.W.

For the best Examination on the Final Branches, JOHN A. STEWART, Charlottetown, Prince Edwards Island.

For the best Examination on the Primary Branches, JOHN J. MARSTON, Original C.W.

The Professors Prize in Materia Medica was awarded to MR. JOHN WM. BIGH, Quebec.

The Professors prize in Clinical Medicine, for the best answers to written questions to EDWARD H. TRENHOLME, Trenholmsville, C.E.; and for the best report of cases to RICHARD MAURICE BUCKE, Sarnia, C.W.

In Botany and Zoology the prizes awarded were :—

For Botany and Zoology to MR. TIMOTHY BIGELOW, Whitby C.W.

For Botany to MR. EDWARD P. HURD, Eton, C.E.

For Zoology to MR. KENNETH REID, Huntingdon, C.E.

EXTRACTS FROM THE REGULATIONS OF THE FACULTY.

CHAP. I.

Relative to the Courses of Lectures, Fees, &c.

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

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

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

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

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

6th. The Fee for each class shall be \$12, with the following exceptions: for that of Medical Jurisprudence, \$10; for those of Clinical Medicine and Clinical Surgery, \$6, each, and for Botany and Zoology, \$5.

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

8th. The course of all the classes, except those of Clinical Medicine, Clinical Surgery and Medical Jurisprudence, shall be of six months' duration; the Classes of Clinical Medicine and of Clinical Surgery of three months' duration; and that of Medical Jurisprudence, either of three months' duration, in which case Five Lectures a week shall be given, or of six months' duration, in which case only Three Lectures a week shall be required.

9th. The courses shall commence on the first Monday in November, and with the exception of a vacation at Christmas, shall continue to the end of April.

CHAP. II.

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

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

2nd. The said Register shall be closed on the 31st day of December in each year and no tickets obtained from any of the Professors shall be received without previous Matriculation.

3rd. No one shall be admitted to the Degree of Doctor of Medicine and Master of Surgery who shall not either, 1stly have attended Lectures for a period of at least Four Sessions in this University or some other University, College or School of Medicine, approved of by this University; or 2ndly, have studied medicine during at least Four years, and during that time have attended Lectures for a period of at least Three Sessions either in this University or some other University, College or School of Medicine, approved of by this University.

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

*Anatomy,
Chemistry,
Theory and Practice of Medicine,
Principles and Practice of Surgery,
Midwifery and Diseases of Women and Children,
Materia Medica and Pharmacy,
Clinical Medicine,
Clinical Surgery,
Practical Anatomy,
Institutes of Medicine,*

} Of which two Courses
will be required.

*Medical Jurisprudence,
Zoology,
Botany.*

} Of which one Course
will be required.

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

5th. The Candidate must also give proof by ticket of having attended during twelve months the practice of the Montreal General Hospital, or that of some other Hospital approved of by this University.

6th. Moreover, no one shall be permitted to become a Candidate for examination who shall not have attended at least One Session of this University, and during that Session at least four six months' classes, or three six months' and two three months' classes.

7th. Students in Medicine will be examined in Classics and in English or French Composition, the standard being such as may from time to time be determined by the Faculty.

8th. Every Candidate for the Degree must, on or before the first day of April, present to the Dean of the Medical Faculty testimonials of his qualifications, entitling him to an examination, and also a Thesis or inaugural dissertation, written by himself, on some subject connected with Medical or Surgical Science, either in the Latin, English, or French Language. He must, at the same time, deliver to the Secretary of the Faculty the following Certificate :

MONTREAL—18—.

I, the undersigned, being desirous of obtaining the Degree of Doctor of Medicine and Master of Surgery, do hereby declare that I have attained the age of twenty-one years, (or, if the case be otherwise, that I shall have attained the age of twenty-one years before the next graduation day), and that I am not, (or shall not be at the time) under articles as a pupil or apprentice to any Physician, Surgeon or Apothecary.

(Signed),

A. B.

9. The trials to be undergone by the Candidate shall be :

1st. The matriculation examination referred to in Section 7 supra. Students will undergo this Examination in the first session of their attendance, unless allowed to postpone it by special permission of the Faculty.

2nd. The private examination of his Thesis as evidence both of Medical and General acquirement, followed (if approved) by its public defence. And

3rd. A general examination on all the branches of Medical and Surgical Science, either oral or by written papers as may from time to time be determined by the Faculty.

This examination will be divided into Primary and Final, the former comprehending the branches of Anatomy, Chemistry, Materia Medica, Institutes of Medicine and Zoology, or Botany ; the latter, those of Practice of Medicine,

Surgery, Midwifery and Medical Jurisprudence. It will be optional with the student to present himself for the primary examination at the end of the third session.

10. The following Oath or affirmation will be exacted from the Candidate before receiving his Degree :

SPONSIO ACADEMICA.

In Facultate Medicinæ Universitatis Collegii McGill,

Ego, A—— B—— ; Doctoratus in Arte Medica titulo jam donandus, sancto coram Deo cordium scrutatore, spondeo, me in omnibus, grati animi officiis erga hanc Universitatem ad extremum vitæ halitum, perseveraturum ; tum porro artem medicam, caute, caste, et probe exercitaturum, et quoad in me est, omnia ad ægrotorum corporum salutem conducentia cum fide procuraturum ; quæ denique, inter medendum, visa vel audita silere conveniat, non sine gravi causa vulgaturum. Ita præsens mihi spondenti adsit Numen.

11th. The fee for the degree of Doctor of Medicine and Surgery shall be twenty dollars, to be paid by the successful Candidate immediately after examination, together with a Fee of one dollar to the Registrar of the Medical Faculty.

12th. The money arising from the Fees of Graduation, as well as those of Matriculation, shall be applied to the enlargement of the Medical Library and Museum, and to defraying their expenses.

BOOKS RECOMMENDED TO STUDENTS.

ANATOMY.—Sharpey and Quain, Wilson, Ellis, Dublin Dissector.

CHEMISTRY —Graham, Kane, Silliman.

MATERIA MEDICA.—Pereira's Elements, Royle's Manual, Wood's Therapeutics, Stillé's Therapeutics, Pereira on Food and Diet.

INSTITUTES OF MEDICINE, *Physiology*.—Carpenter's Principles of Human Physiology, Kirke and Paget's Manual, Todd and Bowman's Physiological Anatomy. *Pathology*.—Williams' Principles of Medicine, Chomel and Vogel's General Pathology.

SURGERY.—Paget's Surgical Pathology, Miller's Principles and Practice, Erichsen's Surgery, Drnitt's do, Pirrie's do.

PRACTICE OF MEDICINE.—Wood's Practice of Medicine, Watson's Practice of Physic, Hooper's Physicians' Vademecum by Guy, Barlow's Practice.

MEDICAL JURISPRUDENCE.—Orfila *Medicine Legale*, Devergie *Medicine Legale*, Theorique et Pratique, Taylor's Jurisprudence, Guy's Forensic Medicine, Taylor on Poisons.

MIDWIFERY.—Churchill, Ramsbotham, Cœzeaux.

N.B. Boarding may be obtained at from Twelve to Sixteen Dollars per month.

FACULTY OF LAW.

The Principal (ex-officio.)

Professors—BADGLEY.

ABBOTT.

TORRANCE.

LAFRENAÏE.

LAFLAMME.

Dean of the Faculty,—J. J. C. ABBOTT, Esq., B.C.L.

The several courses of Lectures in the Faculty of Law, comprise every branch of Legal Study.

The Educational officers of this Faculty have felt that the Law of Lower Canada, though in many of its details purely local, retains, as its leading characteristics, the noble and imposing features of the civil law, and that the principles established in the Roman jurisprudence, still form the groundwork of many of its departments. The Lectures, therefore, though prepared with especial reference to the Law of Lower Canada, have been as far as consistent with their primary object, divested of any purely sectional character, and are made to inculcate such comprehensive principles, as form, to a great extent, the basis of every system of jurisprudence.

It is considered that this system will afford to students of the laws of Lower Canada, a better foundation for their subsequent studies, and tend to give them a more extended and comprehensive grasp of legal subjects, than a course of instruction conducted solely with reference to local law; while it is hoped, in view of the increased importance which the study of the civil law is everywhere assuming, that the advantages offered, and the mode of education adopted by this Faculty, will open to it an extensive field of usefulness.

The complete course of study in this Faculty extends over three years, but may be shortened to two years, when the student matriculates in the third year of his indentures.

The following are the subjects comprised in the complete course of three years:—

TO STUDENTS OF THE FIRST YEAR.

On Public and Constitutional law.

Professor BADGLEY.

On obligations, and on the general principles of the law of Contracts.

Professor ABBOTT.

- On the Civil Law. Persons under the Roman law, Inst. B. I.
Professor TORRANCE.
- On the origin and History of the Laws of France, of England, and of Lower
Canada.
Professor LAFRENAYE.
- On the Law of Real Estate and Customary Law.
Minority.
Tutors and Curators.
Husband and Wife.
Fiefs.
Servitudes.
Professor LAFLAMME.

TO STUDENTS OF THE SECOND YEAR.

- On Public and Constitutional Law.
Professor BADGLEY.
- On Commercial Contracts.
Agency.
Bailments.
Partnerships.
Bills and Notes.
Insurance.
Professor ABBOTT.
- On the Civil Law.
Property in Possession, *jus in re.* Inst. B. II
Professor TORRANCE.
- On Legal Bibliography.
The Bibliography of English Law ;
of French Law ; and
of Canadian Law.
Professor LAFRENAYE.

- On the Law of Real Estate and Customary Law.
Successions.
Donations and Wills.
Contracts of Marriage.
Community of Property.
Professor LAFLAMME.

TO STUDENTS OF THE THIRD YEAR.

- On Criminal Law.
Professor BADGLEY.
- On Commercial Contracts.
Shipping, and Merchant Seamen.
Sale.
Pleading.
Practice.
Professor ABBOTT.
- Inst. B. III. & IV.
International Law.
Conflict of Laws.
Evidence.
Professor TORRANCE.

On Leases.

Deposits.
 Sequestrations.
 Pledges.
 Suretyships.
 Compositions.
 Imprisonments.

Professor LAFRENAYE.

On the Law of Real Estate and Customary Law.

Dower.
 Privileges and Hypotheques.
 Prescriptions.
 Judicial Sales.

Professor LAFLAMME.

Students who avail themselves of the privilege of attending two years only, will, nevertheless, be required to pass an examination in the subjects comprised in the three years' course.

Occasional Students will be received without matriculation, for attendance on any particular series of Lectures; and Students in the Faculty of Arts will be permitted to attend any of the courses, on such terms and conditions as may be fixed by that Faculty.

The matriculation fee is ten shillings, payable only by Students who have not previously matriculated in any other Faculty. The annual fee for the full course of Lectures is fixed for the present at three pounds ten shillings; for attendance on any one series of Lectures, one pound five shillings per annum, and the fee on graduation, including *diploma*, is one pound five shillings.

Students who have completed their course of three years,—or of two years, if they have commenced in the third year of their indentures,—and have passed a satisfactory examination, will be entitled, upon the certificate and recommendation of the Law Faculty, to the Degree of Bachelor of Civil Law.

Applications for admission may be made to the Dean of the Faculty or to the Secretary of the College.

STUDENTS OF THE UNIVERSITY.

Session 1861-62.

FACULTY OF LAW.

Allan, Irwine
 Ascher, Isidore G.
 Bertrand, Michael C.
 Benjamin, Lewis J.
 Boyd, John
 Brachaud, Athanase
 Bullock, William E.
 Cowan, Robert C.
 Charland, Alfred
 Curran, John Joseph
 Day, Edmund
 Davidson, Charles P.
 Desaulniers, Henri Lesieur
 Dorion, P. A. Adlard
 Doak, George O.
 Durand, Neptalie
 Galarneau, Joseph.
 Grenier, Amédée
 Hall, William A.
 Houghton, John G. K.
 Hunter, A. C.

Joseph, Joseph O.
 Kelly, John P.
 Kelly, William
 Kirby, James
 Laurier, Wilfrid
 Lefebvre, Frederick
 Loranger, Louis G.
 Mayo, William A.
 Nagle, Sarsfield B.
 Ronayne, John
 Sabourin, Ernest
 Sicotte, Victor B.
 Stephens, George W.
 Stevens, Charles O.
 Stewart, Ernest H.
 Tait, Melbourne
 Tessier, Wilfrid
 Vilbon, Charles
 Welch, Alfred
 Wright, W. McKay
 Wurtele, Charles J. C.

FACULTY OF MEDICINE.

Anderson, John Colborne, Montreal,	C.E.	Bullen, Chas. F., Delaware,	C.W.
Aylen, James, Aylmer,	C.E.	Bogue, Denis R. H., Montreal	C.E.
Anderson, Alex. Georgina,	C.W.	Blair, Robert C., Ha Ha Bay,	"
Atkinson, Robert, Army Medical Staff, Montreal,	C.E.	Campbell, Donald P., Glengarry	C.W.
Beaudet, Alfred, Coteau du lac,	C.E.	Case, William H., Hamilton,	"
Beaudry, Raphael, Montebello,	C.W.	Church, Mills Kimble, Merrickville,	"
Belleau, Alfred, Quebec,	C.E.	Crichton, Stewart, Russell,	"
Bessey, William, E. Georgetown,	C.W.	Church, Charles H., Aylmer,	"
Brodeur, Alphonse, Varrennes,	C.E.	Chesley, George A., Cornwall,	"
Brush, Charles, Montreal,	C.E.	Cotten, Wm. W., Belleville,	"
Burland, John Hamilton, St. Johns,	"	Christie, John B., Oxford Mills,	C.E.
Burritt, Horatio C., Smith's Falls,	C.W.	Codd, Alfred, Ottawa,	C.W.
Butler, George C., Brighton,	"	Collins, Charles W., Quebec,	C.E.
Brown, Peter Eli, Lake of Two Mountains,	C.E.	Cutland, Wm. F., Montreal,	"
Burland, John Gordon, Montreal,	"	Cullen, John G., Ottawa,	C.W.
Beatty, Daniel, Aylmer,	C.W.	Delvecchio, Alphonse, Montreal,	C.E.
Bucke, Maurice R., Sarnia,	"	Dickson, Wm. W., Pakenham,	C.W.
Bigelow, Timothy, Whitby,	"	Dodd, John, Port Hope,	"
Bower, Silas J., Kempville,	"	Donnelly, Thomas James, Montreal,	C.E.
Bass, Cyrus, Belleville,	"	DeBonald, G. V., Berthier,	"
Bligh, John W., Quebec,	C.E.	DeSaulniers, Antoine A. Riviere du Loup,	"
Bender, Prosper, Quebec,	"	Duncan, George, Montreal,	"
Birks, John, Montreal,	"	Digby, James W., Brantford,	C.W.
		Donor, William J. Fort Erie,	"
		Dice, George Nelson,	"
		DeWitt, Caleb S., Montreal,	"

Empson, John, Montreal,	C.E.	McDonald, Angus, Lancaster,	C.W.
Evans, Griffith, R. A.	"	McIntosh, Robert, Newcastle,	"
Ethier, Calixte, St. Joseph du lac	"	Morrison, William S., Wadding-	"
Elkington, Arthur G., Fus.	"	ton,	U.S.
Guards, Montreal,	"	Morris, Wm., Brockville,	C.W.
Fagan, Thomas, St. Marie de	"	Merrick, Edgar H., Merrickville	"
Monnoir,	"	Merrick, John A.,	"
Ferguson, Alex. A., Cornwall,	C.W.	Moffatt John E., Montreal,	C.E.
Fitzgerald, James, Fenelon Falls,	"	Mack, Francis L., St. Catharine,	C.W.
Fisk, Newell, Montreal,	C.E.	Moffat, Peter, Ramsay,	"
Fulton, James Winchester,	C.W.	McVean, John M., Montague,	"
Gordon, William W., Bathurst N.B.	"	Mackie, John R., Melbourne,	C.E.
Graham, Henry, Bell's Corners,	C.W.	Massey, Wm. M., Montreal,	"
Grant, Donald James, Williamston	"	Marotte, Antoine, St. Hyacinthe,	"
Gustin, William C., London	"	Morley, Edward, Montreal,	"
Grahame, Charles E., Ottawa,	"	Nicols, Chas. N., Gren. Guards,	"
Goforth, Franklin, Thorold,	"	Montreal,	"
Gurd, Charles, Montreal,	C.E.	Nores, Septimus, W., Montreal,	"
Grange, Henry,	"	Nelson, Wolfred, D. O., Mon-	"
Haycock, John H., Ottawa,	C.W.	treal,	"
Huneau, Louis G., Montreal,	C.E.	O'Brien, Thomas, B. P., Mon-	"
Hall, James B.,	"	treal,	"
Harkness, John, Matilda,	"	O'Connor, Daniel, Montreal,	"
Harkin, Henry, Montreal,	"	Pegg, Charles H., Arcona,	C.W.
Hambly, James Hill, Montreal,	"	Phelan, C. J. F. R., St.	"
Howell, George W., Belleville,	C.W.	Columbin,	C.E.
Hurd, Edward P., Eaton,	C.E.	Picault, M. J. Alfred, Montreal,	"
Hart, David A., Montreal,	"	Pinet, Alexander R., St. Lau-	"
Harrison, David H., St. Marys,	C.W.	rent	"
Halliday, James T, Vernonsville	"	Prentiss, George W., Aylmer,	"
Ives, Eli, Compton, E. T.,	C.E.	Patterson, James, Almond,	C.W.
Jones, John C., Maitland,	C.W.	Patten, Albert M., St. Johns,	"
Kempt, William, Lindsay,	"	Quenouille, Alphonse, St. Lau-	"
Kennedy, Richard A., Mon-	"	rent,	C.E.
treal,	C.E.	Richard, Marcel, St. Jaques,	C.W.
Keefer, Henry G., Thorald,	C.W.	Russel, James Theodore, Brant-	"
Killery, St. John, Staff Sur-	"	ford,	C.W.
geon, Montreal,	C.E.	Ross, Thomas, Lancaster,	"
Lonergan, James, St. Therese,	"	Rugg, Henry C., Compton,	C.E.
Lapointe, Jovite, Boucherville,	"	Robertson, David, Esquesing,	C.W.
Leman, Joseph, Montreal,	"	Reid, Kenneth, Montreal,	C.E.
Lafontaine, Louis, Chambly,	"	Richardson, John, Quebec,	"
Lotremouille, Avila, Montreal,	C.E.	Redner, Horace P. Belleville,	C.W.
Lister, James,	"	Robertson, James, Georgetown P.E.I.	"
Lawrence, Henry G. H., Gren.	"	Robertson, Charles, Quebec,	C.E.
Guards, Montreal,	"	Smallwood, C. E.,	"
Lundy, Edward L., Staff Sur-	"	Senkler, Albert Edward, Brock-	"
geon, Montreal,	"	ville,	C.W.
Massey, George, Montreal,	"	Squire, William Wood, Mon-	"
Mayball, Edward,	"	treal,	C.E.
Mongenais, Napoleon, Rigaud,	C.E.	Stewart, John Alexander,	"
McCord, John D., Montreal,	"	Charlottetown,	P.E.I.
McDowell, Duncan A., Corn-	"	Stafford, William A., Montreal	C.E.
wall,	C.W.	Strobridge, James G., Brant-	"
McDongall, Peter A., Aylmer,	C.E.	ford,	C.W.
Malloch, Edward C., Ottawa,	C.W.	Switzer, Egerton R., Emstown,	"
Marion, Alfred, Contrecoeur,	C.E.	Shiek, George, Walpole,	"
Mason, James L., Montreal,	"	Sawyer, James H., Belleville,	"
Marston, John J., L'Original,	C.W.	Tew, Herbert Sayer, Montreal,	C.E.

Therien, Honore, Riviere David	C.E.	Woodill, A. H., Shelburne, N.S.	C.E.
Therault, Francois D., Beauharnois,	"	Wood, George, Shefford,	"
Trenholme Edward H., Trenholmeville,	"	Wood, Hannibal W., Dunham,	"
Tomkins, John H., Montreal,	"	Webb, James T., Montreal,	"
Vincent, Noel, Montreal,	"	Warren, Richard, Oshawa,	C.W.
		Wherry, John L., Quebec,	C.E.
		Waldo, Samuel, Merrickville,	C.W.

FACULTY OF ARTS.

1. Undergraduates.

Adams, Abel, Bedford.	Krans, Edward H., Frelingsburg.
Baynes, Donald, Montreal.	Lyman, Frederick, Montreal.
Bancroft, Charles, "	McCord, David, "
Bayfield Horace O., Charlottetown.	McDonell, Aeneas J., Cornwall.
Brewster, William, Montreal.	McGregor, James, Montreal.
Bothwell, John A., Durham.	McLaurin, John R., Riceville.
Clowe, John D., Richmond.	Morrison, James, Waddington.
Court, William, Montreal.	Muir, John N., S. Georgetown.
Cushing, Lemuel, Chatham.	Ouellette, Charles, Montreal.
Davidson, Chas P., Coteau Landing.	Patton, Thomas, Prescott.
Davidson, Leonidas H., Cowansville.	Pease, G. A., Coteau Landing.
† Drummond, Charles G. B., Montreal.	Plimsoll, Arthur H., Montreal.
Duff, Archibald, Cowansville.	† Ramsay, Robert A., "
Duncan, Alexander, Montreal.	Robins, Sampson P., "
Fairbairn, Thomas, "	Rogers, E. Fitzgerald, "
Fessenden, Elisha J., Frost Village.	Rogers, George W., "
Fowler, William, Montreal.	† Ross, George, "
Fraser, Duncan R., "	Sherril, Alvan F., Eaton.
† Gilman, Francis E., Richmond.	Short, Robert, Sherbrooke.
Harris, Stewart, Hamilton.	Trenholme, N. W., Trenholmeville.
Hicks, Francis W., Montreal.	Wardrop, Robert, Brockville.
Jordan, William E., Eaton.	Wicksteed, R. J., Quebec.

† B. A., 1862.

2. In Special Course of Engineering.

Edwards, George, Clarence.	McGlashan, Alexander York Mills.
Gaviller, Maurice, Bond Head.	McOwat, Walter, Chatham.
§ Gould, James H., Smith's Falls.	Muir, James J., S. Georgetown.
Marston, George J., Hull.	Reid, John L., Bowmanville.

§ G. C. E., 1862.

3. Partial and Occasional Students.

Belle, Chas. E.	McPherson, Murdoch.
Grant, William.	Souter, W. K.
Holton, Edward.	Supple, J.
Court, James J.	

PRIZES, HONOURS, AND STANDING, OBTAINED BY STUDENTS, SESSION 1861-62.

FACULTY OF LAW.

RANKING OF STUDENTS AS TO GENERAL PROFICIENCY.

3rd Year.

James Kirby, 1st prize; John P. Kelly, 2nd prize.

2nd Year.

Charles Wurtele, 1st prize; Ernest Sabourin, 2nd prize.

1st Year.

Wm. E. Bullock, 1st prize ; Wilfred Laurier, 2nd prize.

STANDING IN THE SEVERAL CLASSES.

Professor Laflamme's Class.

3rd Year.

John P. Kelly, 1st ; James Kirby, T. B. Nagle, equal, 2nd.

2nd Year.

C. Wurtele, E. Sabourin, equal, 1st ; E. T. Day, G. O. Doak, equal, 2nd.

1st Year.

W. Laurier, 1st ; Wm. E. Bullock, Alfred Welch, equal, 2nd.

Professor Lafrenaye's Class.

3rd Year.

James Kirby, 1st ; John P. Kelly, 2nd.

2nd Year.

Charles Wurtele, 1st ; Ernest Sabourin 2nd.

1st Year.

Wm. E. Bullock, 1st ; Henri Lessèur Desaulniers, 2nd.

Professor Torrance's Class.

3rd Year

John P. Kelly, 1st ; James Kirby, 2nd ; P. A. A. Dorion, 3rd.

2nd Year.

Charles Wurtele, 1st ; Ernest Sabourin, 2nd ; G. O. Doak, 3rd.

1st Year.

Wm. E. Bullock, 1st ; John Boyd, Alfred Welch, equal, 2nd.

Professor Abbott's Class.

3rd Year.

James Kirby, 1st ; V. B. Sicotte, Irvine Allan, equal, 2nd.

2nd Year.

G. O. Doak, 1st ; E. T. Day, 2nd.

1st Year.

Wm. E. Bullock, 1st ; W. Laurier, 2nd.

 FACULTY OF MEDICINE.

BUCKE, R. M., Prize for Thesis.

STEWART, J. A., " Final Examination.

MARSTON, J. J., " Primary Examination.

BLIGH, J. W., Professor's Prize in Materia Medica.

TRENHOLME, E. H., " " Clinical Medicine.

BUCKE, R. M., " " " "

BIGELOW, T., Prize in Botany and Zoology.

HURD, E. P., " "

REID, K., " in Zoology.

The names of Students who passed the Primary and Degree Examinations will be found on pages 29 and 30.

FACULTY OF ARTS.

PASSED FOR DEGREES.

Degree of B. A.

George Ross.

Robert Anstruther Ramsay.

Charles G. B. Drummond.

Francis Gilman.

Graduate in Civil Engineering.

James H. Gould.

HONOURS AND PRIZES.

Graduating Class.

Lapman Medallist—Ross.

Prince of Wales Medallist—RAMSAY.

ROSS—First Rank Honours in Classics, Prize in Rhetoric, Prize in German.

RAMSAY—First Rank Honours in Natural Science.

DRUMMOND—First Rank Honours in Natural Science.

Students of the Third Year.

RENHOLME—First Rank General Honours, First Rank Honours in Classics and Prize, Prize in Zoology.

MUSKIE—First Rank General Honours, First Rank Honours in Classics, Prize in Hebrew.

MORRIS—First Rank General Honours, First Rank Honours and Prize in Mathematics.

MURPHY—Second Rank General Honours, Prize in Classics, Prize in German.

MURPHY—Second Rank General Honours, Prize in Moral Philosophy, Prize for Essay.

MURPHY—Second Rank General Honours.

Students of the Second Year.

MURPHY—(Dunham Academy)—First Rank General Honours, First Rank Honours and Prize in Mathematics, Prize in Classics, Prize in Botany.

MURPHY—First Rank General Honours, First Rank Honours and Prize in Mathematics, Second Rank Honours in Logic.

MURPHY—(Durham Academy)—First Rank General Honours, First Rank Honours in Logic, First Prize in Botany, Prize in Logic, Prize for Essay, Prize in English Literature.

MURPHY—(Victoria College)—First Rank General Honours, Second Rank Honours in Logic, Prize in Classics, Prize in French.

MURPHY—(St. Francis College)—First Rank General Honours, Second Rank Honours in Logic, Prize in Botany.

MURPHY—Prize in French.

Students of the First Year.

MURPHY, (Brockville)—1st Rank General Honours, 1st Rank Honours and Prize in Mathematics, Prize in Classics.

MURPHY, (Stanbridge Academy)—1st Rank General Honours, Prize in Classics, Prize in Chemistry, Prize in French, Prize in English Literature.

MURPHY, (High School)—1st Rank General Honours, Prize in Classics.

MURPHY, (High School)—1st Rank General Honours, Second Rank Honours and Prize in Mathematics.

MURPHY, (Brantford)—Prize for Essay, Prize in Hebrew.

*Engineering Students.**Senior Class.*

GOULD, (Smith's Falls Grammar School)—Prize in Engineering.

Junior Class.

M. OWAT, (Chatham)—Prize in Engineering.

EDWARDS, (Clarence)—Prize in Drawing.

STUDENTS WHO HAVE PASSED THE DEGREE AND SESSIONAL EXAMINATIONS,
SESSION OF 1861-2.

LOGIC, MORAL PHILOSOPHY, RHETORIC AND ENGLISH LITERATURE.

ORDINARY B. A. EXAMINATION.—(Moral Philosophy)—*Class 1st*: Ross. *Class 2nd*: Drummond. *Class 3rd*: Ramsay, Gilman.

FOURTH YEAR.—(Rhetoric)—*Class 1st*: Ross (prize). *Class 2nd*: Drummond. *Class 3rd*: Ramsay, Gilman.

THIRD YEAR.—(Moral and Intellectual Philosophy)—*Class 1st*: McCord (Prize and Prize Essay), Trenholme, Robins. *Class 2nd*: Clowe, Cushing, L. Davidson, C. P. Davidson. *Class 3rd*: Fairbairn, Wicksteed.

SECOND YEAR.—(Logic)—*Class 1st*: Bothwell (Prize and Prize Essay), Pease Sherrill, Duff. *Class 2nd*: McGregor, Hicks, Muir, J. N. *Class 3rd*: Ouellette, Baynes.

SECOND YEAR.—(Honours in Logic)—First Rank, Bothwell. Second Rank, Pease, Sherrill, McGregor.

SECOND YEAR.—(English Literature)—*Class 1st*: Bothwell (Prize), Pease, McGregor, Sherrill. *Class 2nd*: Duff, Hicks, Baynes, J. N. Muir. *Class 3rd*: Ouellette.

FIRST YEAR.—(English Literature)—*Class 1st*: Krans (Prize), Brewster, Fowler, Wardrop, Bancroft. *Class 2nd*: Morrison, McLaurin, Bayfield, W. Court. *Class 3rd*: Supple, Souter, McOwat, Harris, Duncan (Prize Essay).

GREEK.

B. A. ORDINARY EXAMINATION.—*Class 1st*: Ross, Ramsay. *Class 2nd*: Drummond. *Class 3rd*: Gilman.

THIRD YEAR.—(Ordinary)—*Class 1st*: Trenholme, (prize), Fairbairn, Cushing, L. Davidson, Chas. Davidson; Wicksteed and Robins, equal. *Class 2nd*: Lyman, McCord, Clowe.

SECOND YEAR.—*Class 1st*: Pease, (prize), Sherrill, Hicks, Duff, Bothwell, John Muir, Short. *Class 2nd*: McGregor, Ouellette, Grant. *Class 3rd*: Baynes.

FIRST YEAR.—*Class 1st*: Brewster, (prize); Wardrop and Krans, equal; Fowler. *Class 2nd*: Jordan. *Class 3rd*: Bancroft, Duncan, Morrison.

LATIN.

B. A. ORDINARY EXAMINATION.—*Class 1st*: Ross, Ramsay. *Class 2nd*: Drummond. *Class 3rd*: Gilman.

THIRD YEAR.—(Ordinary)—*Class 1st*: Fairbairn, (prize), Trenholme, Cushing, L. Davidson, Wicksteed; Chas. P. Davidson, McCord and Robins equal. *Class 2nd*: Clowe, Lyman.

SECOND YEAR.—*Class 1st*: Duff, (prize); Pease and Sherrill, equal; Bothwell, Hicks, McGregor, Short. *Class 2nd*: John Muir, Baynes. *Class 3rd*: Ouellette, Grant.

FIRST YEAR.—*Class 1st*: Wardrop, (prize), Krans, Brewster; Fowler and Jordan, equal. *Class 2nd*: Bancroft. *Class 3rd*: Duncan, McLaurin, Morrison, Supple and Wm. Court, equal.

HONOURS IN CLASSICS—(B. A. Honours.) *1st Rank*: Ross.

THIRD YEAR HONOURS—*1st Rank*: 1. Trenholme. 2. Cushing.

HISTORY.

FIRST AND SECOND YEARS—*Class 1st*: Brewster, Sherrill, Bothwell, Pease.
Class 2nd: Duff and Short, equal; Hicks, Krans and Wardrop
 equal; Fowler, McGregor and Morrison equal; *Class 3rd*: Bay-
 field, Jordan, Bancroft.

MATHEMATICS AND NATURAL PHILOSOPHY.

ORDINARY B. A. EXAMINATION—*Class 1st*: Ramsay (Robert), Ross (George)
 Drummond (Charles). *Class 2nd*: None. *Class 3rd*: Gilman
 (Francis).

THIRD YEAR—*Class 1st*: Trenholme (Norman), Robins (Sampson P.) Wick-
 steed (Richard), McCord (David), Davidson (Charles.) *Class*.
2nd: Cushing (Lemuel). *Class 3rd*: Fairbairn (Thomas),
 Davidson (Leonidas), Lyman (Frederick), Clowe (John D.)

SECOND YEAR—*Class 1st*: Duff (Archibald), McGregor (James), and
 Sherrill, (Alvan), equal; Pease (George A.), Bothwell (John
 A.), Hicks (Francis W.) *Class 2nd*: None. *Class 3rd*: Muir
 (John), Ouellette (Charles), Baynes (Donald).

FIRST YEAR—*Class 1st*: Jordan (William E.), Krans (Edward K.), Wardrop
 (Robert), Bayfield (Horace O.), Fowler (Wm.), Brewster (Wm.),
Class 2nd: Court (William), McLaurin (John R.), Duncan
 (Alexander), Bancroft (Charles). *Class 3rd*: Morrison (James).

ENGINEERING STUDENTS.—(Senior Year)—*Class 1st*: Gould, (James H.)
 —(Junior Year)—*Class 1st*: MacOwat.

Honour Examinations.

THIRD YEAR—*First Rank*—Robins (Sampson P.), (prize).

SECOND YEAR—*First Rank*—Duff (Archibald), (prize); McGregor (James)
 (prize).

FIRST YEAR—*First Rank*—Wardrop (Robert), (prize). *Second Rank*—
 Fowler (William), (prize).

NATURAL SCIENCE.

ORDINARY B. A. AND ENGINEERING EXAMINATION.—(Geology)—*Class 1st*:
 Ramsay, Ross, Drummond, Gaviller. *Class 2nd*: Gould.

THIRD YEAR.—(Zoology)—*Class 1st*: Trenholme, (prize) Robins. *Class 2nd*:
 Lyman, Cushing, Wicksteed, Gilman, Davidson, L., Fairbairn.

SECOND YEAR.—(Botany)—*Class 1st*: Bothwell, (prize) Sherrill, (prize) Duff,
 (prize) Pease, Hicks, McGregor. *Class 2nd*: Muir, Ouellette,
 Grant, Baynes.

FIRST YEAR.—(Elementary Chemistry)—*Class 1st*: Krans, (prize) Wardrop,
 Fowler, MacOwat, Court, Wm., Bayfield, Muir, J. N. *Class 2nd*:
 Edwards, Morrison, Jordan, Marston, McLaurin, Brewster,
 Bancroft, Rogers. *Class 3rd*: Supple, Duncan, Harris.

HONOURS IN NATURAL SCIENCE.—(B. A. Honours)—*First Rank*: 1. Ramsay,
 2. Drummond.

FRENCH

ORDINARY B. A. EXAMINATION.—*Class 1st*: none. *Class 2nd*: none. *Class*
3rd: Ramsay.

SECOND YEAR.—*Class 1st*: Ouellette (prize), Pease (prize), Duff, McGregor
Class 2nd: Hicks, Sherrill. *Class 3rd*: Bothwell.

THIRD YEAR.—*Class 1st*: Krans (prize), Brewster. *Class 2nd*: Fowler Bancroft, McLaurin. *Class 3rd*: W. Court, Bayfield and Wardrop, equal.

Engineering Students.

SECOND YEAR.—*Class 1st*: none. *Class 2nd*: none. *Class 3rd*: Gaviller, Gould.

FIRST YEAR.—*Class 1st*: Edwards. *Class 2nd*: none. *Class 3rd*: McOwat, Muir, James.

GERMAN.

B. A. ORDINARY EXAMINATION—*Class 1st*: ROSS (prize). *Class 2nd*: Drummond.

THIRD YEAR—*Class 1st*: Fairbairn, (prize). *Class 2nd*: Cushing and Trenholme equal; McCord and Robins, equal. *Class 3rd*: Davidson, Lyman.

HEBREW.

SENIOR DIVISION—*Class 1st*: Duncan (prize). *Class 2nd*: Grant.

JUNIOR DIVISION—*Class 1st*: Cushing (prize). *Class 2nd*: Fessenden.

ENGINEERING.

SENIOR YEAR—*Class 1st*: Gould (prize).

JUNIOR YEAR—*Class 1st*: McOwat (prize). Muir, Jas. *Class 2nd*: Marston, Edwards, (prize in drawing).

GOVERNOR GENERAL'S SCHOLARS.

By competition in the Matriculation Examination, 1861—E. H. Krans, W. Fowler, William E. Jordan.

GRADUATES OF THE UNIVERSITY.

DOCTORS OF DIVINITY.

ev. John Bethune, (ad eundem) 1843 | Rev. Daniel Falloon, (Hon.)....1844

DOCTORS OF LAWS AND OF CIVIL LAW.

ev. Francis Lundy, (D.C.L.hon.) 1843	Edmund A. Meredith, B.C.L
on. Wm. Badgley, (D.C.L.hon.) 1843	(LL.D. Hon.) 1857
Hon. J. R. Vallières de St. Real,	*William Smith, (LL.D. Hon.)...1858
(D.C.L. hon.).....1844	Rev. A. DeSola, (LL.D. Hon.)...1858
ev. Wm. T. Leach, (D.C.L.Hon. 1849	*Andrew F. Holmes, M.D. (LL.D.
(LL.D. Hon. 1857)	Hon.).....1858
ev. William A. Adamson,	Right Hon. Sir Edmund W. Head,
(D.C.L. Hon.).....1850	Baronet, M.A. (LL.D. Hon.)...1862
ev. Benjamin Davies, Ph. D.	Rev. D. Falloon, D.D. (LL.D.
(LL.D. Hon.).....1856	Hon.).....1862
ir William E. Logan, Knt. (LL.D.	George Lawson, Ph. D. (LL.D.
Hon.).....1856	Hon.).....1862
Charles Smallwood, M.D. (LL.D.	Alexander Morris M.A. B.C.L.
Hon.).....1856	(D.C.L. in Course,).....1862
on. Pierre J. O. Chauveau,	Christopher Abbott, B.C.L.
(LL.D. Hon.).....1857	(D.C.L. in Course,).....1862
ohn William Dawson, M. A.	
(LL.D. Hon.) 1857	

DOCTORS OF MEDICINE.

1833.	*William Oscar Dunn,.....L.C.
William Logie,.....L.C.	Charles B. de Boucherville,.... do
1834.	*Andrew F. Holmes,.. (ad eun.) do
oderick Macdonald,.....U.C.	Geo.W. Campbell, M.A. (ad eun.) do
E.P. McNaughton,.....L.C.	Archibald Hall,..... (ad eun.) do
ohn Finlayson,.....Scotland.	Stephen C. Sewell,.... (ad eun.) do
1835.	*Michael McCulloch,.....(Hon.) do
oseph Workman,.....L.C.	Oliver T. Bruneau,.... (Hon.) do
rederick W. Hart,.....do	1844.
ierre Dansereau,.....do	Eugene Trudel,.....L.C.
1836.	Philius Proulx,.....do
William Sutherland,.....L.C.	Rufus Holden,.....U.C.
Louis H. Gauvreau,.....L.C.	Alexander Long,.....L.C.
Robert T. Reynolds,....U.C.	William E. Scott,.....do
William Fraser,.....L.C.	William H. Wagner,.....U.C.
1841.	Robert Godfrey,.....L.C.
errence Sparham,.....U.C.	1845.
amuel McMurray,.....L.C.	Pierre Fortin,.....L.C.
Charles D. DeCelles,.....do	1846.
1842.	William Kelly, Surgeon, Royal
Thomas Reynolds,.....U.C.	Artillery.
Thomas L. B. Meredith,.....L.C.	A. Thomas Jackson, Staff Sur-
David D. Logan,.....do	geon in the Army.
Louis Boyer,.....do	*Andrew Aylmer Staunton, Sur-
Charles Dansereau,.....do	geon, Royal Artillery.
James Thomson,.....England.	Stephen Sewell Foster,....L.C.
James R. Dick,.....L.C.	John Wilbrod Wilscam,.....do
1843.	*Alfred Malhot,.....do
Augustus Carson,.....England.	James J. Dickinson,.....U.C.
Severe Dorion,.....L.C.	*George Augustus Scriven,....do
ohn L. Leprohon,.....L.C.	Henry Paradis,.....L.C.
ean G. Bibaud,.....do	George D. Gibb,.....do
ean M. Paquin,.....do	Peter H. Church,.....U.C.

* Deceased.

1847.

George Edworth Fenwick,.....L.C.
John Duncan McDiarmid, Staff
Surgeon in the Army.

Peter A McDougall,.....U.C.
William Mayrand,.....L.C.
*Peter Warren Dease,..... do
William H. Brouse,.....U.C.
Darby Bergin,..... do
*Christopher Widmer, Toronto,
(Hon.).....U.C.

James Sampson, Kingston (Hon.) do
*Daniel Arnoldi, Montreal, (Hon.) L.C.
James Douglas, Quebec, (Hon.) do
A. B. Larocque,..... do
Samuel B. Schmidt,..... do
*John Fisher,.....L.C.
William Irwin Breslin, Asst. Sur-
geon 46th Regiment of Line.
*Alexis Pinet,.....L.C.

1848.

T. W. Smythe,.....U.C.
Thomas Christie,.....L.C.
Josiah G. Whitecomb,..... do
John W. Hall,..... do
Josiah S. Prigham,..... do
William McGill,.....U.C.
*John Rolph Lee,..... do
Albert Baker,.....England.
Joseph R. Culver,.....U.C.
R. Palmer Howard,.....L.C.
William Wright,..... do
Peter Henderson,..... do
Pierre F. Longpré,..... do
Edward S. L. Painchaud,..... do
André Seguin,..... do
Léonard Lepailleur,..... do
Wolfred Nelson, Montreal, (Hon.)L.C.

1849.

Jules M. Quesnel,.....L.C.
*John N. Buxton,..... do
Moise Sabourin,..... do
Francis Challinor,.....England.
Thomas McGrath,.....L.C.
*Israel P. Marr,.....U.C.
George C. Wood,.....Ireland.
Eneas McDonnell,.....U.C.
William Odell, Surgeon 19th Re-
giment of the Line.

1850.

Duncan C. McCallum,.....L.C.
Amos S. Bristol,.....U.C.
George W. Sanderson,..... do
John A. Nelles,..... do
Jonathan M. Vannorman,..... do
*Enoch P. Dorland,..... do
Robert M. Wilson,..... do
André Loupret,..... do
Charles Lemoine,..... do

Olivier Raymond,.....U.
Josh. Morrin, Quebec, (Hon.)...L.
1851.

Remi Claude Weilbrenner,.....L.C.
William H. Hingston,..... do
*Peter O'Carr,.....U.C.
George McMicking,..... do
Robert Walker,..... do
Samuel T. Brooks,.....L.C.
John J. Blacklock,.....U.C.
Onesime Bruneau,.....L.C.
Charles E. Casgrain,..... do
George Leclere,..... do
John W. Moont,.....U.C.

1852.

Robert Thompson,.....L.C.
Richard Weir,.....U.C.
Edward H. Bucke,.....U.C.
Joseph Moore,..... do
Joseph Garvey,..... do
John Easton,..... do
Victor Perrault,.....L.C.
Eric B. Sparham,.....U.C.
George Henry Boulter,..... do
Henry Thomas Ridley,..... do
Burnham G. G. Demorest,..... do
Newton W. Powell,..... do
Allan Ruttan,..... do
Angus McDonnell,.....L.C.
*Amable Simard,..... do

1853.

Henry A. Tuzo,.....L.C.
Benjamin Workman,..... do
Adolphe Bruneau,..... do
*Stephen Duckett,.....L.C.
Colin Macdonald,.....U.C.
Richard Moore,.....Ireland.
John Rae, Hamilton, (Hon.)...U.C.
*Walter Henry, Belleville, (Hon.)C.W

1854.

*James Crawford,(ad eun.) L.C.
Thomas W. Jones,.... do do
Augustus M. Corbett,.....U.C.
William H. Corbett,..... do
Robert Craik,.....L.C.
*Joseph P. Phelan,.....U.C.
James A. Grant,..... do
Thomas Simpson,.....L.C.
*David M. Rintoul,..... do
Cornelius H. O'Callaghan,....Cuba.
Alfred J. Burns,.....U.C.
Thomas Y. Savage,..... do
Walter McKay,..... do
Herman L. Cook,..... do
Peter Rolph Shaver,..... do
Stephen A. Scott,..... do

1855.

Nelson Loverin,.....U.C.
Elephalet G. Edwards,..... do

John L. Stevenson,.....	U.C.	James Joseph O'Dea,.....	U.C.
Roller M. Church,.....	L.C.	Andrew W. Hamilton,.....	do
John B. Gibson,.....	do	James McIntosh,.....	do
George Pringle,.....	U.C.	James Stephenson,.....	do
James Paterson,.....	do	*Thomas Keeler,.....	do
Charles Ault,.....	do	Samuel A. Carter,.....	do
James F. Ault,.....	do	Irvine Bogart,.....	do
Dezear Gauvreau,.....	L.C.	Robert W. W. Carroll,.....	do
1856.			
Justus Jones,.....	U.C.	William Ramsey,.....	do
Joseph Alex. Hamel,.....	L.C.	Walker H. Marr,.....	U.C.
Al. Laberge,.....	do	George W. Hurlburt,.....	do
James G. P. Dupuis,.....	do	Samuel S. Macklem,.....	do
John H. Kollmyer,.....	do	1860.	
Alter J. Henry,.....	do	Henry Warren,.....	C.W.
James Kirkpatrick,.....	U.C.	Alexander Ault,.....	do
James C. Lee,.....	do	Adolphe Robillard,.....	do
James McGregor Stevenson,.....	do	David Woods, L. R. C. S. I., Staff	
James Barnston,..... (ad eun.)	L.C.	Surgeon,.....	C. E.
John Reddie,.....	do do	Louis G. Turgeon,.....	do
1857.			
James D. Stevens,.....	L.C.	John Erskine,.....	do
John R. Church,.....	do	Gustave Chevalier,.....	do
C. E. Picault,.....	do	William P. O. Whitwell,.....	do
Henry Shoebottom,.....	do	Henri Adolphe Mignault,.....	do
Robert Howden,.....	do	Alexander McLean,.....	P. E. I.
David T. Robertson,.....	do	Arthur Courthope, Poussette,...	C.W.
William Wilson,.....	do	Edwin Augustus Hulbert,.....	C.E.
Marie R. R. Riel,.....	U.C.	John Wallwork Pickup,.....	do
John Aulen,.....	L.C.	William Edward Bowman,.....	do
Whiteford,.....	do	Robert Wilkins Burnham,.....	C.W.
N. Shaver,.....	U.C.	George Loyd McKelcan,.....	do
John McMillan,.....	do	Louis Robitaille,.....	C.E.
Andrew A. Boylan,.....	do	Louis J. A. McMillan,.....	do
Arden J. Emery,.....	do	Israel Wood Powell,.....	C.W.
1858.			
James Kerr,.....	U.C.	Francis Wayland Campbell,.....	C.E.
F. English,.....	do	Henry Thomas Tait,.....	do
James McGarry,.....	L.C.	Charles H. Donnelly,.....	C.W.
James Harkin,.....	do	Louis Duhamel,.....	do
George Pattee,.....	do	1861.	
T. Robitaille,.....	do	John Rolph Malcolm,.....	C.W.
James H. Taylor,.....	do	Herbert H. Read,.....	N.S.
W. E. Glenn,.....	do	David L. Philip,.....	C.W.
James S. Duncan,.....	do	Arthur Lyon,.....	do
James Peter Reid,.....	U.C.	Jacob E. Browne,.....	do
James C. Thurlow Cunynghame,...	L.C.	Henry Usher,.....	do
1859.			
Patrick O'Leary,.....	L.C.	Napoleon Leclair,.....	do
John Rambaut, Surgeon, Cana-		Fred. Dunbar Sutherland,.....	C.E.
dian Rifles,.....		Peter McLaren,.....	C.W.
William A. Duckett,.....	L.C.	James Gun,.....	do
Edward W. Smith,.....	do	Rufus Frederick Hamilton,.....	C.E.
Philippe Giroux,.....	do	Donald McGillivray,.....	C.W.
Gilbert Provost,.....	do	Joseph M. Drake,.....	C.E.
Stephen Wright,.....	do	Vincent G. B. Chagnon,.....	do
James O. Thayer,.....	do	Heriot Lindsay,.....	C.W.
James T. Roberts,.....	do	George W. Powers,.....	C.E.
William M. H. King,.....	do	George E. Gascoyne, Staff Asst.	
		Surgeon,.....	C.E.
		Horace Nelson,.....	do
		Duncan McGregor,.....	C.W.
		Charles Battersby,.....	do

1862.		Fred. John Austin,.....C.E.
Charles Richard Nicholls, Surg.	Major Grenadier Guards,....C.E.	Richard Maurice Buck,C.W.
John Edward Moffatt, Staff Surg.	Guards, do	William S. DeBonald,.....C.E.
Henry G. H. Lawrence, Asst.	Surg. Grenadier Guards... do	Edward Henry Trenholme,..... do
Arthur G. Elkington, Asst. Surg.	Scots Fusilier Guards..... do	Charles Howard Church,.....C.W.
Edward Lewis Lundy, Staff Asst.	Surgeon,..... do	Francis Lewis Mack, do
St. John Killery, Staff Asst. Surg.	do do do	John Alexander Stewart,P.E.I.
Robert Atkinson, do do do	do do do	David Beattie,.....C.W.
Thos. B. P. O'Brien, do do do	do do do	John Wherry,.....C.E.
James Lister,.....C.W.		Alfred Bellew,.....do
		George Ashbold Chesley,.....C.W.
		James Gordon Strowbridge,.... do
		Donald Peter Campbell,..... do
		John Harkness,..... do

MASTERS OF ARTS.

Alex. Morris, B.A., B.C.L.,.....1852	William M. Bowman,.... do. 1859
Rev. John Butler,.....(Hon). do	Edwin Gould, B.A.1860
Rev. Charles Bancroft, (ad eun.) 1855	Robert A. Leach, B.A., B.C.L.,.. do
Henry Aspinwall Howe, (Hon.) do	Rev. John Kennedy, B.A.,..... do
Thomas A. Gibson,..... do. 1856	Dunbar Browne, B.A., B.C.L.,...1861
George D. Gibb, M.D.....do. do	John Thorburn,(Hon.) do
Brown Chamberlin, B.C.L., (ad eun.).....1857	Reginald J. Plimsoll, B.A.,.....1862
David Rodger.....(Hon.) 1857	John A. Perkins, B.A.,..... do
John H. Graham, do. 1859	James Kirby, B.A., B.C.L.,..... do
	Corydon J. Mattice., B.A..... do

BACHELORS OF CIVIL LAW.

Christopher C. Abbott,.....1850	Thomas Joseph Walsh,.....1860
Alexander Morris,..... do	John Dunlop,..... do
William B. Lambe,..... do	James Ponsonby Sexton,..... do
Brown Chamberlin,..... do	Henry Carden,..... do
Romeo H. Stephens,..... do	Mederic Lanctot,..... do
Alexander Molson.....1851	John A. Perkins, do
Frank H. Badgley,.....1852	Reginald J. Pimsoll, B.A.....1861
John J. C. Abbott,.....1854	Jean L. B. Desrochers,..... do
Peter Aylen, B.A. do	Charles A. Rochon,..... do
Edward J. Hemming,.....1855	Frederick MacKenzie,..... do
John G. Barnston,.....1856	Louis Armstrong,..... do
William F. Gardiner,..... do	Gonsalve Doutre,..... do
R. G. Laflamme,.....(Hon.) do	Adolphe P. Ouiment,..... do
P. R. Lafrenaye,.....(do) do	Philippe Vandal,..... do
H. L. Snowdon,..... do	John Aylen. M.D..... do
Frederick W. Torrance, M. A. (Hon.)..... do	Netterville H. Driscoll,..... do
Dunbar Browne, B.A.....1858	David S. Leach,..... do
Isai Jodoin,..... do	Alexis L. Desaulniers,..... do
J. G. Daly,..... do	Thomas D'Arcy McGee,..... do
Pierre Doutre,..... do	James Kirby, M.A.....1862
Zephirin Gauthier,.....1859	John P. Kelly,..... do
Damase F. J. Ricard,..... do	Irvine Allan,..... do
Chas Ambroise Pariseault,.... do	Athanase Branchard,..... do
Edson, Kemp, B. A..... do	Victor B. icotte,..... do
Robert A. Leach, B. A..... do	Sarsfield B. Nagle,..... do
John L. Morris,..... do	Melbourne Tate,..... do
Telesphore Larose..... do	Joseph C. Curran,..... do
John Robert McLaren,..... do	Robert C Cowan,..... do
Desiré Girouard,.....1860	A. P. Adelard Dorion,..... do

BACHELORS OF ARTS.

Alexander Morris,.....	1849	George D. Redpath,.....	1857
Peter Aylen,.....	1850	Robert W. Ferrier,.....	do
Rev. Charles B. Pettit,.....	do	Robert A. Leach,.....	do
Charles E. Bockus,.....	1852	Harry McLaren,.....	1858
Charles W. Philips,.....	do	Reginald J. Pinsoll,.....	do
George T. Stethem,.....	do	John A. Perkins,.....	do
Thomas Browne,.....	1853	James Kirby,.....	1859
Edwin Gould,.....	1856	James L. Mason,.....	do
John R. McLaren,.....	do	Corydon J. Mattice,.....	do
Dunbar Browne,.....	do	William Morris,.....	do
Philip G. Kershaw,.....	1857	Edson Kemp,.....	do
Alexander Barnston,.....	do	William F. Bullock,.....	1860
John Redpath Dougall.....	do	Frederick Gore,.....	do
Duncan Dougall,.....	do	Caleb J. De Witt,.....	do
Thomas Walker,.....	do	William Hall,.....	do
Joseph Greene,.....	1861	George Ross,.....	1862
William McKay Wright,.....	do	Robert Anstruther Ramsay,....	do
John Boyd,.....	do	Charles G. B. Drummond,.....	do
John S. Ferguson,.....	do	Francis Gilman,.....	do

GRADUATES IN CIVIL ENGINEERING.

Oliver Gooding.....	1858	Charles H. Kirby,.....	1860
Christopher McLennan,.....	1859	Joseph Savage,.....	do
Alexander Barnston, B. A.....	do	Arthur Ross,.....	do
Robert Crawford,.....	do	Robert Bell,.....	1861
Thomas Walker,.....	1860	Joseph Doupe,.....	do
George H. Frost,.....	do	James H. Gould,.....	1862

WHITTONS OF ARTS

James H. Whitton	1857
Robert W. Whitton	1858
Robert & Sons	1859
Henry Whitton	1860
John & Sons	1861
James Whitton	1862
John & Sons	1863
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James Whitton	1896
John & Sons	1897
James Whitton	1898
John & Sons	1899
James Whitton	1900

WHITTONS IN C. & E. ENGINEERING

James H. Whitton	1857
Robert W. Whitton	1858
Robert & Sons	1859
Henry Whitton	1860
John & Sons	1861
James Whitton	1862
John & Sons	1863
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John & Sons	1899
James Whitton	1900

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HIGH SCHOOL DEPARTMENT

OF

M^cGILL COLLEGE.

1862-63.

Rector.—	Prof. H. ASPINWALL HOWE, M. A.	
Classical and Senior English Masters.	{	T. A. GIBSON, M. A.
		J. MARTLAND, B. A.
		J. JOHNSON, B. A.
Mathematical Master.—	D. RODGER, M. A.	
Junior English and Writing Masters.	{	J. KEMP.
		J. M. REID.
French Master.—	Prof. P. J. DAREY, M. A.	
German Master.—	Prof. C. F. A. MARKGRAF.	
Elocution Master.—	J. ANDREW.	
Drawing Master.—	J. DUNCAN.	
Music Master.—	J. FOLLENUS.	
Book-Keeping.—	A. GRANT.	
Drilling and Fencing.—	C. R. DEARNLEY.	

This School offers the higher kind of instruction and the mental training which together constitute the foundation of what is called a *Liberal Education*. As a Department of the University, it offers a thorough preparation for the College Course.

The Course of Instruction includes the *Latin, Greek, English, French and German Languages; Geography and History; Arithmetic, Algebra, Plane Geometry, Plane Trigonometry* with the use of *Logarithms, Mensuration* and the Elements of *Natural Philosophy; Writing, Book-Keeping and Linear Drawing*. The *Religious Instruction* is not sectarian, and attendance upon it is required only from Pupils who are Protestants. Occasional Classes are formed in *Local Music*; also Classes for *Drilling, Fencing and Gymnastics* at moderate extra charge. Details of the above Course are subjoined a Programme for the year. An examination of it will shew that, whilst the Latin and Greek Languages have that prominence in it which necessarily belongs to them in Higher Education, provision is made to impart at the same time a thorough English and Commercial Education, and that French, as being one of the colloquial languages of the country, is much cultivated.

The complete Course extends over a period of six or seven years,

but Pupils are admitted for any portion of that time into any Form for which, upon examination, they are found qualified.

The Session, which is divided into four equal Terms, commences on the 1st September, and with the exception of a week at Christmas and three days at Easter, continues to the 1st July.

The full School hours are from Nine to half-past Twelve, a.m., and from Two to Four, p.m., every day in the week except Saturday, but the time for the youngest boys is shorter by an hour each day.

The School is divided into seven Forms. The Junior of these is a Lower School in which young boys receive the preparatory training necessary to fit them for the commencement of the regular Curriculum.

For admission into this Form, it is required that the Pupil shall have attained the age of seven years, and be able to read moderately well. Regular early training is of so great importance that the entrance of a pupil should not be delayed beyond the age of nine. The best time for entrance is at the commencement of the Session, when, owing to the promotions that take place, the classes are remodelled for the year.

The First, Second and Third Forms, next above the Preparatory, constitute the Middle School. The pupils of these Forms are not allowed any option in their studies, but must take all the course of instruction prescribed for them. The Fourth, Fifth and Sixth Forms compose the Upper School. The Pupils of these are divided into two "Sides." The "Classical Side" is adapted for those boys who for any reason desire a more extended and accurate knowledge of the Ancient Languages. The "Commercial Side" is intended for those who are to enter upon mercantile pursuits where high classical attainments may be dispensed with. When a Pupil has reached the Fourth Form, his Parent or Guardian may select either of these sides for him, but, the choice having been made, the Pupil must pursue all the course of instruction appointed for the side to which he belongs.

A weekly Report is sent to the Parent or Guardian of any Pupil who has been absent, negligent of any study, or incorrect in his conduct. A semi-Quarterly Report is made of the progress, attendance and conduct of every Pupil, and a Quarterly Report of the same, shewing further his rank in his Form for each study.

At the end of each Term, Class Examinations are held, both Written and Oral, and at the close of the Session a Public Examination takes place, followed by a Distribution of Prizes and Award of Honours to the deserving, the lists being published. The Highest Honour of the School is the Davidson Gold Medal, which is awarded to the Head Boy of the School for the year, provided the Examiners are satisfied that his attainments reach a certain standard.

The Pupils are required to prepare themselves every evening in their work for the ensuing day, as exhibited in a Time-table. As

their progress will depend very much upon the diligent performance of this duty, which ought to occupy them from one to two hours, Parents are particularly requested to allow no arrangements to interfere with it. The class-rooms are always open to visitors; and Parents having sons at the School are earnestly invited to frequent intercourse with the Masters, so as to aid them in securing that regularity and industry without which Education is but the Stone of Sisyphus. The classes are visited periodically by a Committee of the Governors.

The School Building is in a healthy and airy situation, and has convenient interior arrangements, with those modern improvements which secure proper warmth and ventilation. A very good Gymnasium has recently been erected in the play-ground adjoining the School.

The Rector, who resides a short distance from the City, has made arrangements to receive a limited number of Pupils of the High School to board with him.

COURSE OF STUDY FOR THE SESSION 1862-63.

PREPARATORY FORM.

English.—Reading and Questioning. Spelling. Formation and Derivation of Words. Grammar and Parsing.

Scripture.—The Gospel of St. Matthew.

Geography.—Outlines of the World.

Arithmetic.—The four Simple Rules, with the Multiplication Table.

Elocution.—Principles explained, with Readings and Recitations.

Writing.

FIRST FORM.

Latin.—The Accidence of the Grammar, with Introductory Exercises in Translation.

English.—Reading and Questioning. Spelling and Dictation. Derivation. Grammar and Parsing.

Scripture.—The Gospel of St. Luke.

Geography.—Europe in detail, especially the British Isles.

History.—Outlines of the History of England.

Arithmetic.—Compound Rules and Reduction, with Tables of Weights and Measures.

Elocution.—Principles explained, with Readings and Recitations.

Writing.

SECOND FORM.

Latin.—The Grammar as before. Add the Irregulars, &c., and Chief Rules of Syntax. Eutropius and Phædrus. Oral and Written Exercises.

English.—Reading and Questioning. Spelling and Dictation. Derivation. Grammar and Parsing. Simple Exercises in the Analysis of Sentences.

Scripture.—The Book of Genesis. The Gospel of St. John.

Geography.—Revision of Europe. Add America in detail, especially British America.

History.—Continuation of England. Add Canada.

Arithmetic.—Revision of previous work. Add Practice and Vulgar Fractions of the Simpler kind.

Elocution.—Readings and Recitations.

Writing.

THIRD FORM.

Latin.—The Grammar as before. Add the Appendix and all the Syntax. Cornelius Nepos and Ovid. Oral and Written Exercises.

English.—Reading and Questioning. Spelling and Dictation. Derivation. Grammar and Parsing. Exercises in the Analysis of Sentences

French.—The Grammar with Oral and Written Exercises. Reading and Translation.

Scripture.—The Book of Exodus. The Gospel of St. Mark.

Geography.—Revision of previous work. Add Asia in detail.

History.—Revision of previous work.—Outlines of the History of Great Britain and Ireland. Do. of Rome.

Arithmetic.—Revision. Continuation of Vulgar Fractions. Add Decimal Fractions. Mental Arithmetic.

Elocution.—Readings and Recitations.

Writing.

FOURTH FORM.

Latin.—Revision of the Grammar as before. Add Prosody. Cæsar. Sallust. Virgil. Prose Composition.

Greek.—The Accidence of the Grammar, with Introductory Translations, and Oral and Written Exercises.

English.—Reading. Critical Examination and Analysis. Etymology. Dictation.

French.—The Grammar with Oral and Written exercises. Dictation Reading and Translation.

Scripture.—Selections from the Historical Books of the Old Testament. The Acts of the Apostles.

Geography.—Revision. Add Africa in detail and Scripture Geography.

History.—Revision of previous Work. Add History of Greece.

Arithmetic.—Revision. Continuation of Decimal Fractions. Add Proportion. Mental Arithmetic.

Geometry.—First Book of Euclid's Plane Geometry.

Elocution.—Readings and Recitations.

Writing.

Drawing.

FIFTH FORM.

Latin.—Revision of the Grammar. Rules for Quantity applied. Cicero. Virgil. Horace. Prose Composition. Classical Antiquities.

Greek.—Grammar and Exercises continued. Xenophon. Homer.

English.—Reading, &c. as before. Add Composition. English Literature.

French.—Grammar. Oral and Written Exercises. Dictation. Reading and Translation.

German.—Grammar. Oral Exercises. Reading and Translation.

Scripture.—Scripture History and Geography.

Geography.—Revision. Ancient and Modern. Add Physical Geography. and Map drawing.

History.—Outlines of Universal History with Revision of previous work.

Arithmetic.—Revision. Add Interest, per centages, &c. Mental Arithmetic.

Algebra.—As far as Quadratic Equations.

Geometry.—Six Books of Euclid's Plane Geometry.

Elocution.—Readings and Recitations.

Writing.

Drawing.

SIXTH FORM.

Latin.—Occasional Revision of the Grammar. Livy. Tacitus. Horace. Juvenal. Prose Composition. Versification. Classical Antiquities.

Greek.—Frequent Revision of the Grammar. Herodotus. Euripides. Prose Composition.

English.—Reading, &c. Composition. Essays. History of the Language and its Literature.

French.—As before. Add Composition. Conversation.

German.—As before with Written Exercises.

Scripture.—On the method of studying the Scriptures. Evidences of Christianity.

Geography.—Ancient and Modern. Political and Physical as before. Map drawing. Use of the Globes.

History.—Universal History. Exercises in the form of short Essays.

Arithmetic.—The higher parts, with Revision of previous work. Mental Arithmetic. Add Logarithms.

Algebra.—From Simple Equations.

Geometry, &c.—Revision of Plane Geometry. Add Plane Trigonometry. Also the Elements of Mensuration.

Nat. Philosophy.—The Elements of the Subject.

Elocution.—Readings and Recitations.

Writing.

Drawing.

COMMERCIAL CLASS.

Latin. { *Senior Division.*—Revision of the Grammar, with Exercises. Short lessons of Translation from Cicero—three times a week.
Junior Division.—Revision of the Grammar, with Easy Exercises. Short lessons of Translation from Cæsar—three times a week.

English.—A special Course of Grammar and Composition in addition to the work with their Form.

Arithmetic.—Extra Practice in addition to the work of their Form.

Writing.—Extra Practice of various kinds.

Book-keeping.—Theory and Practice by Single and Double Entry.

Commercial Law.—Principles explained.

Other Subjects of the Course.—With their proper Form.

TERMS.

Autumn Term	-	-	-	1st September to 15th November.
Winter Term	-	-	-	16th November to 31st January.
Spring Term	-	-	-	1st February to 15th April.
Summer Term	-	-	-	16th April to 30th June.

FEES.

For the two Senior Forms	-	-	-	\$12 00. per Term.
For the four Junior Forms	-	-	-	10 00. "
For the Preparatory Form	-	-	-	8 00.

Government Scholars have their Tuition free, but are charged \$2 per annum for Stationery, and \$1 for Fuel.

Payable in advance to the College Secretary.

M'GILL NORMAL SCHOOL,

Affiliated to the University, under the control of the Superintendent of Schools and the Corporation of the University.

Principal and Associate Professor of Natural History and Agriculture
—J. W. Dawson, LL.D., F.G.S.

Ordinary Professors—William Henry Hicks, Esq.

Sampson Paul Robins, Esq.

Associate Professor of French, Pierre J. Darcy, M.A.

Regular instruction in Drawing is given by Mr. James Duncan, Music by Mr. R. S. Fowler, and in Elocution by Mr. John Andrew.

The institution is intended to give a thorough training to teachers, especially for the Protestant population of Lower Canada. This end is attained by instruction and training in the Normal School itself, and by practice in the Model Schools; and the arrangements are of such a character as to afford the greatest possible facilities to Students in all parts of the Province.

Candidates for admission at the commencement of the Session, will be examined in reading, writing, the elements of grammar, arithmetic, and geography, and will be required to produce certificates of good moral character from the clergymen or ministers of religion under whose charge they have last been, and also testimony that they have attained the age of sixteen years. They will also be required to sign a pledge that they purpose to teach for three years in some public school of Lower Canada.

On complying with these conditions, pupil-teachers will be entitled to free tuition, with the use of text books, and to an allowance not exceeding £9 per annum in aid of their board, should they be successful in obtaining the diploma at the final examination. A portion of this allowance will in future be payable to students on their passing the semi-sessional examination at Christmas. Under the regulations subjoined, those who reside at a distance of more than ninety miles from the city of Montreal, will also be entitled to a small allowance for travelling expenses, proportionate to the distance.

The course of study in the Normal School will include all the branches of a good English and French education, with special reference to their principles and practical applications, and to the best methods of teaching them. Instructions will also be given in the art of teaching and the management of schools, in history, the elements of geometry and algebra, natural philosophy, chemistry, natural history, agriculture, drawing and music.

In addition to religious instruction of a general Protestant character, by the professors, arrangements will be made for special religious instruction, by ministers representing the several denominations with which the pupil-teachers may be connected.

No boarding-house is attached to the institution, but every care will be taken to ensure the comfort and good conduct of the pupil-teachers in private boarding-houses to be selected by the Principal. Board can be obtained at from \$9 to \$12 per month.

The building of the Normal School in Belmont Street, is large and commodious, and is provided with every modern appliance in the art of teaching.

At the close of the first year of study, pupil-teachers may apply for examination for diplomas, giving the right to teach in Elementary Schools; and after two years' study, or if found qualified at the close of the first year, they will on examination be entitled to diplomas as teachers of Model Schools. All the preceding regulations and privileges apply to female as well as to male pupil-teachers.

It is also contemplated, that such of the male pupil-teachers as may be distinguished by previous education, ability and industry, shall have the further privilege of entering on the University course as free students, with the view of qualifying themselves for teaching in colleges, academies and other institutions for superior education.

The Session commences on the 1st of September and extends to the 1st July: and with the view of accommodating those who may be unable to enter at the commencement of the session, or whose previous education may enable them to enter at a more advanced period, the course of study is divided into terms as follows:

1. JUNIOR CLASS STUDYING FOR THE ELEMENTARY DIPLOMA.

FIRST TERM, from September 1st to December 20th.

(Entrance Examination as stated above.)

English—Grammar and Composition so far as to parse Syntactically, and write correctly a few short descriptive sentences—Text-Books, Bullion's Grammar and Parker's Progressive Lessons; Reading and spelling, Etymology, Penmanship.

Geography—So far as to have a good acquaintance with the Map of the World.

History—Outline of Sacred and Ancient History.—History of Canada. Text-Book, White and Roy.

Arithmetic—Simple and compound rules, Vulgar and Decimal Fractions, Practice and Proportion, with explanation and demonstration of rules. Text-Book, Sangster's Arithmetic.

Algebra—The elementary rules as in the Algebra of Chambers' Educational course.

Geometry—First book of Euclid.

French—Elements of Grammar, easy reading and translation Text-Book, Endorff.

Natural History—Elements of Animal Physiology.

Drawing—Elements and simple outlines.

Music—Elements of Vocal Music.

SECOND TERM—January 1st to April 1st.

Pupils entering at the commencement of this term will be expected to pass a satisfactory examination in the Subjects of the previous Term.)

English—Grammar and Composition, so far as to be able to analyse simple complex sentences, and to write correctly a short essay on a familiar subject.

Geography—So far as a good acquaintance with the physical features and political divisions of the great Continents.

History of England and France. Ancient History.

Arithmetic—Commission, Brokerage, Insurance, Purchase of Stocks, Interest, Exchange. Book-keeping.

Algebra—Simple Equations of one and two unknown quantities.

Geometry—Second and Third Books of Euclid.

French—Grammar continued, including Syntax, Reading, Translation, and Written Exercises.

Natural History—Systematic Zoology. Text-book, Patterson's Zoology Schools.

Drawing—Landscape, &c., in pencil.

Music—Vocal Music continued.

THIRD TERM—April 1st to July 1st.

Pupils entering at the commencement of this Term, will be expected to pass a satisfactory examination in the subjects of the two previous Terms.)

English—Advanced Lessons in Grammar and Composition.

Geography and History—Advanced Lessons, with use of Globes, and recitation of previous parts of the course.

Art of Teaching—Including Hygiene and Elements of Mental Science.

Arithmetic—Conclusion of Commercial Arithmetic, and General Recapitulation.

Algebra—Quadratic Equations and Recapitulation.

Natural Philosophy—Matter, Motion, and Mechanical Powers.

French—Advanced Grammar, Composition, Reading, and Conversation.

Natural History, Drawing and Music—Continued as in previous term.

Religious Instruction will be given throughout the Session.

II. SENIOR CLASS STUDYING FOR THE MODEL DIPLOMA.

Pupils entering this Class will be expected to pass a satisfactory examination in the subjects of the Junior Class. The Class will pursue its studies throughout the Session, without any definite division into Terms.)

English—Principles of Grammar and Composition, Style. History of the English language. Lectures on English Literature. Elocution.

Geography—Mathematical, with Nautical Problems, Detailed Course of Political and Physical Geography.

History—Mediæval and Modern, with especial reference to the History of Literature, Science, and Art, and to Colonization and Commerce.

Education—Advanced Course of Lectures on Educational Subjects.

Mathematics—Logarithmic, Algebraic, and Geometric Arithmetic, Recapitulation of Commercial Arithmetic. Quadratic Equations continued. Ratios and Progressions. Theorem of Undetermined Co-efficients. Binomial and Exponential Theorems. Theory of Equations. 5th and 6th Books of Euclid. Elements of Solid Geometry and Trigonometry.

Natural Philosophy—Hydrostatics, Pneumatics, Heat, Optics, and Electricity.

French—Advanced Course of French Literature, with Composition and Conversations in French.

Natural History—Botany, and Vegetable Physiology.

Agricultural Chemistry—Principles and applications to Canadian Agriculture.

Drawing—Figures from the Flat and from Models—Elements of Perspective.

Music—Instrumental Music, and continuation of Vocal Music.

Religious Instruction—Throughout the Session.

Classics—A course of study in Classics, with the view of obtaining the Academy diploma, will be provided for those pupils who may be found fitted to enter upon it.

EXTRACTS FROM THE REGULATIONS.

Special Regulations for the admission of Pupil-teachers.

Article First—Any person desirous of being admitted as a pupil-teacher, must apply to the Principal of the Normal School, who, on his producing an extract from the Register of Baptisms, or other evidence, showing that he is fully sixteen years of age, with the certificate of character and conduct required by the 16th article of the general Rules and Regulations, approved by His Excellency, the Governor General in Council, on the 22nd December, 1856, shall examine the candidate.

If upon this examination, it is found that the candidate can read and write sufficiently well, knows the rudiments of grammar in his mother tongue,—arithmetic as far as the rule of three inclusively, and has some knowledge of Geography, the Principal shall grant him a certificate.

Article Second.—The candidate having thus obtained the certificate of the Principal, shall then, (in the presence of two witnesses who, with the Principal, shall countersign the same,) sign an application in writing for admission, containing the declaration required by the 23rd general regulation. This shall be forwarded to the Superintendent of schools, together with all the certificates and other documents required, and if the whole be found correct the Superintendent shall cause the name of the candidate to be inscribed in the register, and due notice thereof shall be given to the Principal.

Article Third.—The pupil-teachers shall state the place of their residence, and those who cannot reside with their parents, will be permitted to live in boarding-houses, but in such only as shall be specially approved of. No boarding-house having permission to board male pupil-teachers, will be permitted to receive female pupil-teachers as boarders, and *vice versa*.

Article Fourth.—Every pupil-teacher on passing the examinations, will be allowed a sum not exceeding £9, to assist in paying his board.

Article Fifth.—Every pupil residing at a distance of more than ninety miles from the city of Montreal, shall be entitled to receive an allowance for travelling expenses, proportionate to the distance, but not to exceed two pounds ten shillings *per annum*.

Article Sixth.—The total amount of allowances paid to pupil-teachers

Under the foregoing articles, shall not exceed £333 6s. 8d. currency, yearly—
 that being the sum granted for this object; and when the whole of this
 amount is appropriated, such pupil-teachers as may apply for admission shall
 be entitled to any portion thereof, until vacancies shall occur.

Special Regulations for Government and Discipline.

Article First.—Pupil-teachers guilty of drunkenness, of frequenting taverns,
 entering disorderly houses or gambling houses, of keeping company with
 disorderly persons, or of committing any act of immorality or insubordination,
 shall be expelled.

Article Second.—There shall be no intercourse between the male and fe-
 male pupil-teachers while in the school, or when going to, or returning from
 school. Teachers of one sex are strictly prohibited from visiting those of the
 other.

Article Third.—They are on no account to be absent from their lodgings
 after half-past nine o'clock in the evening.

Article Fourth.—They will be allowed to attend such lectures and public
 meetings only as may be considered by the Principal conducive to their
 moral and mental improvement.

Article Fifth.—Proprietors of boarding-houses authorised by the Principal,
 shall report to him any infraction of the rules, with which they may become
 acquainted.

Article Sixth.—The Professors shall have the power of excluding from the
 school for a time, any student who may be inattentive to his studies or
 guilty of any minor infraction of the regulations.

Article Seventh.—Pupil-teachers shall be required to state, with what reli-
 gious denomination they are connected, and lists of the students connected
 with each denomination shall be furnished to one of the ministers of such de-
 nomination resident in Montreal, with a request that he will meet weekly
 with that portion of the pupil-teachers, or otherwise provide for their religious
 instruction.

Every Thursday afternoon, after four o'clock, will be assigned for this
 purpose.

Article Eighth.—In addition to punctual attendance at the weekly religious
 instruction, each student will be required to attend public worship at his own
 church, at least every Sunday.

Any additional information that may be desired, may be obtained on appli-
 cation to the Principal, or to either of the Professors.

MODEL SCHOOL OF M'GILL NORMAL SCHOOL.

Teacher of Boys' School—Mr. James McGregor.

“ Girls' School—Miss Mary McCracken.

These schools can accommodate about 300 pupils, are supplied with
 the best furniture and apparatus, and conducted on the most modern
 methods of teaching. They receive pupils from the age of six and up-
 wards, and give a thorough English education. Fee, Senior Class,
 3s. 3d. per week : Intermediate, 1s. ; Junior, 9d. ; payable weekly.

Time Table of McGill Normal School, 1862-63.

SENIOR DIVISION.

HOURS.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
9 10 11	Model School.	History. Geography. Grammar.	Agricul. Chemistry.	Education. English Literature. Composition.	Model School.	Elocution. Drawing. Singing.
1 2 3 4	Natural Philosophy. Arithmetic. Algebra & Writing. French.	Model School.	Arithmetic. Geometry & Writing. Botany. French.	Model School. Religious Instruction.	Algebra. Geometry. General Exercise. French.	

JUNIOR DIVISION.

9 10 11	History. Geography. Composition.	Model School.	English Literature. Zoology. Grammar.	Model School.	French. Grammar. History.	Drawing. Elocution. Singing.
1 2 3 4	Model School. Art of Teaching.	Arithmetic. Algebra and Writing. Geometry. French.	Model School. Chemistry.	Arithmetic. Algebra. Geometry & Writing. Religious Instruction.	Model School. Geography.	

EXAMINATION PAPERS

M'GILL UNIVERSITY,

MONTREAL.



SESSION OF 1881-82.

PRINTED BY JOHN LOVELL AT THE CLARENCE STREET PRESS

1882.

Name	Address	City	State	Country
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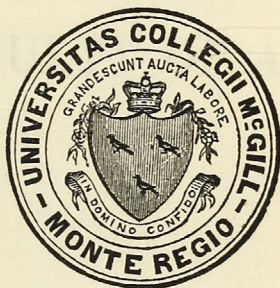


EXAMINATION PAPERS

OF THE

M^CGILL UNIVERSITY,

MONTREAL.



SESSION OF 1861-62.

Montreal:

PRINTED BY JOHN LOVELL AT THE CANADA DIRECTORY OFFICE,

1862.

EXAMINATION PAPERS

OF THE

MCGILL UNIVERSITY,

MONTREAL.



SESSION OF 1861-62.


Montreal:

PRINTED BY JOHN LOVELL AT THE CANADA DIRECTORY OFFICE

1862

EXAMINATION PAPERS
COLLEGE UNIVERSITY
1911

FACULTY OF ARTS.



THE UNIVERSITY OF CHICAGO

PHILIP H. RAVEN

1911

FACULTY OF ARTS



UNIVERSITY

MIDDLE COLLEGE

MONTREAL

STANLEY J. ...

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UNIVERSITY

OF

MCGILL COLLEGE,

MONTREAL.

EXAMINATIONS, JANUARY, 1862.

TUESDAY, JAN. 7th.—9 A. M. TO 1 P. M.

GREEK.—XENOPHON,—ANABASIS, BOOK I.

Examiner,..... REV. GEORGE CORNISH, B. A.

1. Translate Chap. I., §§ 3—7 inclusive.

2. *a.* Translate and state the exact difference in meaning between the following uses of the verb *βουλεύειν*:—*βουλεύειν τινά*; *β. τινί*; *βουλεύεσθαι*; *βουλεύεσθαι περὶ τινός*. *b.* Explain the syntax of the clause *πάντας οὕτω διατιθεῖς * * * * ἢ βασιλεῖ*. *c.* Give the exact meaning of the prepositions in the following expressions;—*διαβάλλει τ. κ. πρὸς τὸν ἀδελφόν*; *ἀποπέμπει ἐπὶ τὴν ἀρχήν*; *ἔσται ἐπὶ τῷ ἀδελφῷ*; *ἀφικνεῖτο τ. παρὰ βασιλέως πρὸς αὐτόν*; *παρ' ἐαντῷ*; *ἐκ βασιλέως δεδομένοι*; *ὑπὲρ τῆς κώμης * * ἐφ' οὗ. x. 11*; *ἐφ' ἡμῶν: ix. 12.*

3. Translate and give the force of the particle *ὡς* in the following expressions;—*διαβάλλει ὡς ἐπιβουλοί*; *ὡς ἀποκτενῶν*; *ὡς ἀπῆλθε κινδ.*; *ὡς πολεμεῖν * * εἶσαν*; *ὡς μάλιστα ἔδνατο*; *παρήγγειλε ὡς ἐπιβουλέοντος*; *ἀπέθανον ὡς πεντακόσιοι.*

4. *a.* Of what country was Xenophon? When did he live? What was his position in the army previous to the battle of Cunaxa? How did he distinguish himself after the death of Cyrus? *b.* What are the leading characteristics of the style of Xenophon? What do you understand by the terms *genuineness* and *authenticity*, as applied to literary productions? State the general principles on which these are established. *c.* The genuineness of the *Anabasis* has been questioned. To whom has it been ascribed, and for what reason? On what grounds may the claim of Xenophon to the work be vindicated?

5. Translate Chap. II. §§ 15 and 16; and III., §§ 1 and 2.

6. *a.* Parse the following verbs ;—*ταχθῆναι, στήναι, συντάξαι, ἔγνω, ἔστως, ἀφεστήκεσαν, ἐκπεπτωκότας, ἠσθάνετο, κατεθέμην, ἐπήνεσαν.* *b.* Explain the forms *πλείους* and *μείζους*. How do you account for the genitive in the expression *ἵεναι τοῦ πρόσω*? What is the force of *κατὰ* in the compounds *κατεθέμην* and *καθηδύπαθησα*, respectively? *c.* Decline, (with accents, the following nouns and adjectives ;—*στρατία, πρῶτος, χρόνος, ἄνθρωπος, ἔρημος, ἱκανός, πρᾶγμα.*

7. Translate Chap. VI. §§ 3—5 inclusive ; and VIII., §§ 8—10 inclusive.

8. *a.* Give the different significations of the phrase *τίθεσθαι τὰ ὄπλα.* *b.* What do you supply with the word *δείλη*? How was the afternoon divided? What part of the day is meant in VIII. § 8? *c.* Give the derivation of *κονιορτός, νεφέλη, τάξεις, γερρόφοροι, δαρεικός, στάδιον, διαβάτης, σχεδίαις, ἀμαξιτός, ἀπόρρητον, εὐώνυμος.* For what is *ἐλῶντα* used?

9. Translate Chap. IX., §§ 22—24 inclusive. Explain the grammatical construction of § 24.

10. Translate Chap. X., §§ 8—12 inclusive.

11. *a.* Explain the movement narrated in § 9. Supply the ellipsis of *ἐκ πλέονος. ἀετόν τινα.* What is the force of *τινα* here? *b.* IX. § 3. *ταῖς βασιλέωσ θύραις.* What custom is alluded to in this expression. What expressions do we now use answering to it?

12. *a.* Write a sketch of the history of Persia, so far as it has to do with Grecian affairs, and give the dates of the leading events. With what event did the hostility of Persia towards Greece originate? *b.* Give the date of the Anabasis. What important results sprang from it?

13. Conjugate and accentuate the Present and Imperfect Indicative Active of *καλέω*: the Optative and Subjunctive, Aorist Active, of the same: and likewise the Aorist and Future, Passive and Middle, of *βουλεύω.*

It is found the following...

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UNIVERSITY

MCGILL COLLEGE

MONTREAL

Latin-Greek-Glossary

1888

Prof. J. G. G. G. G.

1. Translate into English the following expressions...

- 1. Translate into English the following expressions...
- 2. Translate into Greek the following expressions...

UNIVERSITY

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MONTREAL.

EXAMINATIONS, JANUARY, 1862.

WEDNESDAY, JAN. 8th.—9 A. M. TO 1 P. M.

LATIN.—CICERO.—ORATIONS AGAINST CATILINE.

FIRST YEAR.

Examiner,..... REV. GEORGE CORNISH, B. A.

1. Translate Orat. I. chap. 8, down to the words 'expectas proficiscere.'

2. Give an account of the life and conspiracy of Catiline. Can you state any particulars recorded by Sallust in his "Bellum Catilinarium" which corroborate the statements made by Cicero in these orations? What was the end of Catiline and the other leading conspirators?

3. What was the situation of affairs at Rome when Cicero was elected to the Consulship? What age and rank were requisite for that office? Write a historical sketch of the Consulship, and point out its peculiar functions and powers. Give the name, and date, of the first *Plebeian* who was elected Consul. State the various etymologies that have been given of the word *consul*:—which do you prefer, and why?

4. Write explanatory notes on the following expressions occurring in Orat. I.:

a. § 2. "Consul videret, ne quid respublica detrimenti caperet."

b. § 4. "De republica sententiam rogo."

c. § 5. "Consule designato."

d. § 6. "Quas omnes * * * proximis Idibus senties."

e. § 11. "An leges, quæ * * * rogatæ sunt."

f. § 12. "Si in hunc animadvertissem."

g. § 13. "Malleolos."

5. Translate Orat. II. Chap. 5, down to 'propagarit reipublicæ.'

6. *a.* For the common reading "abliguerunt," there is a reading, with better authority, "obligaverunt":—translate and explain, according to both, and state the reasons for preferring the latter. *b.* What is the difference between *impendēre* and *impēdēre*: *obliti* and *obliti*: *patrimonia*, *fortunas*, and *res*? *c.* "Qui mihi accubantes":—how do you explain this use of the Dative?

7. Translate Orat. III. Chap. 3.

8. *a.* State the exact meaning of the expressions;—"Rem ad senatum referre;" and "Rem ad senatum deferre." *b.* § 4. "Ex fati Sibyllinis;"—Give an account of these. What were the Saturnalia?" *c.* § 5. Translate and explain the words *tabellas*, *linum*, *incidimus*, *signum*, *manum suam*, with an account of the method and materials for writing in use among the Romans. State the distinction between *mandata*, *literæ*, and *epistola*.

9. Translate Orat. IV. Chap. 8, with explanatory notes on;—*circum tabernas*;—*illum sellæ, atque operis et questus quotidiani locum*; *cubile ac lectulum suum*; *omne instrumentum*.

10. In what places and before whom were these four orations respectively delivered? Give a brief narrative of the events that occurred during the intervals of their delivery. By what line of argument does Cicero, in the fourth oration, meet the objection of the unlawfulness of putting the conspirators to death? Give a short account of the cases which he adduces in support of his view.

11. *a.* Write down the Present, Supine, and Infinitive of the following verbs;—*fefellit*, *contigit*, *bacchabere*, *multaverunt*, *aggrevaverit*, *irretisses*, *dunt*, *prostravit*, *propagarit*. *b.* Give the Perfect, Supine, and Infinitive of;—*spondeo*, *pendo*, *tango*, *cado*, *sono*, *frango*, *fodio*, *fleo*.

MONTICELLO

The first of the... the second... the third... the fourth... the fifth... the sixth... the seventh... the eighth... the ninth... the tenth... the eleventh... the twelfth... the thirteenth... the fourteenth... the fifteenth... the sixteenth... the seventeenth... the eighteenth... the nineteenth... the twentieth... the twenty-first... the twenty-second... the twenty-third... the twenty-fourth... the twenty-fifth... the twenty-sixth... the twenty-seventh... the twenty-eighth... the twenty-ninth... the thirtieth... the thirty-first... the thirty-second... the thirty-third... the thirty-fourth... the thirty-fifth... the thirty-sixth... the thirty-seventh... the thirty-eighth... the thirty-ninth... the fortieth... the forty-first... the forty-second... the forty-third... the forty-fourth... the forty-fifth... the forty-sixth... the forty-seventh... the forty-eighth... the forty-ninth... the fiftieth... the fifty-first... the fifty-second... the fifty-third... the fifty-fourth... the fifty-fifth... the fifty-sixth... the fifty-seventh... the fifty-eighth... the fifty-ninth... the sixtieth... the sixty-first... the sixty-second... the sixty-third... the sixty-fourth... the sixty-fifth... the sixty-sixth... the sixty-seventh... the sixty-eighth... the sixty-ninth... the seventieth... the seventy-first... the seventy-second... the seventy-third... the seventy-fourth... the seventy-fifth... the seventy-sixth... the seventy-seventh... the seventy-eighth... the seventy-ninth... the eightieth... the eighty-first... the eighty-second... the eighty-third... the eighty-fourth... the eighty-fifth... the eighty-sixth... the eighty-seventh... the eighty-eighth... the eighty-ninth... the ninetieth... the ninety-first... the ninety-second... the ninety-third... the ninety-fourth... the ninety-fifth... the ninety-sixth... the ninety-seventh... the ninety-eighth... the ninety-ninth... the hundredth...

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UNIVERSITY

MOBILE QUARTER

MONTREAL

BERNARDINI

The following is a list of the names of the persons who have been admitted to the University of Montreal during the year 1885-1886. The names are arranged in alphabetical order of their surnames.

1. ADAM, J. B.

2. ADAMS, J.

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UNIVERSITY

OF

MCGILL COLLEGE,

MONTREAL.

EXAMINATIONS, JANUARY, 1862.

TUESDAY, JAN. 7th.—9 A. M. TO 1 P. M.

GREEK.—HERODOTUS.—BOOK I.

SECOND YEAR.

Examiner,..... REV. GEORGE CORNISH, B. A.

1. Translate Chaps. III. and IV.

2. *a.* Explain the construction of the sentence *οὕτω δὴ ἀρπάσαντος αὐτοῦ * * * δίκας γίνεσθαι*, and give the proper Latin pronouns for those which are used in the Greek. *b.* What expressions used in these chapters may be regarded as furnishing evidence as to (1) *the date*, and (2) *the origin*, of the several legends here narrated?

3. *a.* Translate and give the force of the expressions *οὕτω δὴ; καὶ δὴ;* and *καὶ δὴ καὶ*, as used by Herodotus. *b.* Translate Chap. 6, *πρὸ δὴ τῆς Κροίσου ἀρχῆς * * * * ἐξ ἐπιδρομῆς ἀρπαγῆ*. What is there peculiar in the use of *πρεσβύτερον* in this passage?

4. Translate Chap. XVII.

5. *ὑπὸ συρίγγων, πηκτίδων, αὐλοῦ γυναικίου τε καὶ ἀνδρηίου*:—Give a description of these instruments severally. What inference does A. GELLIIUS draw from the epithet *γυναικίου*? State the objection which has been brought against his interpretation of the passage. To what instruments used by the Romans have the *αὐλὸς ἀνδρηίος* and the *αὐλὸς γυναικίος* of the Greeks been supposed to correspond?

6. *a.* Give the composition and derivation of the following words, and the cognate forms of any of them that occur in Latin or English;—*ἄδρός, τρώματα, ἐντεταμένως, σπονδάς, κρητήρα, κολλητόν, ναυπηγίην, ἐπίστιος, κτήνεα, περιβραντήρια, θέσμια, κιβδήλφ, συνεχέως, ἀπωστοί, μοιραν, ζεύγος, νεήλυδα*. *b.* Parse the following verbs: *κατελεῖν, προσπταίσας, ἐνεπίμπρη, ἐστάμεναι, συνδιήνεικαν, καταστράφατο, προσεπικτωμένον, συντεταραγμενος, ἐπώρα, εἰσάμενοι, ἀποθορόντες, συνεπεπτώκεε*.

7. Translate Chaps. XLI. and XLII. How do you explain the form ἀχάρι?

8. Mention some of the peculiarities of the Ionic dialect. Turn the following words into Attic:—*βασιλήην, πιθών, ἐγνέατο, οἰκός, τρώματα, θωῶμα, ἐπίστιος, πλεῖνας, φαίνεαι.*

9. Translate Chap. L.

10. *a.* State the difference between *τρία τάλαντα* and *τρίτον ἡμιτάλαντον*
b. Give the respective weights of the Attic, Euboic, and Æginetan talents. Name, with their Latin names, the principal measures of length among the Greeks, and give the derivation of the terms employed.
c. Chap. 52:—*τὸ ξυστὸν τῆσι λόγχησι*;—Why is the plural here used? What is it intended to express?

11. Translate Chap. LXVII. Explain the grammatical construction of the clause *τοὺς δεῖ τοῦτον * * * ἄλλους ἄλλῃ.*

12. Give an account of the principal oracles which were consulted by Cræsus. Is it necessary to suppose the existence of any supernatural cause for inspiring the answers given by them, or can they in any, and in what way, be regarded as the results of human contrivance? Which oracle exercised the greatest political influence among the states of Greece?

13. *a.* At what period did Solon flourish? *b.* Describe the political and social condition of the Athenian people when he undertook the management of public affairs. *c.* Name the different parties that he found in contention with each other. *d.* Mention the leading features of the legislation of Solon at this time.

14. What is the modern name of the river HALYS? Describe its course, and point out what mistakes Herodotus appears to have made respecting it. Give the geographical positions of Sardis, Miletus, Ephesus, Smyrna, Colophon, Chios, Samos, Rhodes.

15. Give some account of the Cimmerians. At what period was their invasion of Asia Minor supposed by the ancient chronologers to have taken place?

7. The same thing is to be done in the case of the...

8. The same thing is to be done in the case of the...

9. The same thing is to be done in the case of the...

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15. The same thing is to be done in the case of the...

16. The same thing is to be done in the case of the...

UNIVERSITY

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MCGILL COLLEGE,

MONTREAL.

EXAMINATIONS, JANUARY, 1862.

WEDNESDAY, JAN. 8th.—9 A. M. TO 1 P. M.

LATIN.—HORACE.—EPISTLES AND ARS POETICA.

SECOND YEAR.

Examiner,..... REV. GEORGE CORNISH, B. A.

1. Give a short account of what is known respecting the life, rank, and education of Horace, with the date and place of his birth, confirming your statements by particulars which he has himself given, especially in his Epistles.

2. Translate Bk. I., Ep. 3, vs. 1-27.

3. *a.* To what is allusion made in v. 4? Explain and give the derivation of the verb *ampullatur*. What is the corresponding expression in Greek? What is meant by "Scripta Palatinus * * Apollo"?

b. Write explanatory notes on the following expressions in Ep. 1, vs. 4-6. "Spectatum satis et donatum jam rude:" "Armis Herculis * * fixis:" "Ne populum * * * arena." Point out the grammatical construction of Ep. 1, vs. 28-31. What is the tmesis in v. 32? vs. 50 and 51;—"Magna coronari Olympia:" "sine pulvere." Give the Greek for these expressions. In v. 55 some editions read 'perdocet,' others 'prædocet,' instead of the reading of the text. Translate according to each of the three, and point out which reading you regard as best.

4. Translate I., Ep. 6, vs. 49-68.

5. Give an account of the practice alluded to in vs. 50-55; what were the slaves called who were hired for this purpose? "trans pondera dextram porrigere:"—give the various meanings that have been assigned to these words. State the difference in meaning and derivation of *obliti* and *obliti*. v. 62, "Cærite cera digni:" explain the allusion.

6. Translate I., Ep. 17, vs. 11-37.

7. *a.* Give a short account of the character and tenets of the two philosophers alluded to in the above passage. *a.* Explain the words, *siccus, unctum, notat, eludebat, color, duplici panno, personam, inconcinnus, amictum.* *c.* To what does *hoc*, v. 19 refer? Is there, therefore, anything unusual in this use of it? Explain the grammatical construction of vs. 20—21 :—“*Equus ut me portet, * * * * nullius egentem;*” v. 28 :—“*Quidlibet indutus;*” vs. 30—32 :—“*Alter Mileti * * * * vivat ineptus.*” *d.* State the origin and explanations that have been given to the proverb in v. 36, “*Non cuivis * * * * adire Corinthum.*” In v. 45 how do you explain the Imperfect ‘*erat*’? *e.* Explain and give the derivation of *chlamydem, salebras, viatica, acumina, catellam, perisclidem, planum.*

8. Translate Bk.II. Ep. 1, vs. 69—89, inclusive.

9. *a.* State the general subject of Ep. 1, Bk.II. What value do you assign to the remarks and criticisms of Horace on the writings of the early Roman Poets? *b.* Ep. 1, 31 :—“*Nil intra est oleam, nil extra est in nuce duri.*” What does Horace mean by this saying? “*pingimus atque psallimus * * * unctis;*” explain the verbs here used, and what is the full force of the epithet *unctis*? In what branches of learning did the education of the Grecian youth consist? *c.* vs. 45—47 :—“*Utor promisso * * * ruentis acervi.*” What species of argument is here used? Who was its reputed inventor? Give a short account of the writers mentioned in vs. 50—59. What is meant by *Afrani toga*? Explain the words ‘*gravitate*’ and ‘*arte*,’ v. 60; ‘*dictare*,’ v. 71; “*crocum floresque * * Fabula,*” v. 79; ‘*gravis*’ ‘*doctus*,’ v. 82. “*Saliare Numæ carmen;*” “*Cautos nominibus rectis expendere nummos;*” ‘*obsæanis*,’ give the derivation. *d.* When was the festival of the Manes held? Explain the word, and state the difference between Manes, Lares, and Lemures.

10. Translate II., Ep. 2, vs. 87—101, inclusive.

11. In v. 80 what other readings have been given for ‘*contacta*’? What is Bentley’s? In v. 199 what others are there for ‘*domo procul*’? On what grounds is Bentley’s text of Horace objectionable? What are the fundamental rules to be observed in determining the text of an ancient author. Point out instances, in the Epistles of Horace, where Bentley and others have unwarrantably disregarded these rules.

12. Translate *Ars Poet.* vs. 98—111, inclusive.

13. Explain the construction of vs. 60—62. What great public works are alluded to in vs. 63—68?

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WALTER DOUGLAS

MONTHLY

BY WALTER DOUGLAS

THE UNIVERSITY OF CHICAGO

CHICAGO, ILLINOIS

VOLUME 1

NUMBER 1

1911

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EXAMINATIONS, JANUARY, 1862.

TUESDAY, JAN. 7th.—9 A. M. TO 1 P. M.

GREEK.—DEMOSTHENES,—DE CORONA.

THIRD YEAR.

Examiner,..... REV. GEORGE CORNISH, B. A.

1. Translate De Corona, page 218, Ed. Tauchnitz :—πολλὰ μὲν οὖν *
* * ἀγῶνα ἐνστησάμενος.

2. Write a sketch of the public life of Demosthenes, and point out, especially, those events in which he took a prominent part in thwarting the aggressive designs of Philip. State what appear to you to be the leading characteristics of the oratory of Demosthenes.

3. *a.* At what date was the suit of Æschines against Ctesiphon instituted? How long time elapsed before the trial took place? *b.* State definitely [the accusation which Æschines brought against Ctesiphon, and also the three distinct grounds on which he based it. Point out the strong points of the accusation which Æschines succeeded in establishing. On what did Demosthenes principally rely in the defence? *c.* Before what court was this cause tried? How was it constituted, and what was its mode of procedure?

4. Translate, page 227: τὸ μὲν τοίνυν * * * μικρὰ ἀποκρίνασθαι.

5. *a.* Give the dates of the events alluded to in the above extract. *b.* "Πύλας;" "τὸν πορθμὸν;" what is meant by these expressions? *c.* For "ὅπως μὴ ἀπίωσιν Dindorf reads "ὅπως μὴ ἀπίωμεν:"—which is the preferable reading, and why is it so?

6. Translate, page 229 :—'Ἐπὶ Μνησιφίλου ἀρχοντος, * * * εἶπε. Explain the clause "συγκλήτου ἐκκλησίας ὑπὸ στρατηγῶν γενομένης." How were the Athenian months divided? What days of the month are meant by 'δεκάτη ἀπίοντος;' 'ἕκτη ἰσταμένου;' and 'ἔνη καὶ νέα'? Explain the terms μὴν πλήρης and μὴν κοῖλος.

7. Translate, page 242 ;—*ἐνταῦθ' οὐδαμοῦ * * ἀτιμώσαντες τήμερον.*

8. *a.* What reasons may be assigned for regarding the foregoing letter of Philip, to which Demosthenes here alludes, as a forgery? *b.* “*καὶ σὺ προὔξενεις αὐτῶν :*” what office is here alluded to? What were its duties? “*ἀτιμώσαντες ;*”—How were they to do this? What was the penalty?

9. *a.* Name the dialect of the Decree given on p. 245, and translate its peculiar forms into Attic. Who were the principal writers in this dialect? *b.* Can you assign any reasons against the genuineness of this Decree? *c.* Explain the following expressions found in it:—*λαβὼν ῥήτραν ; ἐπιγαμίαν ; πολιτείαν ; ἐγκτασιν γὰς καὶ οἰκιᾶν ; πόθοσον ποτὶ τὰν βωλάν * * * μετὰ τὰ ἱερά ; καὶ τοῖς κατοικέειν * * * λειτουργίᾳν.*

10. Translate, page 248 ;—*ἡμεῖς τοίνυν * * * ὁ θεὸς διδῶ γενναίως.*

11. Give the geographical situations of the places mentioned in the above passage.

12. Give the derivation of the word *λειτουργία*. Enumerate the principal *λειτουργίαι* at Athens. Into how many classes were they divided?

13. Give a short account of the various forms of the Trierarchy, which, according to Böckh, existed at different times in Athens. What were the reforms which were effected in this department of the public service by the legislation of Demosthenes?

14. What were the functions and duties of ; 1. *ἡ ἐν Ἀρείῳ πάγῳ βουλή :* 2. *ἡ τῶν πεντακοσίων βουλή :* 3. *ἡ ἐκκλησία.* How often did the *ἐκκλησία* regularly meet, and how were its proceedings conducted?

1. The first question is whether the defendant is liable for the damage caused by the fire. The answer is yes, because the defendant was negligent in not taking proper precautions to prevent the fire from spreading.

2. The second question is whether the defendant is liable for the damage caused by the explosion. The answer is no, because the explosion was caused by a gas leak that was not the result of the defendant's negligence.

3. The third question is whether the defendant is liable for the damage caused by the collapse of the building. The answer is yes, because the building was in a state of disrepair and the defendant was negligent in not maintaining it properly.

4. The fourth question is whether the defendant is liable for the damage caused by the fire, explosion, and collapse of the building. The answer is yes, because the defendant's negligence was the proximate cause of all the damage.

5. The fifth question is whether the defendant is liable for the damage caused by the fire, explosion, and collapse of the building, and whether the defendant is liable for the damage caused by the fire, explosion, and collapse of the building, and whether the defendant is liable for the damage caused by the fire, explosion, and collapse of the building.

6. The sixth question is whether the defendant is liable for the damage caused by the fire, explosion, and collapse of the building, and whether the defendant is liable for the damage caused by the fire, explosion, and collapse of the building, and whether the defendant is liable for the damage caused by the fire, explosion, and collapse of the building.

7. The seventh question is whether the defendant is liable for the damage caused by the fire, explosion, and collapse of the building, and whether the defendant is liable for the damage caused by the fire, explosion, and collapse of the building, and whether the defendant is liable for the damage caused by the fire, explosion, and collapse of the building.

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WEDNESDAY JANUARY 27 - 4.45
1. The first part of the paper is devoted to a discussion of the general principles of the method of moments. It is shown that the method of moments is a special case of the method of maximum likelihood estimation. The method of moments is simpler and more direct than the method of maximum likelihood estimation. It is also more robust to outliers than the method of maximum likelihood estimation.

2. In what sense is the method of moments a special case of the method of maximum likelihood estimation? The method of moments is a special case of the method of maximum likelihood estimation in the sense that the method of moments estimates are the maximum likelihood estimates of the parameters of the distribution. The method of moments is simpler and more direct than the method of maximum likelihood estimation. It is also more robust to outliers than the method of maximum likelihood estimation.

3. The method of moments is a special case of the method of maximum likelihood estimation. The method of moments is simpler and more direct than the method of maximum likelihood estimation. It is also more robust to outliers than the method of maximum likelihood estimation.

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EXAMINATIONS, JANUARY, 1862.

WEDNESDAY, JANUARY 8TH.—9 A.M. TO 1. P.M.

LATIN.—JUVENAL.—SATIRES I., III. & VIII.

THIRD YEAR.

Examiner,..... REV. GEORGE CORNISH, B. A.

1. Translate Sat. I., vs. 51-72 inclusive.

2. In what year is it supposed Juvenal was born? What was the place of his birth and death? Under what Roman Emperors did he live? Is the picture of Roman life and manners, which he gives in his Satires, confirmed as truthful, or not, by the representations of other writers?

3. *a.* Write short explanatory notes on the following expressions which occur in the 1st Satire, translating them accurately at the same time: v. 1:—*Semper ego auditor tantum*? 5:—*Summi plena * * * et in tergo*. 20:—*Magnus Aurunca alumnus*. 27-29:—*Tyrias humero. * * * pondera gemmæ*. 44:—*Lugdunensem * * * ad aram*. 51:—*Venusina digna lucerna*. 69:—*Molle Calenum*. 71:—*Melior Locusta*. 73:—*brevibus Gyaris*. 88:—*Major * * sinus*. 95:—*Nunc sportula * * * togatæ*. 105:—*sed quinque tabernæ quadringenta parant*. 106:—*purpura major*. *b.* In v. 67 some editors place the comma after *signator*; how is the passage then rendered? What other readings have been given for *et* and *deducis* in v. 157.

4. Translate Sat. III., vs. 21-48 inclusive.

5. State the subject and argument of the third Satire. By what English writer has it been imitated?

6. *a.* "Augusto mense:"—What was the ancient name of this month, and why was it changed? Translate into modern dates:—"IX. KAL. OCT." "PRIDIE ID. SEXT." "A. D. IV. NON. MART." "ID. JAN." Translate into Latin, and according to the Roman method of computation

the following dates: January 9th, 1862. March 7th, B. C., 45. October 15th; September 15th. *b. v. 10*:—*madidam Capenam*. Why is the epithet *madidam* here used? In what part of Rome was the *porta Capena*, and whence came its name? Explain *vs. 13-16*;—what historical event connected with the Jews in Rome is here probably alluded to? Who were the *Camenæ*? What is the derivation of the word *Camenæ*? What other readings have been given for 'vulgi' and 'quum libet,' in *vs. 36 and 37*? If we read 'quem libet,' state the two interpretations, that may be given of the clause "et verso pollice * * * populariter." What custom is alluded to in "verso pollice?"

7. Translate *Sat. III. vs. 190—211* inclusive.

8. *a.* What is the modern name of *Præneste* and where is it situated? What epithet does *Horace* apply to it? Does *Juvenal* follow the common usage in making *Præneste* feminine? Give the situations and modern names of *Gabii*, *Volsinii*, and *Tibur*. *b.* Explain the expressions *frivola*, *tabulata tertia*, *urceoli sex*, *ornamentum abaci*, *opici mures*, *differt vadimonia Prætor*, *mediam Minervam*, *proavorum atavos*.

9. Translate *Sat. VIII. a. vs. 146-162. b. vs. 195-210. c. vs. 245-253.*

10. *a.* What country did the *Syrophœnicians* inhabit? What is meant by "*Idumææ incola portæ*." *b. v. 198*, '*citharædo Principe*' to whom is the allusion made? Give a general account of the *Gladiatorial exhibitions* of the *Circus* and explain the terms belonging to them in extract *b.* In *vs. 213 and 214* what punishment is alluded to? *c.* "*Arpinas alius*;" give his name. What was the date of the invasion of the *Cimbri*? Where and when was the decisive battle fought against them? *d.* Explain the construction of *vs. 247 and 248.*

11. What is the fundamental rule for the use of (*a*) *Qui* with the *Subjunctive*; and of (*b*) *Quum* with the *Indicative*? Give instances.

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EXAMINATION

GEOMETRY - ALGEBRA

1880-1881

1. It is a triangle the angles at the base be equal, the straight

lines drawn from the vertex to the base bisect the base and the angles at the vertex.

2. The angles formed by the intersection of two straight lines are equal to two right angles.

3. The angles formed by the intersection of two straight lines are equal to two right angles.

4. The angles formed by the intersection of two straight lines are equal to two right angles.

5. The angles formed by the intersection of two straight lines are equal to two right angles.

6. The angles formed by the intersection of two straight lines are equal to two right angles.

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11. The angles formed by the intersection of two straight lines are equal to two right angles.

12. The angles formed by the intersection of two straight lines are equal to two right angles.

UNIVERSITY
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EXAMINATIONS, JANUARY, 1862.

GEOMETRY.—ARITHMETIC.

1ST YEAR.—THURSDAY 9TH.—MORNING, 9 A.M. TO 1 P.M.

Examiner..... ALEXANDER JOHNSON, LL.D.

1. If in a triangle the angles at the base be equal, the triangle is isosceles.

2. From a point in a right line draw a right line which shall make an angle with the given line equal to a given rectilinear angle.

Given the base of a triangle, one base angle and the side opposite to it, construct the triangle.

3. Triangles standing on the same base and between the same parallels are equal.

Given the base of a triangle and the length of the line drawn from the vertex to the middle point of the base, construct the triangle so that the area shall be the greatest possible.

4. The square of the hypotenuse of a right-angled triangle is equal to the sum of the squares of the sides.

Find a right line whose square shall be equal to the difference of two given squares.

5. If a right line be divided into two parts, the square of the whole line is equal to the sum of the squares of the parts and twice the rectangle under the parts.

If it be divided into any number of parts, the square of the whole is equal to the sum of the squares of the parts and twice the sum of the rectangles under every possible pair of them.

6. If a right line be bisected and produced, the sum of the squares of the whole line thus produced, and of the produced part, is equal to twice the square of half the line, together with twice the square of the line made up of the half and produced part.

7. If two circles touch one another internally, the right line joining their centres, being produced, shall pass through a point of contact.

8. If a right line be a tangent to a circle, the right line drawn perpendicular to it from the point of contact passes through the centre of the circle.

If two concentric circles be described, any chord of the greater which is a tangent to the less is bisected at the point of contact.

9. If a right line be a tangent to a circle, and from the point of contact a right line be drawn cutting the circle, the angle made by this line with the tangent is equal to the angle in the alternate segment of the circle.

If two circles touch one another, and through the point of contact two lines be drawn cutting the circles in four parts, the chords joining these points are parallel to each other.

10. If two triangles have their sides proportional, they will be equiangular; and those angles will be equal which are opposite homologous sides.

11. Divide a given undivided line similarly to a given divided line.

Given the base of a triangle, the ratio of sides, and the length of the bisector of vertical angle, find locus of vertex.

12. If four right lines be proportional, the similar rectilinear figures similarly described on them are also proportional.

13. A bankrupt pays his creditors £1915 10s 6d; calculate the whole amount of his debts, the composition being 9s 5d in the £1.

14. The national debt of the United Kingdom amounted in the year 1860 to £801,477,741; the interest paid on it was £26,833,470; calculate the average rate per cent paid as interest.

The total revenue for the year ended June 1861 was £71,863,095; how much per cent was the total interest of the total revenue?

15. A book consists of $21\frac{3}{4}$ sheets of 16 pages, each page containing 38 lines; how many sheets will it run to if printed in sheets of 24 pages, each page containing 32 lines; the length of the line in the latter case being $\frac{2}{3}$ that of the former?

16. Divide 358.3 by 1.27, and from the quotient subtract $\frac{2}{3}$ of $\frac{4}{5}$ of 12.

8. The right line is a tangent to a circle, the right line is perpendicular to it from the point of contact, passes through the center of the circle.

If two concentric circles be described, any chord of the greater circle is a tangent to the less circle at the point of contact.

9. The right line is a tangent to a circle, the right line is perpendicular to it from the point of contact, passes through the center of the circle. The right line is a tangent to a circle, the right line is perpendicular to it from the point of contact, passes through the center of the circle.

10. If two circles touch, one another, and through the point of contact two lines be drawn, cutting the circles in two parts, the chords joining those points are parallel to each other.

11. If two triangles have their sides proportional, they will be equiangular, and their angles will be equal which are opposite homologous sides.

12. Divide a given rectified line similarly to a given divided line. Given the part of a line, the ratio of areas, and the length of the diameter of vertical circle, find focus of ellipse.

13. If two right lines be given, find the smaller rectangle which is exactly described on them and also proportional.

14. A ball is projected from a height of 20 feet, and falls into a pool of water, whose amount of his depth, the competition being 10 to the 20.

15. The national debt of the United Kingdom amounted to the sum of £100,000,000; the interest paid was £1,000,000; find the rate of interest.

16. The total revenue for the year ended 1851 was £27,000,000; how much per cent was the total interest of the total revenue?

17. A book consists of 211 sheets of 16 pages, each page containing 24 lines; how many sheets will it cost to be printed in sheets of 24 pages each page containing 24 lines; the length of the line in the latter case being 24 that in the former?

18. The distance between A and B is 100 miles, and from the equidistant point C, the distance to A is 60 miles, and to B is 80 miles; find the distance between A and B.

19. A man has a certain sum of money, and he spends it in the following manner: he buys a horse for £100, a cow for £50, a pig for £20, and a dog for £10; he then spends the remainder on a carriage, and finds that he has spent the whole of his money; how much did he have at first?

20. A man has a certain sum of money, and he spends it in the following manner: he buys a horse for £100, a cow for £50, a pig for £20, and a dog for £10; he then spends the remainder on a carriage, and finds that he has spent the whole of his money; how much did he have at first?

GEOMETRY

MONTEBELL

GEOMETRY

GEOMETRY

GEOMETRY

GEOMETRY

1. If two triangles be placed together so that one of the sides of the one shall be in a straight line with one of the sides of the other, and the angles at the vertex of the one be equal to the angles at the vertex of the other, then the two triangles shall be equal in all respects.
2. If two triangles be placed together so that one of the sides of the one shall be in a straight line with one of the sides of the other, and the angles at the vertex of the one be equal to the angles at the vertex of the other, then the two triangles shall be equal in all respects.
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EXAMINATION, JANUARY, 1862.

FRIDAY, JANUARY 10.—9 A.M. TO 1 P.M.

GEOMETRY.

FIRST YEAR.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. *a.* If all the sides of a polygon pass through given points, and all its angles except one move on given right lines meeting in a point which is in the same straight line with the two points through which the sides containing the free angle pass, prove that the locus of this angle is a right line. (The successive order of the sides and angles of the variable polygon being assigned).
b. State the reciprocal theorem.
2. *a.* If two triangles be polar reciprocals, one of the other, with respect to a circle, prove that the lines joining corresponding angles meet in a point.
b. Hence deduce a method of inscribing in a circle a triangle having its three sides passing through three given points.
3. *a.* Prove Pascal's theorem with respect to a hexagon inscribed in circle.
b. Show how Brianchon's theorem with respect to a circumscribed hexagon follows from it by reciprocation.
4. If four right lines be drawn from the same point, so as to cut a circle, the anharmonic ratio of any four of the points of intersection is the same as that of the remaining four.
5. If from the angles of a triangle three right lines be drawn passing through the same point (whether inside or outside the triangle) to meet the opposite sides, the products of the alternate segments of the sides will be equal.
6. The arithmetic, geometric and harmonic means between two right lines are in geometrical progression.

7. If from any angle of a triangle a perpendicular be let fall on the opposite side, the rectangle under the sides containing that angle is equal to the rectangle under the perpendicular and the diameter of the circle circumscribed about the triangle.

8. If D be the distance of the centre of the inscribed from the centre of the circumscribed circle of any triangle, and D' , D'' , D''' , the distances from the centres of the several exscribed circles, and R the radius of the circumscribed circle prove that

$$D^2 + D'^2 + D''^2 + D'''^2 = 12 R^2$$

9. If several circles pass through two points and cut a given circle, prove that the chords of intersection of all these circles with the given circle will pass through a given point.

10. Find the locus of intersection of tangents drawn to two circles, if one tangent be m times the other.

11. Find the locus of a point such that the sum of the squares of its distances from any number of given points shall be constant.

12. Given in position and magnitude, the bases of two triangles which have a common vertex, and the sum of their areas, find the locus of the vertex.

13. Prove that the circle which passes through the feet of the perpendiculars let fall on the sides of a triangle from the opposite angles, passes also through the middle points of the sides.

14. Given the three bisectors of the sides of a triangle, construct it.

15. Prove that the three perpendiculars of a triangle meet in a point.

16. Inscribe a square in a triangle.

1. If from any point of a straight line perpendiculars be let fall on the opposite sides of the vertex, the rectangle which they contain shall be equal to the rectangle under the perpendicular and the diameter of the circle circumscribed about the triangle.

2. If D be the distance of the center of the circle from the vertex of the circumscribed circle of any triangle, and V, O, C, the distance from the center of the circle to the vertex, and the radius of the circumscribed circle, prove that

$$D^2 + V^2 + R^2 = 4R^2$$

3. If several circles pass through two points and cut a given circle, prove that the chords of intersection of all these circles with the given circle will pass through a given point.

10. Find the locus of intersection of tangents drawn to two circles. It was required to be done in the other way.

11. Prove that the locus of a point such that the sum of the squares of its distances from any number of given points shall be constant.

12. Given 2 points and two circles, the locus of two circles touching both a point and a circle, and the sum of their radii, find the locus of the center of the circle which touches both circles and the two points.

13. Prove that the circle which passes through the feet of the perpendiculars let fall on the sides of a triangle from the opposite angles, passes also through the middle points of the sides.

14. Given the three bisectors of the sides of a triangle, construct it.

15. Prove that the three perpendiculars of a triangle meet in a point.

16. Inscribe a square in a triangle such that one vertex shall be at the vertex of the triangle and the other three on the sides.

17. Prove that the three medians of a triangle meet in a point, and that this point is the center of gravity of the triangle.

18. Prove that the three medians of a triangle divide it into six smaller triangles of equal area.

19. Prove that the three medians of a triangle are concurrent at a point, and that this point is the center of gravity of the triangle.

20. Prove that the three medians of a triangle are concurrent at a point, and that this point is the center of gravity of the triangle.

UNIVERSITY

MIDDLE COLLEGE

MONTPELIER

EXAMINATIONS, JANUARY, 1883.

GEOMETRY—ALGEBRA—TRIGONOMETRY.

AND JOHN TOWNSEND, JR.—MONTPELIER, V. T.
PUBLISHED BY ALBANY JOHNSON, L. D.

1. The sum of the three angles of a triangle is equal to two right angles.
2. The sum of the internal angles of any rectilineal figure, together with four right angles, is equal to twice as many right angles as the figure has sides. How is the latter statement modified if the figure have a re-entrant angle?
3. The sum of a triangle is equal to half the circumference under its base, and the perpendiculars on it from the vertex.
4. If a right line be bisected and one segment, the sum of the squares of the unequal segments is equal to twice the square of half the line and twice the square of the perpendicular bisecting it.
5. The difference of squares is a square, and the sum of their squares is a square, when the sides are equal.
6. In equal circles, the major arcs which subtend equal chords are equal, whether they be at the center or at the circumference.
7. In equal circles, sectors which stand upon equal arcs are equal.
8. If two triangles have an angle in each equal, the sides about two other angles proportional, and the remaining angles either both acute or both obtuse, or both right angles, the triangles will be similar.
9. From the extremities of the hypotenuse of a right-angled triangle there be drawn meeting equal angles to the sides, and the tangents on the sides between the points of section and the extremities of the hypotenuse be equal, the triangle is isosceles.
10. Divide a right line in extreme and mean ratio.
11. In the greater segment a part be taken equal to the less, the greater segment will be cut in extreme and mean ratio.

UNIVERSITY

OF

MCGILL COLLEGE,

MONTREAL.

EXAMINATIONS, JANUARY, 1862.

GEOMETRY.—ALGEBRA.—TRIGONOMETRY.

2ND YEAR.—THURSDAY 9TH.—MORNING, 9 TO 1.

Examiner..... ALEXANDER JOHNSON, LL.D.

1. The sum of the three angles of a triangle is equal to two right angles.

The sum of the internal angles of any rectilinear figure, together with four right angles, is equal to twice as many right angles as the figure has sides. How is the latter statement modified if the figure have a *re-entrant* angle?

2. The area of a triangle is equal to half the rectangle under the base and the perpendicular on it from the vertex.

3. If a right line be bisected and cut unequally, the sum of the squares of the unequal segments is equal to twice the square of half the line and twice the square of the intermediate part.

The difference of 2 lines is 4 inches, and the sum of their squares 170 square inches; find them.

4. In equal circles, the angles which stand upon equal arcs are equal, whether they be at the centres or at the circumferences.

In equal circles, sectors which stand upon equal arcs are equal.

5. If two triangles have an angle in each equal, the sides about two other angles proportional, and the remaining angles either both acute or both obtuse, or both right angles, the triangles will be similar.

If from the extremities of the hypotenuse of a right-angled triangle lines be drawn making equal angles with the sides, and the intercepts on the sides between the points of section and the extremities of the base be equal, the triangle is isosceles.

6. Divide a right line in extreme and mean ratio.

If on the greater segment a part be taken equal to the less, the greater segment will be cut in extreme and mean ratio.

7. Add $3a + \frac{a+x}{ax}$, $2a - \frac{a-x}{3x^2}$ and $\frac{a+x}{4a^2}$ together.

8. Solve the equations:

$$\frac{x+6}{4} - \frac{16-3x}{12} = \frac{25}{6}$$

$$a+x + \sqrt{a^2+x^2} = b$$

9. Solve:

$$6x^2 - 37x + 57 = 0$$

and

$$ax^2 + bx + c = 0$$

10. Expand $(1+x)^{-\frac{1}{2}}$ by the Binomial Theorem.

11. A cistern can be filled by one pipe in 16 minutes and emptied by another in 20 minutes. Supposing it at first empty, in what time would it be filled when both pipes are running?

12. If a carriage-wheel four feet in diameter pass over 10 feet of road, through what angle (expressed in degrees) does any spoke revolve?

13. Prove $\sin A + \sin B = 2 \sin \frac{1}{2}(A+B) \cos \frac{1}{2}(A-B)$

$$1 + \cos A = 2 \cos^2 \frac{1}{2}A.$$

14. What is the height of a hill, its angle of elevation at the bottom being $34^\circ 10' 25''$, while 560 feet from the bottom, measured on a horizontal plane, its elevation is found to be $21^\circ 35' 20''$?

15. Prove the following approximate formula for finding the distance of the sea-horizon in miles:

$$D^2 = 1.5 h$$

where D is the distance in miles, and h is the height in feet of the eye above the sea.

16. The boundaries of a breakwater, as seen from either A or B , two stations 1000 yards apart, of which A is situated due south of one extremity of the breakwater and B at an equal distance due east of the other, subtend an angle of 14° ; what is the rectilinear distance between the two ends of the breakwater?

7. Add $2 + \frac{a+b}{2}$ and $\frac{a-b}{2}$ together.

8. Solve the equations:

$$\frac{2x+10}{4} = \frac{10-3x}{2}$$

$$x^2 + 4x + 2 = 4$$

9. Solve:

$$x^2 + 4x + 2 = 4$$

and

$$x^2 + 4x + 2 = 4$$

10. Apply (14-15) to the following triangles:

11. A class can be filled by one sign in 15 minutes and emptied by another in 20 minutes. Suppose it is first empty, in what time would it be filled when both signs are running?

12. If a carriage wheel has 30 spokes, how many spokes pass over the axle in 10 minutes? (Expressed in degrees) How many spokes pass through when angle is expressed in degrees? How many spokes pass through when angle is expressed in radians?

13. From the following equations, find the value of $\sin A$ and $\cos A$ if $\tan A = \frac{3}{4}$.

14. What is the height of a hill, the angle of elevation at the bottom being 30° , and the angle of elevation at the top being 45° , if the distance between the two points of observation is 1000 feet?

15. From the following equations, find the value of $\sin A$ and $\cos A$ if $\tan A = \frac{3}{4}$.

16. A man starts at a point A and walks 1000 feet to a point B, then 1000 feet to a point C, then 1000 feet to a point D, and finally 1000 feet to a point E. What is the distance from A to E?

17. A man starts at a point A and walks 1000 feet to a point B, then 1000 feet to a point C, then 1000 feet to a point D, and finally 1000 feet to a point E. What is the distance from A to E?

18. A man starts at a point A and walks 1000 feet to a point B, then 1000 feet to a point C, then 1000 feet to a point D, and finally 1000 feet to a point E. What is the distance from A to E?

19. A man starts at a point A and walks 1000 feet to a point B, then 1000 feet to a point C, then 1000 feet to a point D, and finally 1000 feet to a point E. What is the distance from A to E?

20. A man starts at a point A and walks 1000 feet to a point B, then 1000 feet to a point C, then 1000 feet to a point D, and finally 1000 feet to a point E. What is the distance from A to E?

UNIVERSITY

MOORE'S COLLEGE

MONTHLY

EXAMINATIONS, JANUARY, 1921

PARTIAL, JAN. 1921 - A. M. 10.15

ANALYTICAL GEOMETRY - GEOMETRICAL

1. Given any number of points, the locus of a point such that the sum of its distances from the first $n-1$ of these points is constant is a circle. Show that the locus of a point such that the sum of its distances from the first $n-1$ of these points is constant is a circle. Show that the locus of a point such that the sum of its distances from the first $n-1$ of these points is constant is a circle.

A. The radius of this circle is given by the equation

$$r = \frac{1}{2} \left(\sum_{i=1}^{n-1} d_i^2 - \frac{1}{n-1} \left(\sum_{i=1}^{n-1} d_i \right)^2 \right)^{1/2}$$

where d_i denotes the distance of each point from the center of mass of the given points.

2. Find the locus of a point such that the sum of its distances from two fixed points is constant. Show that this locus is an ellipse.

3. Show that the locus of a point such that the sum of its distances from two fixed points is constant is an ellipse.

4. Find the condition that the general equation of the second degree should represent two straight lines.

5. Given two straight lines L_1 and L_2 and an angle θ . Find the locus of a point such that the angle subtended by the line segment joining the feet of the perpendiculars from the point to L_1 and L_2 is θ .

6. Find the area of the triangle formed by joining the feet of the perpendiculars from a point to the sides of a triangle.

7. Show that the locus of a point such that the sum of its distances from two fixed points is constant is an ellipse.

8. Given a circle and a point outside it. Find the locus of a point such that the sum of its distances from the center of the circle and the given point is constant.

9. Show that the locus of a point such that the sum of its distances from two fixed points is constant is an ellipse.

UNIVERSITY

OF

MCGILL COLLEGE,

MONTREAL.

EXAMINATIONS, JANUARY, 1862.

SATURDAY, JAN. 18th.—9 A. M. TO 1 P. M.

ANALYTICAL GEOMETRY.—ALGEBRA.—TRIGONOMETRY.

SECOND YEAR.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. α . Given any number of points, the locus of a point such that m' times the square of its distance from the first point + m'' times the square of its distance from the second + &c., shall be constant (which we may denote thus $S(md^2) = C$) is a circle whose centre is the centre of mean position of the given points.

β . The radius of this circle is given by the equation

$$r^2 S(m) = S(md^2) - S(mD^2)$$

where D denotes the distance of each point from the centre of mean position.

2. Taking the base and perpendicular of a triangle as axes of co-ordinates, and denoting the perpendicular by $2p$, and the segments of the base made by it by $2s$ and $2s'$

α . Form the equation of the circle passing through the middle points of the three sides.

β . Show that this circle passes through the feet of the three perpendiculars from the vertices on the sides.

3. Find the condition that the general equation of the second degree should represent two right lines.

4. Given two fixed points A and B , one on each of the axes: if A' and B' be taken on the axes, so that $OA' + OB' = OA + OB$, find the locus of the intersection of AB' and $A'B$.

5. α . Find the area of the triangle formed by joining the three points x_1y_1, x_2y_2, x_3y_3

β . Hence deduce the condition that the three points should be in one right line.

γ. Show by *pure geometry* that $y_1 x_2 - y_2 x_1$ is equal to double the area formed by the lines joining these points $(x_1 y_1, x_2 y_2)$ to the origin and to one another.

6. Investigate Ferrari's method for solving biquadratic equations.

7. α. State and prove Sturm's Theorem for determining the number and situation of the real roots of an equation.

β. Apply it to the equation $x^3 - 7x + 7 = 0$.

8. Solve the equation

$$x^7 + 5x^6 + 6x^5 - 6x^4 - 15x^3 - 3x^2 + 8x + 4 = 0$$

which has equal roots.

9. Prove that in any equation, the greatest negative coefficient, taken positively and increased by unity, is a superior limit to the positive roots.

10. Define a *determinant*. Prove that the product of two determinants is the determinant whose constituents are the sum of the products of the constituents in any row of one by the corresponding constituents in any row of the other.

11. Show that the product of the squares of the difference of the roots of an equation of the n^{th} degree may be expressed by the determinant

$$\begin{vmatrix} S_0, & S_1, & S_2, & \dots & S_{n-1} \\ S_1, & S_2, & S_3, & \dots & S_n \\ S_2, & S_3, & S_4, & \dots & S_{n+1} \\ \dots & \dots & \dots & \dots & \dots \\ S_{n-1}, & S_n, & S_{n+1}, & \dots & S_{2n-2} \end{vmatrix}$$

where S_p denotes the sum of the p^{th} power of the roots.

12. Define an *eliminant*. Prove that the eliminant of two equations of the m^{th} and n^{th} degrees respectively is of the n^{th} degree in the coefficients of the first, and of the m^{th} in the coefficients of the second.

13. Eliminate θ and ϕ from the equations

$$a \sin^2 \theta + b \cos^2 \theta = c$$

$$b \sin^2 \phi + a \cos^2 \phi = d$$

$$a \tan \theta = b \tan \phi$$

14. Prove $\log_e (1+z) = z - \frac{1}{2} z^2 + \frac{1}{3} z^3 - \frac{1}{4} z^4 + \&c.$

15. In a spherical triangle

$$\cot A \sin C = \cot a \sin b - \cos b \cos C$$

16. The sum of the angles of any spherical triangle lies between two and six right angles.

1. Show that the sum of the squares of the sides of a right-angled triangle is equal to the square of the hypotenuse.

2. Investigate the conditions for solving quadratic equations.

3. A line and curve through the origin for determining the number and situation of the real roots of the equation.

4. Apply it to the equation $x^2 + px + q = 0$.

5. Solve the equation $x^2 + px + q = 0$ which has equal roots.

6. Show that in any triangle the product of the sines of the angles is equal to the product of the cosines of the angles.

7. Show that the product of the sines of the angles of a triangle is equal to the product of the cosines of the angles.

8. In a triangle the sum of the squares of the sides is equal to the sum of the squares of the medians plus three times the square of the circumradius.

9. In a triangle the sum of the squares of the sides is equal to the sum of the squares of the medians plus three times the square of the circumradius.

10. In a triangle the sum of the squares of the sides is equal to the sum of the squares of the medians plus three times the square of the circumradius.

11. In a triangle the sum of the squares of the sides is equal to the sum of the squares of the medians plus three times the square of the circumradius.

12. In a triangle the sum of the squares of the sides is equal to the sum of the squares of the medians plus three times the square of the circumradius.

13. In a triangle the sum of the squares of the sides is equal to the sum of the squares of the medians plus three times the square of the circumradius.

14. In a triangle the sum of the squares of the sides is equal to the sum of the squares of the medians plus three times the square of the circumradius.

15. In a triangle the sum of the squares of the sides is equal to the sum of the squares of the medians plus three times the square of the circumradius.

16. The sum of the sines of any spherical triangle is less than two and six right angles.

UNIVERSITY

MEDICAL COURSE

MONTREAL

EXAMINATIONS, JANUARY, 1901

Travaux de Médecine, 1901

PHYSIQUE

Thème

Examiné par M. le Docteur J. G. Gagnier

1. Une tige AB est supportée horizontalement sur un pied fixe en A. On y suspend deux poids, P et Q, respectivement aux points C et D, situés à des distances respectives de AC et AD, mesurées à partir de A, et on demande de trouver la position de la tige AB, quand elle est en équilibre. On suppose que la tige est homogène et que son centre de gravité est au point G, qui est à une distance AG de A.
2. On suppose que la tige AB est supportée horizontalement sur un pied fixe en A. On y suspend deux poids, P et Q, respectivement aux points C et D, situés à des distances respectives de AC et AD, mesurées à partir de A, et on demande de trouver la position de la tige AB, quand elle est en équilibre. On suppose que la tige est homogène et que son centre de gravité est au point G, qui est à une distance AG de A.
3. On suppose que la tige AB est supportée horizontalement sur un pied fixe en A. On y suspend deux poids, P et Q, respectivement aux points C et D, situés à des distances respectives de AC et AD, mesurées à partir de A, et on demande de trouver la position de la tige AB, quand elle est en équilibre. On suppose que la tige est homogène et que son centre de gravité est au point G, qui est à une distance AG de A.
4. On suppose que la tige AB est supportée horizontalement sur un pied fixe en A. On y suspend deux poids, P et Q, respectivement aux points C et D, situés à des distances respectives de AC et AD, mesurées à partir de A, et on demande de trouver la position de la tige AB, quand elle est en équilibre. On suppose que la tige est homogène et que son centre de gravité est au point G, qui est à une distance AG de A.
5. On suppose que la tige AB est supportée horizontalement sur un pied fixe en A. On y suspend deux poids, P et Q, respectivement aux points C et D, situés à des distances respectives de AC et AD, mesurées à partir de A, et on demande de trouver la position de la tige AB, quand elle est en équilibre. On suppose que la tige est homogène et que son centre de gravité est au point G, qui est à une distance AG de A.
6. On suppose que la tige AB est supportée horizontalement sur un pied fixe en A. On y suspend deux poids, P et Q, respectivement aux points C et D, situés à des distances respectives de AC et AD, mesurées à partir de A, et on demande de trouver la position de la tige AB, quand elle est en équilibre. On suppose que la tige est homogène et que son centre de gravité est au point G, qui est à une distance AG de A.
7. On suppose que la tige AB est supportée horizontalement sur un pied fixe en A. On y suspend deux poids, P et Q, respectivement aux points C et D, situés à des distances respectives de AC et AD, mesurées à partir de A, et on demande de trouver la position de la tige AB, quand elle est en équilibre. On suppose que la tige est homogène et que son centre de gravité est au point G, qui est à une distance AG de A.
8. On suppose que la tige AB est supportée horizontalement sur un pied fixe en A. On y suspend deux poids, P et Q, respectivement aux points C et D, situés à des distances respectives de AC et AD, mesurées à partir de A, et on demande de trouver la position de la tige AB, quand elle est en équilibre. On suppose que la tige est homogène et que son centre de gravité est au point G, qui est à une distance AG de A.

Expliquez le sens de l'équation

$$P = a \cdot X$$

Quelle est la nature de la force ?

Si la force a pour la quantité de matière d'un corps, quel est le correspondant unitaire ?

Si la force a pour la quantité de matière d'un corps, quel est le correspondant unitaire ?

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EXAMINATIONS, JANUARY, 1862.

THURSDAY, 9th—9 A.M. TO 1 P.M.

MECHANICS—HYDROSTATICS.

THIRD YEAR.

Examiner.....ALEXANDER JOHNSON, LL.D.

1. Two weights, P and Q support each other on two inclined planes, making angles of 30° and 45° respectively with the horizon by means of a string passing over the vertex of the planes; find the ratio of P to Q , and the tension of the string.

2. Find the resultant of two parallel forces in magnitude and direction. A uniform bar 10 feet long and weighing 12 lbs. is placed on a prop 2 feet distant from one extremity, what weight ought to be suspended one foot distant from the same extremity that the bar may be in equilibrium?

3. In a balance with unequal arms, the true weight of any commodity is a geometric mean between its apparent weights when placed in the two scales.

4. If a body be supported on an inclined plane by a power parallel to the inclined plane; what is the ratio of the power to the weight?

5. Find the ratio of the power to the resistance in the wheel and axle from the principle of "constancy of work done."

6. Explain the meaning of the equation

$$F = m f.$$

What is the nature of its proof?

If the unit of m be the quantity of matter in a cubic inch of lead, what is the corresponding unit of F ?

7. If a body, under the influence of a constant force, move through 5 feet in 3 seconds, what is the magnitude of the force?

8. Describe Galileo's method for ascertaining the laws of motion.
9. If two weights, P and P' rest on inclined planes whose inclinations are i and i' , and be joined by a string passing without friction over the common vertex of the planes; find the acceleration acquired in one second by the weights?
10. If T and T' be the times of vibration of pendulums whose lengths are l and l' respectively, show that the following formula gives approximately the increase of time due to increase of length,

$$T' - T = \frac{T}{2} \times \frac{l' - l}{l}$$

11. A body weighing 100 lbs. moving at the rate of 4 miles per hour overtakes a body of 50 lbs. moving at the rate of 2 miles an hour, and their relative coefficient of elasticity is 4; find the velocity after impact, demonstrating your method.
12. Define a fluid. How are fluids subdivided? State and explain the fundamental principle of hydrostatics.
13. Show that in heavy liquids the difference of pressures on the unit of area placed at different depths is equal to the weight of a column of the liquid whose base is the unit of area, and whose height is the difference of level.
14. Find the *centre of pressure* in the case of a rectangular surface, one of whose sides coincides with the surface of the liquid.
15. Define *specific gravity*.
What is the volume of a piece of platinum whose weight is 10 lbs. ($s.g. = 22.06$.)
16. A mass of ice ($s.g. = 0.94$) in the shape of a parallelepiped floats in sea water, ($s.g. = 1.028$) 100 feet of it projecting above the surface, how much of it is below?

3. Describe Galileo's method for measuring the laws of motion.
4. If two weights P and Q rest on inclined planes whose inclinations are α and β , and be joined by a string passing without friction over the common vertex of the planes; find the equilibrium required in one of the weights.
5. If P and Q be the limits of equilibrium of a system whose weights are P and Q respectively, show that the following formula gives approximately the measure of time due to increase of length l :

$$T - T_0 = \frac{1}{2} \frac{g}{v} \frac{l^2}{v^2}$$

6. A body weighing 150 lbs. is set up at the rate of 4 miles per hour over a bank to the north at the rate of 2 miles an hour, and their relative coefficient of friction is 1; find the velocity after the point, demonstrating your method.
7. Define a ball, and give its properties. State and explain the fundamental principles of dynamics.

8. Show that the velocity of a body falling from a height h is proportional to the square root of the height. In this respect to the velocity of a body falling from a height h is the same as the velocity of a body falling from a height h .

9. Find the velocity of a body falling from a height h in terms of the height h and the acceleration g .

10. Define specific gravity. What is the volume of a piece of platinum whose weight is 15 lbs. (see p. 115.)

11. A mass of 100 lbs. is the weight of a body whose weight in air is 90 lbs. (see p. 115.) 100 lbs. of it projecting above the surface of the water. (see p. 115.) How much of it is below?

12. A mass of 100 lbs. is the weight of a body whose weight in air is 90 lbs. (see p. 115.) 100 lbs. of it projecting above the surface of the water. (see p. 115.) How much of it is below?

13. A mass of 100 lbs. is the weight of a body whose weight in air is 90 lbs. (see p. 115.) 100 lbs. of it projecting above the surface of the water. (see p. 115.) How much of it is below?

14. A mass of 100 lbs. is the weight of a body whose weight in air is 90 lbs. (see p. 115.) 100 lbs. of it projecting above the surface of the water. (see p. 115.) How much of it is below?

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MONTREAL

EXAMINATION, JANUARY, 1882

EXPERIMENTAL PHYSICS

Time 1 1/2 hours—2 P.M. to 3 P.M.

Answer the following questions in your own words.

1. Calculate the number of molecules and the mass of oxygen gas, weighing 100 grams, at 0° C. and 760 mm. Hg.
2. Describe the method of measuring the coefficient of expansion of a gas, and the method of measuring the coefficient of expansion of a liquid.
3. Describe the method of measuring the coefficient of expansion of a solid.
4. If 2 lbs. of water at 60° F. and 2 lbs. of water at 10° F. are mixed together, what will be the temperature of the mixture?
5. Describe a method of measuring the latent heat of steam by its own expansion.
6. Give a short account of the principle of the steam-engine.
7. How may the amount of latent heat of steam be ascertained?
8. In what way may it be shown that liquids are bad conductors of heat?

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EXAMINATIONS, JANUARY, 1862.

EXPERIMENTAL PHYSICS.

THIRD YEAR.—THURSDAY 9TH.—2 P.M. TO 4 P.M.

Examiner..... ALEXANDER JOHNSON, LL.D.

1. Calculate the number of Centigrade and Reaumur degrees corresponding to -40° Fahrenheit.
2. Describe Negretti's maximum thermometer and its action.
3. There is half a cubic inch of mercury in a thermometer at 32° F. ; when the temperature is raised to 92° F. the mercury ascends 4 in. ; what is the diameter of the bore of the glass tube, the coefficient of expansion of mercury for 1° being .00008696 ?
4. If 2 lbs. of water at 40° F., 5 lbs. at 65° F., 7 lbs. at 70° , and 3 lbs. at 90° be mixed together, what will be the temperature of the mixture ?
5. Describe a method of freezing water by its own evaporation.
6. Give a short account of the principle of the steam-engine.
7. How may the amount of latent heat of steam be ascertained ?
8. In what way may it be shown that liquids are bad conductors of heat ?

UNIVERSITY

McGILL COLLEGE

MONTREAL

EXAMINATION, JANUARY, 1901

Monday, January 15th - 9 AM to 1 PM

Mechanics - Hydrostatics

Time: 1 hour

Answer the following questions in full.

1. A body being acted on by a central attracting force -

a. Prove that the area swept out by the radius-vector in any time is proportional to the time.

b. Prove that the velocity of the body at different points is inversely proportional to the perpendicular on the radius-vector to the tangent.

c. Show that the differential equation to the orbit is polar co-ordinates is $\frac{d^2u}{dr^2} + u = \frac{\mu}{h^2}$

M.B. - Prove (a) and (b) both geometrically and analytically.

2. If a body is attracted to a centre of attraction from which it is projected with a velocity V in any direction, the attracting force varying inversely as the square of the distance, show that the orbit will be a conic section, and will be an ellipse, parabola, or hyperbola according as V is less than, equal to, or greater than $\sqrt{2}$ times the velocity of projection.

3. Find the time of oscillation of a cycloid pendulum. Why is the cycloid called a tautochrone curve?

M.B. - Discuss the position of the cycloid from its geometrical definition.

4. A heavy particle is projected vertically upwards in a medium in which the resistance is equal to kv , v being the velocity of projection, and the velocity of the particle when it again arrives at the point of projection.

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EXAMINATIONS, JANUARY, 1862.

SATURDAY, January 18th.—9 A.M. TO 1 P.M.

MECHANICS.—HYDROSTATICS.

THIRD YEAR.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. A body being acted on by a central attracting force;—

a. Prove that the area swept out by the radius rector in any time is proportional to the time.

β. Prove that the velocity of the body at different points is inversely proportional to the perpendicular on the tangent to its path.

γ. Show that the differential equation to the orbit in polar co-ordinates is

$$\frac{d^2u}{d\theta^2} + u = \frac{P}{h^2u^2}$$

N.B.—Prove (*a*) and (*β*) both geometrically and analytically.

2. If a body at a distance R from a centre of attracting force be projected with a velocity V in any direction, the attracting force varying inversely as the square of the distance, show that the orbit will be a conic section, and will be an ellipse, parabola, or hyperbola, according as V^2 is less than, equal to, or greater than $\frac{2\mu}{R}$; μ being absolute force.

3. Find the time of oscillation of a *cycloidal* pendulum. Why is the cycloid called a *tautochronous* curve?

N.B.—Deduce the equation of the cycloid from its geometrical definition.

4. A heavy particle is projected vertically upwards in a medium in which the resistance is equal to kv^2 ; if v be the velocity of projection, find the velocity of the particle when it again arrives at the point of projection.

5. Two smooth imperfectly elastic spheres moving with given velocities in given straight lines that intersect, impinge; investigate their motion after impact, the masses of the spheres and the coefficient of elasticity being given.

6. A body is projected vertically from the surface of the earth; find the height to which it will ascend, taking the variation of gravity into account, and neglecting the resistance of the atmosphere.

7. State and prove the principle of Virtual Velocities.

8. An elastic string has a weight attached to one end, it is fastened at the other, and hangs vertically; determine the extension of the string, making its own weight into account.

9. A right cone is placed on its base upon a *rough* inclined plane; investigate the condition that a motion of rolling and of sliding may take place simultaneously.

10. A uniform isosceles triangle is placed within a smooth hemispherical bowl, its three angles touching the bowl; if a be the length of each of the equal sides, h be the altitude of the triangle, r the radius of the hemisphere, θ the inclination of the triangle to the vertical, show that when the triangle is at rest

$$\tan \theta = \frac{3(4r^2 h^2 - a^4)^{\frac{1}{2}}}{4h^2 - 3a^2}$$

11. Find the volume and surface of the solid ring generated by the complete revolution of a circle about any external axis in its own plane.

12. Find the centre of gravity of a portion of a sphere intercepted between two parallel planes.

13. Find the *centre of pressure* of a triangular surface immersed in a fluid; one side being in the surface of the fluid, and the other perpendicular to it.

14. A cylindrical vessel is closed at the top, and very nearly filled with incompressible fluid which rotates uniformly about the axis of the cylinder; find the whole pressure on the curved surface and on the top of the cylinder.

15. If an incompressible fluid be enclosed in an immovable vessel and subjected to pressures produced on its surface by any number of pistons, show that the principle of virtual velocities holds in the case of equilibrium.

16. Write down the equations connecting the *weight*, *mass*, *density*, and *specific gravity* of a body, defining each of these terms, and illustrating the effect of a variation in the unit of any of the first three upon those of the others.

7. Two smooth particles of like specific gravities with given radii are in given straight lines that intersect; investigate their motion after impact, the radius of the spheres and the coefficient of elasticity being given.

8. A body is projected vertically from the surface of the earth; find the height to which it will ascend, taking the variation of gravity into account, and neglecting the resistance of the atmosphere.

7. State and prove the principle of Virtual Velocities.

9. An elastic string has a weight attached to one end; it is fastened at the other, and hangs vertically; determine the extension of the string, taking its own weight into account.

10. A right cone is placed on its base upon a rough inclined plane; investigate the condition that a motion of rolling and of sliding may take place simultaneously.

11. A uniform isosceles triangle is placed within a smooth hemispherical bowl, its base being touching the bowl; if h be the height of each of the equal sides, A be the altitude of the triangle, r the radius of the hemisphere, and θ the inclination of the triangle to the vertical, show that when the triangle is at rest

$$\tan \theta = \frac{2(h + \frac{1}{2}A^2 - r^2)}{2A^2 - h^2}$$

12. Find the volume and surface of the solid thus generated in the complete revolution of a circle about any external axis in its own plane.

13. Find the centre of gravity of a portion of a sphere, intercepted between two parallel planes.

14. Find the centre of gravity of a triangular lamina, bounded by a parabola, one side being in the centre of the base, and the other perpendicular to it.

15. A cylindrical vessel is closed at the top and very nearly full with incompressible fluid which extends uniformly above the axis of the cylinder; find the whole pressure on the curved surface and on the top of the cylinder.

16. If a homogeneous fluid be enclosed in an impenetrable vessel and subjected to pressures produced on its surface by any number of pistons, show that the principle of equal velocities holds in the case of equilibrium.

17. Write down the equations connecting the weight, mass, density, and centre of gravity of a body, defining each of these terms and illustrating the effect of a variation in the mass of any of the parts, these being those of the other.

UNIVERSITY

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EXAMINATIONS, JANUARY, 1922

PHYSICS - OPTICS - REFRACTION

QUESTIONS

1. Define the term "refraction of light". Show that the ratio of the sine of the angle of incidence to the sine of the angle of refraction is a constant for a given pair of media. Derive Snell's law of refraction.
2. Define the term "total internal reflection". Show that total internal reflection occurs when light travels from a denser medium to a rarer medium and the angle of incidence is greater than the critical angle. Derive an expression for the critical angle.
3. Define the term "dispersion of light". Show that the refractive index of a transparent medium varies with the wavelength of light. Derive an expression for the angular dispersion of a spectrum.

$$n = \frac{c}{v}$$

4. Investigate a method for determining the ratio of the refractive indices of two media. Derive an expression for the refractive index of a medium in terms of the speed of light in the medium and in vacuum.
5. Describe the construction and use of a spectrometer. Explain the principle of the diffraction grating and derive an expression for the angular position of the maxima in the diffraction pattern.
6. Describe the construction and use of a telescope. Explain the principle of the objective and eyepiece lenses and derive an expression for the magnifying power of a telescope.
7. If D be the diameter of the lens of a small telescope, f the focal length of the objective lens, and d the diameter of the lens of the eyepiece, show that the resolving power of the telescope is proportional to D .
8. The base of a candle is placed in front of a convex mirror of focal length f and the image is formed at a distance of $2f$ from the mirror. Find the position and magnification of the inverted image.

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EXAMINATIONS, JANUARY, 1862.

THURSDAY 9th—9 A.M. to 1 P.M.

ASTRONOMY—OPTICS—MECHANICS—HYDROSTATICS.

FOURTH YEAR.

Examiner.....ALEXANDER JOHNSON, LL.D.

1. Define Parallax. Show that the sine of the horizontal Parallax is equal to $\frac{r}{R}$; r being the radius of the earth and R the distance of the celestial body.

2. Define accurately "a day" and "a year."

3. Show that the periodic time of Mars may be found from the equation

$$M = \frac{T E}{T - E}$$

T being the interval from opposition to opposition, and E the periodic time of the earth.

4. Investigate a method for determining the ratio of the mass of the Sun to the mass of the Earth.

5. Describe the Gregorian telescope and find its magnifying power. Given the object speculum of 3 feet focal length, and an eye-glass of 1 inch focal length: find the focal length of a secondary concave mirror, which will render the telescope capable of magnifying distant objects 700 times.

6. Describe the eye as an optical instrument.

7. If D be the distance of the focus of a pencil of incident rays from a plane transparent surface, and μ be the index of refraction; find distance of focus of refracted pencil.

8. The flame of a candle measuring 2 inches in height is placed in front of a concave mirror of 3 feet radius at a distance of 10 feet; find position and magnitude of the inverted image.

9. Show that if a heavy particle be projected in a vacuum, its maximum range on a horizontal plane corresponds to an elevation of 45° .
10. A perfectly elastic sphere impinges upon an equal sphere at rest, so that the line joining their centres at the impact makes an angle of 45° with the line of approach of the first sphere; find the angle between their paths after the shock.
11. Prove that the diminution of gravity due to centrifugal force at any part of the earth, varies as the square of the cosine of the latitude.
12. The velocity acquired by a body in running down an inclined plane is equal to the velocity acquired in falling down the height of the plane.
13. The weight of a globe in air is W , and in water w ; find its diameter, s and s' being the specific gravities of the water and air.
14. Define the "specific gravity" of a gas or vapour.
15. Describe the Hydrometer.
16. 1000 cubic inches of air have a temperature 32° and a pressure 28.84 inches; calculate the volume if the temperature become 60° and the pressure 29.5.

10. Show that if a body's path is projected in a vacuum, its mass
will vary as a horizontal plane corresponds to an elevation of 45° .

11. A perfectly elastic sphere impinges upon an equal sphere at rest
so that the line joining their centers at the instant makes an angle of
 45° with the line of approach of the first sphere; find the angle between
their paths after the shock.

12. Prove that the diminution of gravity due to centrifugal force at
any part of the earth, ranges as the square of the cosine of the latitude.

13. The velocity acquired by a body in running down an inclined
plane is equal to the velocity acquired in falling down the height of the
plane.

14. The weight of a globe in air is W , and in water w ; find its diam-
eter, x , and x being the specific gravities of the water and air.

15. Define the "specific gravity" of a gas or vapor.

16. Define the "density" of a body.

17. 1000 cubic inches of air have a temperature of 32° and a pressure
of 30 inches; calculate the volume if the temperature become 60° and
the pressure 20 .

18. A gas at 32° and 30 inches pressure is heated to 60° and the
pressure is found to be 20 inches; find the volume.

19. A gas at 32° and 30 inches pressure is heated to 60° and the
volume is found to be 40 inches; find the pressure.

20. A gas at 32° and 30 inches pressure is heated to 60° and the
volume is found to be 40 inches; find the pressure.

21. A gas at 32° and 30 inches pressure is heated to 60° and the
volume is found to be 40 inches; find the pressure.

22. A gas at 32° and 30 inches pressure is heated to 60° and the
volume is found to be 40 inches; find the pressure.

23. A gas at 32° and 30 inches pressure is heated to 60° and the
volume is found to be 40 inches; find the pressure.

24. A gas at 32° and 30 inches pressure is heated to 60° and the
volume is found to be 40 inches; find the pressure.

25. A gas at 32° and 30 inches pressure is heated to 60° and the
volume is found to be 40 inches; find the pressure.

26. A gas at 32° and 30 inches pressure is heated to 60° and the
volume is found to be 40 inches; find the pressure.

27. A gas at 32° and 30 inches pressure is heated to 60° and the
volume is found to be 40 inches; find the pressure.

28. A gas at 32° and 30 inches pressure is heated to 60° and the
volume is found to be 40 inches; find the pressure.

29. A gas at 32° and 30 inches pressure is heated to 60° and the
volume is found to be 40 inches; find the pressure.

30. A gas at 32° and 30 inches pressure is heated to 60° and the
volume is found to be 40 inches; find the pressure.

31. A gas at 32° and 30 inches pressure is heated to 60° and the
volume is found to be 40 inches; find the pressure.

32. A gas at 32° and 30 inches pressure is heated to 60° and the
volume is found to be 40 inches; find the pressure.

UNIVERSITY OF MONTREAL
MONTREAL
EXAMINATION JANUARY 1951

SCIENCE FACULTY
MATH 201
MATH 201

Examination of the Faculty of Science, University of Montreal

1. The function $f(x)$ is defined by $f(x) = \frac{1}{x^2}$ for $x \neq 0$ and $f(0) = 0$.
a) Is $f(x)$ continuous at $x = 0$?
b) Is $f(x)$ differentiable at $x = 0$?
c) Is $f(x)$ continuous at $x = 1$?
d) Is $f(x)$ differentiable at $x = 1$?
2. Let $f(x) = \sin x$ and $g(x) = \cos x$.
a) Find $f'(x)$ and $g'(x)$.
b) Find $(fg)'(x)$ and $(\frac{f}{g})'(x)$.
3. Let $f(x) = x^2 + 3x - 5$.
a) Find $f'(x)$.
b) Find $f''(x)$.
4. Let $f(x) = \ln x$.
a) Find $f'(x)$.
b) Find $f''(x)$.
5. Let $f(x) = e^x$.
a) Find $f'(x)$.
b) Find $f''(x)$.
6. Let $f(x) = \frac{1}{x}$.
a) Find $f'(x)$.
b) Find $f''(x)$.
7. Let $f(x) = \frac{1}{x^2}$.
a) Find $f'(x)$.
b) Find $f''(x)$.
8. Let $f(x) = \frac{1}{x^3}$.
a) Find $f'(x)$.
b) Find $f''(x)$.
9. Let $f(x) = \frac{1}{x^4}$.
a) Find $f'(x)$.
b) Find $f''(x)$.
10. Let $f(x) = \frac{1}{x^5}$.
a) Find $f'(x)$.
b) Find $f''(x)$.
11. Let $f(x) = \frac{1}{x^6}$.
a) Find $f'(x)$.
b) Find $f''(x)$.
12. Let $f(x) = \frac{1}{x^7}$.
a) Find $f'(x)$.
b) Find $f''(x)$.
13. Let $f(x) = \frac{1}{x^8}$.
a) Find $f'(x)$.
b) Find $f''(x)$.
14. Let $f(x) = \frac{1}{x^9}$.
a) Find $f'(x)$.
b) Find $f''(x)$.
15. Let $f(x) = \frac{1}{x^{10}}$.
a) Find $f'(x)$.
b) Find $f''(x)$.

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EXAMINATIONS, JANUARY, 1862.

MONDAY, JAN. 13th.—9 A. M. TO 1 P. M.

MORAL PHILOSOPHY.

Examiner,.....REV. DR. LEACH.

1. The human faculties may be divided into two general classes— which are they and to what do they relate ?
2. How do these faculties enable us to deal with external things and contemplate them ?
3. Mention some of the most general relations which truth and error are concerned about.
4. Can we separate in thought these general relations from their objects, and if so, what do we term them ?
5. What distinction may be made between the laws of nature and the laws of human action ?
6. Distinguish between springs of action and motives.
7. Is there any analogy between the instincts of animals and the desires of man, and if so, what use may be made of this analogy ?
8. In what two forms does the desire of Society appear? Does it originate in the desire of personal safety, or of property, or how ?
9. Why are admiration and awe not to be regarded as moral sentiments ?
10. Shew that man as man must act according to rules.
11. Which are the two primary sources of moral rules, and what is the general term by which we express the united force of both.
12. Shew the necessity of a supreme rule of human action.
13. Shew that there must be rights antecedently to moral rules.
14. What objection lies against the use of the terms perfect obligation and imperfect obligation, for obligation and duty respectively ?

15. What is the doctrine of duties called, and the doctrine of rights and obligations?
16. By what are rights and obligations regulated?
17. Which are the legal obligations corresponding to rights of person, the corresponding duties and the corresponding moral precepts?
18. Which is the most essential element of morality and how does the idea of goodness or virtue grow and become more distinct in men's minds?
19. Show the correspondence between the five principal virtues and the five classes of rights.
20. Give the signification of the terms regard, tenderness, fondness, gratitude, goodwill, goodnature, esteem, respect, reverence, veneration, resentment, indignation, envy, revenge, fortitude, cowardice, decision, resolution, dissimulation, hypocrisy, wisdom, prudence, cunning.
21. Upon what supposition are wrong actions proceeding from ignorance or error, blameless?
22. When one finds he has done a wrong through ignorance or error, what is then his duty?
23. How is the moral culpability of ignorance of common moral principles shown?
24. Are we to make a distinction between our condemnation of immoral express principles and immoral operative principles, and why?
25. Which is the formula in which the duty of toleration is expressed?
26. How is morality dependent upon law, and how do the laws acknowledge their dependence upon morality?
27. What conception may be regarded as among the first and as one of the foundation stones of man's moral nature?
28. With reference to the moral progress of a nation, what may be considered as the first and the second steps by which moral rules are improved?
29. Show how the intellectual progress of the individual may be considered as a brief compendium of the intellectual progress of man.
30. What is meant by the term "State," as applied to a community?
31. Show that the State implies rulers, government and laws.
32. Why do rulers, the government and the laws not constitute the State?
33. Show that the State is not constituted out of individual rights contributed to the common stock, and then shared in the aggregate by consent, and administered by officers by consent established.
34. Why must the State be necessarily conceived as a moral agent, and why may it be said to have a life?
35. Mention some of the duties of the State.

1. What is the difference between the two types of rights and obligations?

2. What is the difference between the two types of rights and obligations?

3. What is the difference between the two types of rights and obligations?

4. What is the difference between the two types of rights and obligations?

5. What is the difference between the two types of rights and obligations?

6. What is the difference between the two types of rights and obligations?

7. What is the difference between the two types of rights and obligations?

8. What is the difference between the two types of rights and obligations?

9. What is the difference between the two types of rights and obligations?

10. What is the difference between the two types of rights and obligations?

11. What is the difference between the two types of rights and obligations?

12. What is the difference between the two types of rights and obligations?

13. What is the difference between the two types of rights and obligations?

14. What is the difference between the two types of rights and obligations?

15. What is the difference between the two types of rights and obligations?

16. What is the difference between the two types of rights and obligations?

17. What is the difference between the two types of rights and obligations?

18. What is the difference between the two types of rights and obligations?

19. What is the difference between the two types of rights and obligations?

20. What is the difference between the two types of rights and obligations?

EXAMINATION, JANUARY, 1911

MONDAY

EXAMINATION, JANUARY, 1911

Monday, January 19, 1911—9 A.M. to 1 P.M.

LOGIC

Answer the following questions in full, giving reasons for your answers. Have the answers written in full.

1. Show the relation of Logic to other sciences.

2. Distinguish the sciences that "the sciences of Logic are."

3. Give a brief definition of the science of Logic.

4. State in brief the objects of Logic.

5. Explain the difference between Logic and other sciences.

6. Explain the difference between Logic and other sciences.

7. Explain the difference between Logic and other sciences.

8. Explain the difference between Logic and other sciences.

9. Explain the difference between Logic and other sciences.

10. Explain the difference between Logic and other sciences.

11. Explain the difference between Logic and other sciences.

12. Explain the difference between Logic and other sciences.

13. Explain the difference between Logic and other sciences.

14. Explain the difference between Logic and other sciences.

15. Explain the difference between Logic and other sciences.

16. Explain the difference between Logic and other sciences.

17. Explain the difference between Logic and other sciences.

18. Explain the difference between Logic and other sciences.

UNIVERSITY

OF

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MONTREAL.

EXAMINATIONS, JANUARY, 1862.

MONDAY, JANUARY 13TH.—9 A.M. TO 1. P.M.

LOGIC.

Examiner,.....REV. DR. LEACH.

1. Show the relations of Logic to other sciences.
2. Disprove the assertion that "the adequate object of Logic is language."
3. Give, discriminatively, the signification of the term "formal" as applied to the science of Logic.
4. State in order, and explain the faculties of intuition or original perception.
5. Distinguish between first and second conceptions, the matter and sphere of conceptions,—presentative and representative conceptions,—abstract and concrete conceptions,—inferior and superior conceptions.
6. What is the difference between particular and individual judgments, and between tautological and identical judgments?
7. What is the difference between hypothetical and disjunctive judgments, and between analytical and synthetical judgments.
8. Explain the meaning of the terms "problematical," "assertive," "contingent," "necessary," as applied to judgments.
9. Explain the signification of the terms, axioms, postulates, problems, theorems, corollaries, lemmas, scholia.
10. Give the ordinary rules for the distribution of terms.
11. State the ordinary forms of opposition of propositions, and give examples.
12. Explain the difference between the analytic and synthetic forms of the syllogism, and give a concrete example of each.
13. Show that the analytic form is the more natural, and is even presupposed by the synthetic.

14. Disprove the assertion that the syllogism merely asserts in the conclusion what has already been granted in the premises.

15. What is the distinction between the figured and the unfigured syllogism? Give the canon for the unfigured syllogism and concrete examples, one in the synthetic and another in the analytic form.

16. State the assumption upon which the common rules for distribution are founded, and show the inadequacy of these rules for logical purposes.

17. State the principles that determine the distribution of the predicate, and enumerate the different classes of propositions that distribute the predicate as well as the subject.

18. Explain the principle of comprehension and extension as applied to the syllogism.

19. Read off the following judgments according to their comprehension and extension;

“Most of the springs of human action operate through the will.”

“A spirit must be regarded as a substance, and also as an active substance.”

20. By example show what is meant by an indirect as well as a direct conclusion.

21. State some of the reasons for desisting from the use of the fourth figure.

22. Give the corresponding negatives to each of the following syllogisms. Fig. I. oyy, aii, uii, iui. Fig II. yua, auy, iui, yaa. Fig. III, uya, aai, yay, aya.

23. Express the above syllogisms in the method of notation given.

24. Explain the three kinds of dilemma, and give an example of each kind in symbols.

25. How are inductive and deductive syllogisms commonly distinguished from each other? Give the formula of an inductive syllogism, supposing a complete enumeration of individuals or species in the case.

26. Give the common definition of an enthymeme, and construct from the following a regular syllogism;

“Ignorance of the signification of words disposes men to take on trust the errors and nonsense of them they trust; for neither error nor nonsense can without a perfect understanding of words be detected.”

27. Explain the characteristic properties of the episyllogism and the prosyllogism, and give examples of each.

28. Give an example of a sorites, both in the progressive and regressive forms.

14. Illustrate the concept of the categorical syllogism using an example in the form of a categorical syllogism. (10 points)

15. What is the difference between the broad and the narrow definition of logic? Give the scope for the broad and narrow definitions. (10 points)

16. State the assumption upon which the syllogism rules for distribution are based and explain the law of distribution for logical syllogism. (10 points)

17. State the syllogism that illustrates the distribution of the middle term and name the logical error of propositions that distribute the middle term as well as the subject. (10 points)

18. Explain the principle of composition and division as applied to the syllogism. (10 points)

19. List off the following judgments according to their composition and distribution. (10 points)

20. State the nature of the change of propositional operators through the syllogism. (10 points)

21. Give an example of a syllogism in which the middle term is distributed in both premises but not in the conclusion. (10 points)

22. Give the corresponding negatives to each of the following syllogisms. (10 points)

23. Explain the above syllogism in the method of relation given. (10 points)

24. Explain the three kinds of syllogism and give an example of each kind in symbols. (10 points)

25. How are inductive and deductive syllogisms compositionally related? (10 points)

26. Give the common definition of an inductive and deductive syllogism. (10 points)

27. Explain the significance of words chosen in the syllogism. (10 points)

28. Explain the characteristic properties of the syllogism and the syllogism. (10 points)

29. Give an example of a syllogism both in the progressive and regressive form. (10 points)

UNIVERSITY

OF

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MONTREAL.

EXAMINATIONS, JANUARY, 1862.

MONDAY, JAN. 13th.—9 A. M. TO 1 P. M.

ENGLISH.

Examiner,.....REV. DR. LEACH.

1. What was the language spoken by the first inhabitants of Great Britain?
2. Whence was the real origin and with what division of languages are the real affinities of the English language?
3. State the principal facts in the history of each of the early immigrations of the Germans into Britain.
4. State the direct evidence in favour of there having been German tribes in England anterior to A.D. 447.
5. Give the more probable date of the epoch of the Germanic invasions.
6. What is the general inference from Latham's criticism concerning the Jutes and the Angles?
7. Describe the position and boundaries of the country of the ancient Anglo-Saxons.
8. Give the evidence in favor of there being Frisians as well as Anglo-Saxons amongst the conquerors of Great Britain.
9. Give the two great divisions of the Saxon—say where each was spoken and which of the two was the mother tongue of the Angles of England.
10. Under what denomination are both the Germanic and the Scandinavian languages comprised; and say, where the dialects of the latter are spoken.
11. Mention the six languages comprised in the Low-Germanic division.

12. State the most characteristic difference between the Saxon and Icelandic tongues.

13. Out of what three elements may the English language be said to be formed?

14. State the characteristics (given) of the Celtic tongues as compared with the Gothic.

15. To what stock did the Norman French belong, and when was it introduced into England?

16. Explain the terms Provençal, Langue d'Oc, and Langue d'Oyl.

17. Give the five classes of the Celtic elements in the present English

18. State the epochs of the four "Latin periods," the characteristics of the different elements introduced in each, and give examples.

19. What do the chief Anglo-Norman elements of English consist of?

20. Give some examples of what are termed, the Miscellaneous elements.

21. Give some examples of the effect of the transformation of names.

22. Explain the signification of the term Hybridism.

23. Explain the fault designated "incompletion of the radical."

24. In the way of historical analysis state the number of English words that may be referred to each of the different sources of the language, as given for sake of illustration.

25. State in one or more of the forms given, the rule by which the earlier and later stages of a language may be determined.

26. With regard to gender in what do Anglo-Saxon adjectives and substantives differ from the English—with respect to number, in what do the substantives differ, and with respect to case in what do they differ?

27. Decline the nouns tunga, smith, and the adjective (in both forms) goda, gód.

28. Write out, in all its parts, the verb lufian.

12. State the most characteristic difference between the Latin and Germanic languages.
13. Out of what three elements was the Gothic language formed?
14. State the characteristics (if any) of the Gothic language as compared with the Gothic.
15. To what work did the Roman Vulgar Latin belong, and when was it introduced into Britain?
16. Explain the terms "Anglo-Saxon", "Anglo-Frisian" and "Anglo-Dutch".
17. Give the treatment of the Celtic elements in the present English.
18. State the origin of the term "Latin period", the characteristics of the different elements introduced in each, and give examples.
19. What are the chief Anglo-Norman elements of English, and how were they introduced into the language?
20. Give some examples of what are termed the Miscellaneous elements.
21. Give some examples of the effect of the transformation of Latin.
22. Explain the classification of the term Hindustani.
23. Explain the term "dialect" and "dialectal".
24. In the way of historical English state the number of dialects that may be found in each of the different countries of the language, as given for sake of illustration.
25. State in one or more of the forms given, the rule by which the order and later stages of a language may be determined.
26. With regard to gender, in what do Anglo-Saxon adjectives and substantives differ from the English—with respect to number, in what do the substantives differ, and with respect to cases in what do they differ?
27. Decline the nouns *king*, *smith*, and the adjectives *in* (both forms).
28. Write out in all its parts, the verb *to be*.
29. Write out in all its parts, the verb *to have*.
30. Write out in all its parts, the verb *to do*.
31. Write out in all its parts, the verb *to go*.
32. Write out in all its parts, the verb *to come*.
33. Write out in all its parts, the verb *to see*.
34. Write out in all its parts, the verb *to hear*.
35. Write out in all its parts, the verb *to speak*.
36. Write out in all its parts, the verb *to read*.
37. Write out in all its parts, the verb *to write*.
38. Write out in all its parts, the verb *to think*.
39. Write out in all its parts, the verb *to know*.
40. Write out in all its parts, the verb *to understand*.
41. Write out in all its parts, the verb *to love*.
42. Write out in all its parts, the verb *to hate*.
43. Write out in all its parts, the verb *to fear*.
44. Write out in all its parts, the verb *to hope*.
45. Write out in all its parts, the verb *to believe*.
46. Write out in all its parts, the verb *to doubt*.
47. Write out in all its parts, the verb *to wish*.
48. Write out in all its parts, the verb *to desire*.
49. Write out in all its parts, the verb *to seek*.
50. Write out in all its parts, the verb *to find*.
51. Write out in all its parts, the verb *to lose*.
52. Write out in all its parts, the verb *to gain*.
53. Write out in all its parts, the verb *to give*.
54. Write out in all its parts, the verb *to take*.
55. Write out in all its parts, the verb *to send*.
56. Write out in all its parts, the verb *to receive*.
57. Write out in all its parts, the verb *to pay*.
58. Write out in all its parts, the verb *to receive*.
59. Write out in all its parts, the verb *to owe*.
60. Write out in all its parts, the verb *to pay*.
61. Write out in all its parts, the verb *to beget*.
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UNIVERSITY
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MONTREAL.

EXAMINATIONS, JANUARY, 13TH, 1862.

GERMAN.

THIRD YEAR.

Examiner.....PROFESSOR C. F. A. MARKGRAF.

1. *a.* What class of Nouns do invariably modify the radical vowels *a, o, u,* and the diphthong *au* in the plural?
b. What Nouns never do so?
State rules and give examples.
2. Show the difference in the termination of the 4 cases singular, between Adjectives of the 2nd and those of the 3rd declension.
3. Give the nominative plural and the significations of *Pferd, Faden, Kaufmann, Knabe, Maler, Türke, Huhn, Vogel, Kloster, Wein, Werk, Feind, Kind, Vorrath.*
4. Define the meanings of *da* and *darin, dahin* and *hinein.*
5. Explain the use of the Prepositions *auf, zu, in,* when denoting motion.
6. When is the Accusative placed before, when after the Dative? Give an example for each case.
7. Give the different constructions in German for each of the following sentences:—To whom do you wish to write? Can you answer this letter? I have no desire to speak to him.
8. Decline in the 4 cases singular and plural, the personal pronouns *er, sie, es.*
9. Translate: Whose books have you? The man whose books you have. I have the books of the one whom you see—we have some paper, but we have not enough of it (translate “of it.”)
10. Decline—what (kind of) glove—this old friend—some fine glass—in the four cases singular and plural.
11. When is ‘more’ rendered by „*mehr,*“ when by „*noch?*“ Illustrate each given rule by one example.
12. Give the imperfect subjunctive and the first future subjunctive of the verbs *haben* and *sein,* and point out the difference between the Subjunctive and the Indicative of the same Tenses.
13. Translate into German:
What have the sons of our neighbor a desire to do? They wish to buy a few good pencils, and as many books as you have. Has that youth been anywhere? Where will the peasant carry his corn to? He will take it nowhere, but he will go to the field to cut some more of it. Have

you nothing more to give me? Can they come hither? They shall (fut.) go thither. When shall (fut.) you have time to take us into the warehouses of your friends to see their stores? Have these noblemen some more carriages? They have several more, but they are not as handsome as those which your father has. Am I right to pick up this crown and to give it to you? You are not wrong to pick it up, but you can keep it. Shall (fut.) you be at anybody's house to-day?

14. Translate into English :

Der Wolf ward ärgerlich, faßte sich aber doch und ging zu dem vierten Schäfer. Diesem war eben sein treuer Hund gestorben, und der Wolf machte sich den Umstand zu Ruhe. „Schäfer,“ sprach er, „ich habe mich mit meinen Brüdern im Walde veruneinigt, und so, daß ich mich in Ewigkeit nicht wieder mit ihnen aussöhnen werde. Du weißt, wie viel du von ihnen zu fürchten hast. Wenn du mich aber anstatt deines verstorbenen Hundes in den Dienst nehmen willst, so stehe ich dir dafür, daß sie keines deiner Schafe auch nur scheel ansehen sollen.“

„Du willst sie also,“ versetzte der Schäfer, „gegen deine Brüder im Walde beschützen?“

„Was meine ich denn sonst? Freilich.“

„Das wäre nicht übel. Aber wenn ich dich nun in meine Hürden einnehme, sage mir doch, wer sollte alsdann meine armen Schafe gegen dich beschützen? Einen Dieb ins Haus nehmen, um vor den Dieben außer dem Hause sicher zu sein, das halten wir Menschen“

„Ich höre schon,“ sagte der Wolf, „du fängst an zu moralisiren.“

(From Lessing's „Gesprächte des alten Wolfes.“)

Die Muttersprache.

(FRAGMENTARY.)

Muttersprache, Mutterlaut,
Wie so wonnesam, so traut!
Erstes Wort, das mir erschallet,
Süßes, erstes Liebeswort;
Erster Ton, den ich gelallet,
Klingest ewig in mir fort!

.....
.....
Sprache, schön und wunderbar,
Ach, wie klingest du so klar!
Will noch tiefer mich vertiefen
In den Reichthum, in die Pracht;
Ist mir's doch, als ob mich riefen
Väter aus des Grabes Nacht.

Klinge, klinge fort und fort,
Heldensprache, Liebeswort!
Steig' empor aus tiefen Gräften,
Längst verscholl'nes, altes Lied!
Leb' aufs Neu in heil'gen Schriften,
Daß dir jedes Herz erglüht!

Max v. Schenkendorf.

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EXAMINATIONS, JANUARY 13TH, 1862.

GERMAN.

FOURTH YEAR.

Examiner, PROFESSOR C. F. A. MARKGRAF.

1. What part of speech is "bis"? Has it different meanings? When is it followed by prepositions, when not? Do these prepositions denote rest or motion? Give examples.
2. Point out the peculiar forms by which Irregular Verbs are distinguished from Regular Verbs.
3. Explain and illustrate by examples the difference in the meanings of the Verbs können, kennen, wissen.
4. Where does the Verb of the subject stand in a dependent clause How do you dispose the components of a compound tense? What place do you assign to the separable Particle, when the Verb is in a simple, and when in a compound tense? Give rules and
5. Translate accordingly: He listens to what I tell him. Do you know where he has gone to? Has the servant brought you the coat which the tailor has mended? I hear that your brother will soon return from England. I shall breakfast before I go out. Will you show me the note which you have written?
6. To what gender belong the names of countries, towns and villages? How are they declined? Which of them form their cases by means of the definite article?
7. State those Adjectives and Adverbs which are irregular in the formation of their comparatives and superlatives. What Adjectives do not soften the radical vowels? How is the absolute Superlative formed?
8. What Verbs retain the form of the infinitive instead of the past participle?
9. Give the Past Participles of the Verbs ordnen, studiren, schneiden, zuhören, senden, bringen, abtragen, erhalten, legen, liegen, lesen, wissen, verbessern, halten, bitten.

0. What part of speech may *da*, *hier*, *wo*, be substituted for in expressions like *darauf*, *darum*, *hiermit*, *woran*? Is there any difference in meaning between „*von da*“ und „*davon*.“

Translate into German :

11. What do you ask me for? Can you tell me where the Pole lives? Have these people wherewithal to live? We shall not receive anybody to-night. From whom do they receive presents? Is your cousin older than you? He is younger than I, he is not quite eighteen years old. Who is going up the mountain? We will go up. They shall come down. Does your house stand on this side of the wood? It is on that side. He intends to set out the day after to-morrow. Who is ill? I am not. Will you pay for what you bought? I have paid him what I owed him. Let him sit there. I must stay here, because my uncle has told me to wait for him.

12. Translate into English :

Ich hebe mein Haupt kühn empor zu dem drohenden Felsengebirge, und zu dem tobenden Wassersturze und zu den krachenden, in einem Feuermeere schwimmenden Wolken, und sage: „Ich bin ewig, und ich trotz' eurer Macht! Brecht alle herab auf mich; und du Erde und du Himmel, vermischet euch im wilden Tumulte! und ihr Elemente alle, schäumet und tobet, und zerreibet im wilden Kampfe das letzte Sonnenstäubchen des Körpers, den ich mein nenne! mein Wille allein mit seinem festen Plane soll kühn und triumphirend über den Trümmern des Weltalls schweben; denn ich habe meine Bestimmung ergriffen, und die ist dauernder als ihr; sie ist ewig, und ich bin ewig, wie sie.“
(From Fichte's „Bestimmung des Menschen.“)

Aus dem Helm des Eisenhutes
Mit dem dunkelgrünen Laube
Tritt ein Ritter, kecken Muthes;
Schwert erglänzt und Pickelhaube.

Auf der Haube nickt die Feder
Von dem silbergrauen Reiher.
Aus der Lilie schwankt ein Mädchen;
Dünn, wie Spinnweb, ist ihr Schleier.

Aus dem Kelch des Türkenbundes
Kommt ein Neger stolz gezogen;
Licht auf seinem grünen Turban
Glüht des Halbmonds goldner Bogen.

Prangend aus der Kaiserkrone
Schreitet kühn ein Scepterträger;
Aus der blauen Iris folgen
Schwerbewaffnet seine Jäger.

(Fragment from „*der Blumen Rache*“ by F. Freiligrath.)

UNIVERSITY

MODERN COURSE

EXAMINATIONS

EXAMINATION, JANUARY, 1911

Topic: *January 11-12 and 13, 1911*

1. What is the difference between the two types of ... ?

2. How many ... ? Give the definition of each. What are the ... ?

3. What is meant by ... ?

4. What does the ... ?

5. What is the ... ?

6. What are the ... ?

7. What is the ... ?

8. What is the ... ?

9. What is the ... ?

10. What is the ... ?

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EXAMINATIONS, JANUARY, 1862.

TUESDAY, JANUARY 14.—11 A.M. to 1 P.M.

FRENCH.

FIRST YEAR.

Examiner.....P. J. DAREY, M.A.

1. Translate into French: *Humming-birds are the jewels of nature*; and give the rule to form the plural of the two nouns for: *Humming-birds* and *jewels*.
2. Translate into French: *I have a beautiful antique statue representing Diana the huntress*; and say what are the different forms for the two genders of the adjectives in that sentence.
3. Translate into French: *That woman is an Italian who is said to be as skilful an actress as she is a good singer*; and give the rule to form the feminine of Italian. What are the two feminine forms of *singer*? When do you use the one, and when the other?
4. When is *nul* an *adjective*, and when a pronoun? Give an example of each.
5. How many COMPLEMENTS are there in French? Give the definition of each. What are the different *compléments* in this sentence: *Aux petits des oiseaux Dieu donne la pâture quand ils en ont besoin*. Translate that sentence in English.
6. What is meant by *MODES PERSONNELS*? Name them.
7. What does the *Plus-que-parfait* express? Give a French sentence in which you use that tense.
8. From what tense is the *present of the subjunctive mood* formed? How is it formed?
9. What are the verbs which double the consonants *l* and *t* of the root? When do they do so?

10. Write the second person singular and plural of the verbs *s'emparer*, *bouiller*, *servir*, *sortir*, *coudre*, *croître* and *naitre*, in the *imperfect* of the indicative and subjunctive, *preterite definite*, *preterite anterior* and *past* of the subjunctive.

Translate into English :

Le style n'est que l'ordre et le mouvement qu'on met dans ses pensées : si on les enchaîne étroitement, si on les serre, le style devient ferme, nerveux et concis ; si on les laisse se succéder lentement, et ne se joindre qu'à la faveur des mots, quelque élégants qu'ils soient, le style sera diffus, lâche et traînant. Mais avant de chercher l'ordre dans lequel on représentera ses pensées, il faut s'en être fait un autre plus général et plus fixe où ne doivent entrer que les premières vues et les principales idées : c'est en marquant leur place sur ce premier plan qu'un sujet sera circonscrit, et que l'on en connaîtra l'étendue ; c'est en se rappelant sans cesse ces premiers linéaments qu'on déterminera les justes intervalles qui séparent les idées accessoires et moyennes qui serviront à les remplir. Par la force du génie, on se représentera toutes les idées générales et particulières sous leur véritable point de vue ; par une grande finesse de discernement on distinguera les pensées stériles des idées fécondes ; par la sagacité que donne la grande habitude d'écrire ou sentira d'avance quel sera le produit de toutes ces opérations de l'esprit.

(BUFFON.)

Translate into French :

Of all vices, there is no one more common nor more shameful than ingratitude, and Seneca has ranked it immediately after robbing, murder and sacrilege. This philosopher has not exaggerated its heinousness, for we cannot reproach a man for his ingratitude without reproaching him with every other vice : "*Omne dixeris maledictum, eum ingratum dixeris.*"

UNIVERSITY

ROBERT COOPER

MONTREAL

EXAMINATION, JANUARY, 1887

FRANCO

Thurs. Jan. 14 - 11 a.m. - 1 p.m.

Examen de la langue Francaise

Questionnaire

1. Quel est le but de cet examen ?
2. Que signifie le mot "français" ?
3. Quels sont les deux points de vue ?
4. Quels sont les deux points de vue ?
5. Comment définir le français ?
6. Quel est le but de cet examen ?
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EXAMINATIONS, JANUARY, 1862.

FRENCH.

TUESDAY, JANUARY, 14.—11 A.M. TO 1 P.M.

SECOND YEAR.

Examiner,..... P. J. DAREY, M. A.

1. Quand est-ce que le mot *couple* est du genre masculin, et quand est-il du féminin ?
2. Que signifie le mot *pendule* lorsqu'il est masculin, et que signifie-t-il lorsqu'il est féminin.
3. Quels sont les deux pluriels du mot *Aieul*, donnez deux phrases dans lesquelles vous emploieriez l'un et l'autre de ces pluriels.
4. Quand fait-on varier les noms propres, et quand les écrit-on invariables bien que précédés de l'article pluriel ?
5. Comment écrit-on au pluriel un substantif composé d'un nom et d'un adjectif ? Quel est le pluriel de *blanc-seing* ? Pourquoi ?
6. Quand emploie-t-on l'article ? Pourquoi ne s'en sert-on point devant le nom *marbre* dans la phrase : *une table de marbre*.
7. Quand fait-on varier les adjectifs *nu* et *demi* ? Donnez des exemples.
8. Quelle faute y a-t-il dans cette phrase : *Tous les élèves de ce professeur sont assidus et enchantés des leçons qu'il donne* ? Corrigez la et dites en quoi consiste la faute.
9. Traduisez en français : *The first men have lived nine hundred and thirty and even nine hundred and sixty-nine years* ; et donnez la règle d'après laquelle vous écrivez ces différents adjectifs numéraux.
10. Quelle faute y a-t-il dans cette phrase : *il a mal à son doigt*. Donnez la règle d'après laquelle vous la corrigez. Ne pourrait-on cependant pas dire : *Son doigt lui fait bien mal* ; dans quel cas ? Quelle différence y a-t-il entre ces deux expressions : *il se fait la barbe* et, *il fait sa barbe* ?

Traduisez en anglais :

Dieux qui voyez ma honte, où me dois-je cacher ?
Orgueilleuse rivale, on t'aime ; et tu murmures !
Souffrirai-je à la fois ta gloire et tes injures ?
Ah ! plutôt . . . Mais, Doris, ou j'aime à me flatter,
Ou sur eux quelque orage est tout près d'éclater.
J'ai des yeux. Leur bonheur n'est pas encore tranquille ;
On trompe Iphigénie ; on se cache d'Achille ;
Agamemnon gémit. Ne désespérons point ;
Et si le sort contre elle à ma haine se joint,
Je saurai profiter de cette intelligence
Pour ne pas pleurer seule et mourir sans vengeance.

Iphigénie (acte ii. sc. viii.)

Quels sont les principaux personnages dans la pièce de Racine *Iphigénie* ? Où la scène se passe-t-elle ? Faites connaître, le sujet de la pièce et comment il a été traité par le poète français.

Quelle faute y a-t-il dans ces deux vers :

Aux affronts d'un refus craignant de vous commettre
Il m'avait par Arcas envoyé cette lettre.

(Iph. acte ii. sc. iv.)

Et dans ceux-ci :

Le ciel s'est fait sans doute une joie inhumaine
A rassembler sur moi tous les traits de sa haine.

(Iph. acte ii. sc. i.)

Traduisez en français :

THE PLEASURE OF ACQUIRING KNOWLEDGE.

Every man is by nature endowed with the power of gaining knowledge and the capacity to be pleased with it, forms equally a part of the natural constitution of his mind. It is his own fault, or the fault of his education, if he derives no gratification from it. There is a satisfaction in knowing what others know—in not being more ignorant than those we live with : there is a satisfaction in knowing what others do not know—in being more informed than they are. But this is quite independent of the pure pleasure of knowledge, of the gratifying curiosity implanted in us by Providence, to lead us towards the better understanding of the universe in which our lot is cast.

LORD BROUGHAM, *On Science.*

McGILL UNIVERSITY, MONTREAL
Faculty of Arts

Final Examinations, 1900
PHYSICS
PART I

January 10th 1900, 9 A.M. to 1 P.M.
Time for this paper, 2 hours.

1. Explain the principle of the heliograph.
2. Investigate the method of determining the mass of Jupiter.
3. Investigate the method of determining the density of the Earth.
4. Investigate the following formulae of refraction for all media
5. Define the equation of time.
6. Account for the difference between a sidereal day and a mean day, and calculate its amount.
7. Illustrate between a hour month and a tropical month, and show how the length of each is determined by observation.
8. Investigate the method of determining the mass of Jupiter.
9. Explain the principle of the heliograph.

3. Determine the density of the Earth's orbit as far as possible from the following data: On the 1st of January, 1800, the Sun's apparent diameter was $32' 32''$, and on the 1st July, 1800, his diameter was $32' 30''$.

2. Describe the method of determining the density of the Earth, means of the torsion balance.

4. Investigate the following formulae of refraction for all media distances less than $30'$:
$$r = (n-1) \tan a$$

5. Define the equation of time.
When it was noon at Greenwich, on January 1st, 1800, the equation was $2^m 37^s 56''$; at noon on January 1st it was $4^m 5^s 41''$; hence find the time of mean noon at Montreal on the 1st, from apparent noon; equation being additive, and supposed to increase uniformly, and longitudes of Montreal being $73^{\circ} 32' W$.

6. Account for the difference between a sidereal day and a mean day, and calculate its amount.

7. Illustrate between a hour month and a tropical month, and show how the length of each is determined by observation.

8. Investigate the method of determining the mass of Jupiter.

9. Explain the principle of the heliograph.

MCGILL UNIVERSITY, MONTREAL.

Faculty of Arts.

B. A. ORDINARY EXAMINATION, 1862.

THURSDAY, APRIL 10TH, 9 A.M. TO 1 P.M.

ASTRONOMY—OPTICS.

Examiner.....ALEXANDER JOHNSON, LL.D.

1. Mention the leading differences between the exterior and interior planets. How are comets distinguished from planets, as regards (*a*) the appearances they present, (*β*) their orbits, (*γ*) their densities? How are the shooting stars of August and November accounted for, and on what facts is the explanation based?

2. Determine the eccentricity of the Earth's orbit, as far as possible, from the following data: On the 1st of January, 1850, the Sun's apparent diameter was $32' 34''.6$, and on the 1st July, 1850, his diameter was $31' 30''.2$.

3. Describe the method of determining the density of the Earth, by means of the torsion balance.

4. Investigate the following formula of refraction for all zenith distances less than 80° :

$$r = (\mu - 1) \tan z.$$

5. Define the *equation of time*.

When it was noon at Greenwich, on January 1st, 1860, the equation was $3^m 37^s.06$; at noon on January 2nd it was $4^m 5^s.42$: hence find the time of mean noon at Montreal on the 1st, from apparent noon; the equation being additive, and supposed to increase uniformly, and the longitude of Montreal being $73^\circ 32' 56''$ W.

6. Account for the difference between a *sidereal day* and a *mean solar day*, and calculate its amount.

7. Distinguish between a lunar month and a synodic month, and state how the length of each is determined by observation.

8. Investigate the method of determining the mass of Jupiter.

9. Explain the principle of the kaleidoscope.

10. A luminous point is placed in front of a concave mirror: examine the relative positions of the conjugate foci, when the point moves in from a very great distance to the surface of the mirror.
11. A small coin is placed at the bottom of a hemispherical bowl filled with water ($\mu = 1.336$): find the smallest angle that the line joining the eye to the edge of the bowl can make with the horizon, when the coin is visible.
12. Find the magnifying power of a convex lens of a given focal length, the distance of distinct vision being also given.
13. Describe Wollaston's goniometer, and the method of using it.
14. Describe the Gregorian telescope, and determine its magnifying power. If the focal length of speculum be 4 feet, of eye-glass be $\frac{1}{2}$ inch, and of secondary speculum be 3 inches, what is magnifying power?

10. A luminous point is placed in front of a concave mirror: explain the relative positions of the conjugate foci, when the point moves in from a very great distance to the surface of the mirror.

11. A small coin is placed at the bottom of a hemispherical bowl filled with water (see Ex. 125): Find the smallest angle that the line joining the eye to the edge of the bowl can make with the horizon, when the coin is visible.

12. Find the magnifying power of a convex lens of a given focal length, the distance of distinct vision being also given.

13. Describe Whiston's condenser, and the method of using it.

14. Describe the Gregorian telescope, and determine its magnifying power. If the focal length of the primary be 4 feet, of the secondary 2 feet, and of the eyepiece 2 inches, what is its magnifying power?

15. Describe the Herschel's reflecting telescope, and determine its magnifying power. If the focal length of the primary be 40 feet, of the secondary 10 feet, and of the eyepiece 2 inches, what is its magnifying power?

16. Describe the Newtonian reflecting telescope, and determine its magnifying power. If the focal length of the primary be 40 feet, of the secondary 10 feet, and of the eyepiece 2 inches, what is its magnifying power?

17. Describe the Cassegrain reflecting telescope, and determine its magnifying power. If the focal length of the primary be 40 feet, of the secondary 10 feet, and of the eyepiece 2 inches, what is its magnifying power?

18. Describe the Gregorian reflecting telescope, and determine its magnifying power. If the focal length of the primary be 40 feet, of the secondary 10 feet, and of the eyepiece 2 inches, what is its magnifying power?

19. Describe the Herschel's reflecting telescope, and determine its magnifying power. If the focal length of the primary be 40 feet, of the secondary 10 feet, and of the eyepiece 2 inches, what is its magnifying power?

20. Describe the Newtonian reflecting telescope, and determine its magnifying power. If the focal length of the primary be 40 feet, of the secondary 10 feet, and of the eyepiece 2 inches, what is its magnifying power?

21. Describe the Cassegrain reflecting telescope, and determine its magnifying power. If the focal length of the primary be 40 feet, of the secondary 10 feet, and of the eyepiece 2 inches, what is its magnifying power?

MCGILL UNIVERSITY MONTREAL

Faculty of Arts

A. A. ORDINARY EXAMINATIONS 1901

This paper is intended to be taken by students of the Faculty of Arts in the Department of Mathematics in the year 1901. It is to be taken on the 15th of June, 1901, at 10 o'clock in the morning. The time allowed for the examination is two hours.

Answer any four questions. Questions 1, 2, 3, 4, and 5 are to be answered in full. Questions 6, 7, 8, 9, and 10 are to be answered in brief. The questions are as follows:

1. In the figure the lines are perpendicular to the sides of a triangle which form the sides are proportional to the sines of the angles made with the base by each side.

2. Find the resultant of two parallel forces, whether acting in the same or opposite directions. When is the resultant impossible?

3. State the principle of moments with regard to parallel forces. On a uniform bar weighing 5 lbs. and 5 feet long, weights of 10 lbs. are hung at the distances of 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 feet from one end; find the distance from the other end of the bar at which the whole will rest.

4. What the power this will support a given weight on an inclined plane the direction of the force being given. A weight of 10 lbs. is supported on an inclined plane of 10 feet length. How far is it from the bottom of the plane?

5. State the principle of conservation of work done. How is it nearly expressed? Apply it to determine the ratio of the power to resistance in the screw.

6. If the diameter of the earth, regarded as a sphere is 7920 miles and the rotation take place in 24 hr. 36 m., what will be the velocity at two points, one at the equator and the other in latitude 45°?

7. Show that approximately the height of any place is equal to square of the number of quarter seconds counted by a clock in fall from the top to the bottom.

8. A descending weight W draws a weight Q up an inclined plane, whose height and length are h and l by a cord passing over a pulley at the summit; find when the cord should be cut, so that the weight Q may just ascend to the top of the plane.

9. If a and b be the number of vibrations in a day of the simple pendulum at the place where the force of gravity is represented by g and g' respectively; show that

$$a - b = \frac{a}{2} \times \frac{g - g'}{g}$$

MCGILL UNIVERSITY, MONTREAL.

Faculty of Arts.

B. A. ORDINARY EXAMINATIONS, 1862.

FRIDAY, APRIL 11th.—9 A.M. to 1 P.M.

MECHANICS—HYDROSTATICS.

Examiner..... ALEXANDER JOHNSON, LL.D.

1. In the Funicular Polygon show that the tensions of the several strings which form the sides are proportional to the secants of the angles made with the horizon by each side.

2. Find the resultant of two parallel forces, whether acting in the same or opposite directions. When is the solution impossible?

3. State the principle of moments with regard to parallel forces.

On a uniform bar weighing 5 lbs. and 5 feet long, weights of 1, 2, 3, 4 lbs. are hung at the distances of 1, 2, 3, 4 ft. respectively from the extremity; find the distance from the centre of the bar of the fulcrum on which the whole will rest.

4. Find the power that will support a given weight on an inclined plane, the direction of the power being given.

5. State the principle of constancy of work done. How is it ordinarily expressed? Apply it to determine the ratio of the power to the resistance in the screw.

6. If the diameter of the earth, regarded as a sphere be 7926 miles, and the rotation take place in 23h. 56 m., what will be the velocities of two points, one at the equator and the other in latitude 45° ?

7. Show that approximately the height of any place is equal to the square of the number of quarter seconds occupied by a body in falling from the top to the bottom.

8. A descending weight, P , draws a weight, Q , up an inclined plane, whose height and length are h and l , by a cord passing over a pulley at the summit; find when the cord should be cut, in order that the weight Q may just ascend to the top of the plane.

9. If n and n' be the number of vibrations in a day of the same pendulum at the places where the force of gravity is represented by g and g' respectively; show that

$$n - n' = \frac{n}{2} \times \frac{g - g'}{g}$$

If a heavy particle be projected in vacuo at an elevation e , with velocity V , show that the equation of the trajectory is

$$y = x \tan e - \frac{gx^2}{2V^2 \cos^2 e}$$

If a rectangular surface 10 ft. by 5, be immersed in water, with short sides horizontal, the upper being 20 feet, and the lower 26 feet below the surface of the water; calculate the pressure it sustains.

Calculate the pressure of the atmosphere on one square inch, when a barometer marks 30 inches, the specific gravity of the mercury being 13.6.

a. State and prove the principle of Archimedes with regard to floating bodies. Define metacentre.

b. A globe 2 feet in diameter floating in water is half immersed; find its weight.

If milk (sp. gr. = 1.031) be adulterated by mixing water with it in the proportion of 2 gallons of water to 10 gallons of milk; calculate the specific gravity.

Determine the force which in the siphon causes the fluid to descend from one vessel to another.

A pump lifting water from a well has a suction-pipe 20 ft. long; the depth of the piston is 3 ft; the handle is 3 ft.; of which 8 inches are above the joint; what force is necessary to raise the water, if the diameter of the piston be 6 inches?

10. A rectangular plate is submerged in water at an angle of 30° to the horizontal. The upper edge is 2 ft below the surface and the lower edge is 4 ft below the surface. The plate is 6 ft long and 3 ft high. Find the center of pressure.

11. A rectangular plate is submerged in water with its upper edge horizontal, the upper edge being 2 ft below the surface and the lower edge being 4 ft below the surface. The plate is 6 ft long and 3 ft high. Find the center of pressure.

12. Calculate the pressure of the atmosphere on a square foot when the barometer reads 30 inches, the specific gravity of the mercury being 13.6.

13. A plate 2 feet in diameter floating in water is full of water. Find the weight of the water in the plate.

14. A plate 2 feet in diameter floating in water is full of water. Find the weight of the water in the plate.

15. A plate 2 feet in diameter floating in water is full of water. Find the weight of the water in the plate.

16. A plate 2 feet in diameter floating in water is full of water. Find the weight of the water in the plate.

17. A plate 2 feet in diameter floating in water is full of water. Find the weight of the water in the plate.

18. A plate 2 feet in diameter floating in water is full of water. Find the weight of the water in the plate.

19. A plate 2 feet in diameter floating in water is full of water. Find the weight of the water in the plate.

20. A plate 2 feet in diameter floating in water is full of water. Find the weight of the water in the plate.

21. A plate 2 feet in diameter floating in water is full of water. Find the weight of the water in the plate.

22. A plate 2 feet in diameter floating in water is full of water. Find the weight of the water in the plate.

23. A plate 2 feet in diameter floating in water is full of water. Find the weight of the water in the plate.

McGILL UNIVERSITY, MONTREAL.

Faculty of Arts.

B. A. ORDINARY EXAMINATIONS, 1862.

TUESDAY, APRIL 15TH, 9 A.M. TO 1 P.M.

GREEK.—{ÆSCHYLUS.—PROMETHEUS VINCTUS.
DEMOSTHENES.—DE CORONA.

Examiner,.....REV. GEORGE CORNISH, B.A.

1. Translate, Prom. Vinct. (Ed. Oxon.), vss. 246-276.

2. *a.* Name the other dramas which Æschylus is supposed to have written on the legend of Prometheus. *b.* Two dates have been conjectured for the composition of this play:—name them, and state the internal evidence which the play has been supposed to furnish in favour of them severally. *c.* How was the person of Prometheus represented on the stage? What were the improvements which, according to Horace, Æschylus introduced in the composition and representation of his plays?

3. In what year B. C. was Æschylus born? Relate the most remarkable events of his time. What philosophical opinions is he said to have adopted? Are they discernible in this play? Where, and in what manner, did he die?

4. Translate, Prom. Vinct., vss. 717-741.

5. *a.* ὑβριστὴν ποταμὸν: What river is the poet supposed to have alluded to here? Give its modern name and the locality of its mouth. Give also the country and the modern name of the Thermodon. Why does the poet use the expressions γνάθος ἐχθροζηνος νάπταισι, μητρὸν ἂν νεῶν? *b.* By what two names was the Black Sea designated by the ancients, and for what reasons? Where does Strabo place the country of the Σκύθαι νομάδες? Where did the Χάλυβες dwell, and the Ἀμαζόνες?

6. Translate, Prom. Vinct., vss. 1036-1054.

7. *a.* In vs. 2, the MSS. and Paley read ἄβατον:—translate according to this reading, and give the derivation of the term. The old editions and MSS. assign vss. 347 and following to Oceanus, but Elmsley assigned them to Prometheus:—what good reasons are there for so doing? Explain the grammatical construction of vss. 351-355, and give the various readings for ἀνέστη and φόνον. In vs. 948, after ὄν, Paley inserts τε:—what difference does its insertion make in the sense? To what speakers are vss. 968, 969, and 970, respectively attributed by Hermann, and, after him, by Paley? Show from the context that their arrangement is preferable to that of Dindorf. *b.* What event is supposed to be alluded to in vss. 366-369, and in what year did it occur? *c.* Parse the following verbs:—γαμῆ, ἄνωγε, σκεδᾶ, μέμνησαι, σέβον, πρόσεπτα, πέπονθας, ἡμαρτες, ἀσχάλῃ, λελειμμένοι. *d.* Vs. 340, τὰ μὲν σ' ἐπανῶ:—give the meaning of this in Latin.

8. *a.* Into what feet of an Iambic Senarius can anapæsts and dactyls be admitted? What exceptions are made in favour of proper names? Write down the scale of the measure called Anapæstic Monometer catalectic. *c.* Scan vss. 520-525.

9. Translate, DeCorona, page 218 (Ed. Tauchnitz): πολλὰ μὲν οὖν * * ὄνα ἐνστησάμενος.

10. *a.* At what date was the suit of Æschines against Ctesiphon instituted? How long time elapsed before the trial took place? *b.* State briefly the accusation which Æschines brought against Ctesiphon, and the three distinct grounds on which he based it. Point out the strongest of the accusation which Æschines succeeded in establishing. On what did Demosthenes principally rely in the defence? *c.* Before what court was this cause tried? How was it constituted, and what was its mode of procedure?

1. Translate, page 229, 'Ἐπὶ Μνησιφίλου ἀρχοντος, * * εἶπε. Explain the clause, "συγκλήτου ἐκκλησίας ὑπὸ στρατηγῶν γενομένης." How were the Athenian months divided? What days of the month are meant by 'δεκάτη ἄρχοντος;' 'ἕκτη ἰσταμένου;' and 'ἔνη καὶ νῆα'? Explain the terms μῆνις and μῆν κοῖλος.

2. Give the derivation of the word λειτουργία. What were the most important of the λειτουργίαι at Athens? How were they divided?

3. State the principal rules for the accentuation of words preceding an enclitic. When does an enclitic retain its accent? Define the terms paroxytone, paroxytone, oxytone, properispomenon, and perispomenon, giving their derivation in each case. Accentuate, in the active voice, 3 sing. pres. ind.; 1 sing. imp. ind.; 1 aor. inf.; 2 sing. imperat.; and 1 a. pres. subj.; of the verbs κινέω and πράττω.

4. *a.* Does the relative, when in apposition to a noun, agree with it, or with its own proper antecedent? *b.* State the rule for the attraction of the relative. *c.* What does the future participle often express? *d.* In what case does the subject of the Infinitive stand? *e.* Can the Infinitive be used, as in English, to express a purpose? *f.* What is the signification of the perf. 2, and of the fut. 3? *g.* What is the middle voice used to denote?

5. Translate into Greek:—

They replied that they would place confidence in any general whom the king might appoint to command them.

They were hired by him on condition that they should serve for one year, and march into the country of the enemy.

The king was very ambitious, so as to bear anything for the sake of being obeyed by the citizens.

He would that the king were here! for then we should know how to act in these matters; but he has not been with us for many days.

The Persians were conquered in the battle of Marathon, a victory which brought great glory to the Athenians.

10. n. At what time was the first of the following species discovered?
11. n. At what time was the first of the following species discovered?
12. n. At what time was the first of the following species discovered?
13. n. At what time was the first of the following species discovered?
14. n. At what time was the first of the following species discovered?
15. n. At what time was the first of the following species discovered?
16. n. At what time was the first of the following species discovered?
17. n. At what time was the first of the following species discovered?
18. n. At what time was the first of the following species discovered?
19. n. At what time was the first of the following species discovered?
20. n. At what time was the first of the following species discovered?

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

B.A. ORDINARY EXAMINATIONS, 1862.

WEDNESDAY, APRIL 16th,—9 A.M. to 1 P.M.

LATIN. { TERENCE.—HEAUTONTIMOROUENOS.
 { PERSIUS.—SATIRES II., V., AND VI.

Examiner,.....REV. GEORGE CORNISH, B.A.

. Translate, Heauton. (Ed. Tauchnitz), Act II., sc. 1 and 2.

. a. Narrate the principal facts that have been handed down to us respecting the birth-place and social position of Terence. With what celebrated men was he intimate at Rome? How did this intimacy affect his literary reputation? b. State the three particular charges that were brought against Terence as a dramatic writer. How, and in what dialogues, does he meet these charges? Who was his most persistent opponent? c. Give the names of the plays written by Terence.

. Write a brief account of the rise and progress of Dramatic Literature among the Romans, mentioning the principal writers therein, and those whom they took as their models, in respect to treatment of subject, characters, plot, &c. In what respect is Terence held to be superior to Plautus, and in what his inferior?

. Translate, Heauton. Act III., sc. 2, vss. 1-25.

. a. For what reasons may the plays of Terence be regarded as of importance and value in respect to the pronunciation of the Latin language? b. Define *synizesis*, and give instances of its occurrence (1) in the written forms of the language, (2) in the pronunciation of words in scanning the verses of Terence. In connection with the latter, adduce instances from the French.

. Translate, Heauton. Act V., sc. 3.

. a. Write down the names and scales of the principal metres in Terence. b. Scan vss. 1-10, Act I., sc. 1.

. a. Translate the Inscription to this play, and explain the terms, 'mofecit'; 'tibiis imparibus.' b. Explain, Prol. 23 :—'studium musicum'; 36 :—'statariam agere'; 1, 92 :—'inscripsi ilico *Aedes mercede*'; id.,

110—'hodie apud me sis volo'; id., 121 :—'sed quid * * hinc a me?' II., 3, 101 :—'in aurem * * ut dormias'; III., 2, 10 :—'aquilæ senectus'; id., 3, 42 :—'arrhaboni * * * argento'; IV., 1, 14 :—'si puellam * * nolle tolli'; id., 4, 11 :—'curriculo percurrere.' c. Give the etymology of the following words used in this play :—ilico, propediem, subtemen, ambages, fraudem, intertrimentum, fenestram, protervus, oppido, sodes, viduæ, ilicet.

9. Translate, Persius, Sat. II., vss. 17-40.

10. a. In the reigns of what Roman emperors did Persius live? b. Give the dates of his birth and death, with a description of his personal appearance and character, as handed down by his contemporaries. c. Write a short critique on the character and style of the Satires of Persius. What poet did he take as his model? Mention passages in his Satires in support of your statement.

11. Translate, Persius, Sat. V., vss. 73-94.

12. a. Give the derivation of the word SATIRA. To what part of speech does it properly belong? Adduce instances. b. Give an account of the rise and progress of Roman Satire, referring particularly to those writers who were most distinguished in this department of Latin literature, and to those passages in Horace which bear upon it. c. What were the *Saliaria carmina*; the *Carmina Fescennia*; and the *Exodia*?

13. Give the exact meaning and derivation of the following words found in these Satires: scilicet, viatica, tressis, centusse, quincunce, deunces, lotus, peronatus, politus, œnophorum, obscænum, artocreas, sinciput.

14. Translate, Persius, Sat. VI., vss. 41-60.

15. Write short explanatory notes on the following expressions:— Sat. II., vs. 1 :—'hunc diem lapillo'; 3 :—'funde merum Genio'; 26 :—'an quia * * bidental'; 32 :—'frontemque * * perita'; 46 :—'quo pacto * * liquescant?' Explain this by an account of the mode of offering sacrifice as described by Homer. 65 :—'Et Calabrum * * vellus.' Where was the best purple dye produced? Sat. V., 30 :—'quum primum * * * pependit'; 54 :—'mercibus * * * cumini.' What case is *mercibus*? Give the force of *pallentis*. What does Horace say about the same thing? 62, Explain the construction of this, and also of 70-72. 76-79 :—'quibus una vertigo * * marcus Dama'; 82 :—'hoc nobis pilea donant'; VI. 9 :—'lunai portum'; 55 :—'Bovillas, Clivumque ad Verbi'; What places are these? 80 :—'Inventus * * Acervi.'

16. *a.* State the general rule for the sequence of Tenses in Latin. Mention the impersonal verbs that are followed by *ut* with the *subjunctive*. *c.* How do you express a *purpose* in Latin? *d.* What is *quo* equivalent to, and what is its force with the comparative? *e.* What do the participles in *rus* and *dus* often severally express? *f.* Define *oratio obliqua*, *oratio recta*. In the former, in what mood do the principal verbs stand? *g.* What class of verbs does *quod*, = *that*, follow?

17. Translate into Latin :—

Æmilianus had reigned only four months. Gallus had sent Valerian bringing the legions of Gaul and Germany to his aid. Valerian executed that commission with zeal and fidelity; and as he arrived too late to save his sovereign, he resolved to avenge him. The troops of Æmilianus, who still lay encamped on the plains of Spoleto, were awed by the superior strength of his army; and they readily imbrued their hands in the blood of a prince who so lately had been the object of their partial notice.

17. The first part of the report is devoted to a general survey of the situation in the country. It is found that the country is in a state of general depression, and that the people are suffering from want and distress. The cause of this is attributed to the war, and the consequent destruction of property and the loss of life.

18. The second part of the report is devoted to a detailed account of the operations of the Government during the year. It is found that the Government has been successful in maintaining the peace and order of the country, and in carrying out its various duties. The revenue has been collected, and the public works have been carried out.

19. The third part of the report is devoted to a detailed account of the operations of the various departments of the Government. It is found that the various departments have been successful in carrying out their respective duties, and in maintaining the peace and order of the country.

20. The fourth part of the report is devoted to a detailed account of the operations of the various departments of the Government. It is found that the various departments have been successful in carrying out their respective duties, and in maintaining the peace and order of the country.

21. The fifth part of the report is devoted to a detailed account of the operations of the various departments of the Government. It is found that the various departments have been successful in carrying out their respective duties, and in maintaining the peace and order of the country.

22. The sixth part of the report is devoted to a detailed account of the operations of the various departments of the Government. It is found that the various departments have been successful in carrying out their respective duties, and in maintaining the peace and order of the country.

MCGILL UNIVERSITY, MONTREAL.

Faculty of Arts.

B. A. ORDINARY EXAMINATION, 1862.

THURSDAY, APRIL 24TH, 9 A.M. TO 12 M.

RHETORIC.

Examiner,.....REV. DR. LEACH.

Under what two general heads may the means of persuasion be classed?

Mention the principal cases in which the feelings ought to be repressed or mitigated, and some of those in which they may be properly excited.

Show that the prejudice against over-excitement of the feelings is well founded. Whence arises the prejudice?

Are the feelings under the direct control of volition? How are they to be reached?

How does it happen that minute details of circumstances affecting individuals often produce powerful impressions, when general statements of the same character, affecting large numbers, produce a comparatively slight impression?

Explain what is meant by "indirect description."

What other methods of exciting the emotions are available to the orator?

Explain the rhetorical artifice for the "diversion of feelings," as described in the text-book.

Show why all eloquence is considered relative. Does this view of eloquence prove that there is no standard of eloquence, except the effects produced by it?

Describe the prudent and conscientious course recommended, and the cautions given.

11. Give the substance of Dr. Whately's exposition of inconsistency.

12. What are the effects, respectively, of too great brevity and prolixity of style? *Illustrate* the necessity of a proper degree of amplification.

13. Show what is necessary to perspicuity, in the construction of long sentences.

14. With regard to the use of words of Saxon and French origin, what are the reasons for preference?

15. Describe the spurious kind of eloquence whose characteristic is display.

16. Which are the three things on which energy of style is said to depend.

17. State the reasons against the use of terms too general and abstract, and illustrate the advantages of sometimes employing terms less general than are exactly appropriate.

18. Illustrate Dr. Campbell's assertion, that "any trope adds force to the expression, when it tends to fix the mind on that part or circumstance in the object spoken of, which is most essential to the purpose in hand."

19. Explain Mr. Foster's opinion as to the use, in religious discourses, of the customary phraseology.

20. State the rule given for reconciling conciseness with perspicuity.

21. Distinguish between copiousness of diction and verbosity.

22. What is the difference between loose sentences and periods? Give an example of each kind.

23. State the directions given for the construction of periodic clauses, and for the precedence of the longer or shorter clauses.

24. Give an exposition of the meaning implied in the following words: "not as if he wanted to say something, but as if he had something to say."

25. Is the opinion correct, that "to give pleasure is the ultimate end of poetry"? State the grounds of this opinion, and those of the contrary one.

6. Compose a speech from the following data:—Cataline to his
liars, after the discovery of the conspiracy.—“Compertum habeo
ea virtutem non addere—audacia naturâ aut moribus inest—vos quò
ca monerem advocavi, simul uti causam consilii aperirem—scitis
avia Lentuli cladem nobis attulerit—exercitus hostium duo obstant—
his locis frumenti * * * egestas prohibet—ferro iter aperiendum est
noneo uti forti atque parato animo sitis—divitias, gloriam, patriam in
tris, portare—non eadem nobis et illis necessitudo impendet—auda-
opus est—animus, ætas, virtus vestra hortantur—cavete inulti
mam amittatis; neu sicuti pecora trucidemini quam virorum more
nantes.

21. General remarks from the following table - Owing to the
rather slow progress of the work, the Commission has
not yet been able to complete the work on the
various subjects mentioned in the table. The work
has, however, been carried out to a considerable extent
in the following cases: * * * * *
The Commission has also been able to complete the work
on the following subjects: * * * * *
The Commission has also been able to complete the work
on the following subjects: * * * * *

22. The Commission has also been able to complete the work
on the following subjects: * * * * *

23. The Commission has also been able to complete the work
on the following subjects: * * * * *

24. The Commission has also been able to complete the work
on the following subjects: * * * * *

25. The Commission has also been able to complete the work
on the following subjects: * * * * *

McGILL UNIVERSITY, MONTREAL.

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B. A. ORDINARY EXAMINATIONS, 1862.

WEDNESDAY, APRIL 23RD, 1½ P.M. to 5 P.M.

GERMAN.

Examiner, PROFESSOR C. F. A. MARKGRAF.

1. *a.* State the rules relating to the declension of Feminine Nouns, and mention the exceptions.
b. How are Feminine substantives formed from masculine ones? Offer some instances.
2. Decline,—good silk,—the noble language,—a great city,—in the four cases singular.
3. Explain and illustrate by short examples the use of the Pronominal forms, „von dem, wovon, dessen.“
4. When are the words Buch, Mann, Fuß, Paar, &c., not used in the plural number?
5. What Parts of Speech have the same declension in the plural for the three genders?
6. Convert the following Forms of Verbs into present infinitives :
sah, muß, ging, kam, schnitt, riß, vergaß, fand, gefiel, gelang, hielt, läuft,
stoßen, schloß, wirft, zog, erwiesen, widerfuhr, verdorben, stand auf, läßt.
7. When is the order of words inverted in a German sentence? Give examples.
8. How are Impersonal Verbs conjugated? What auxiliary do they generally employ? Give all the moods and tenses of „scheinen.“
9. How is the Imperfect (*a*) of Regular, (*b*) of Irregular Verbs, formed in German?

10. Give the 1st pers. sing. of the Reflexive Verb „sich umsehen,“ in all the tenses of the indicative mood.

11. Distinguish between the meanings of erst and nur, wie lange and seit wann, wie weit and bis wohin.

12. What is the peculiar construction in German, in order to express existence in a certain place and existence in general? Give examples.

13. Arrange the words in each of the following sentences according to syntactical rules.

Ich des Beistandes Sie versichere, um den Sie haben mich in Ihrem Briefe die vorige Woche gebeten.

Sorge traget, daß Ihr nicht vertrauet Personen Eure Geheimnisse, die nicht können sie geheim halten.

14. Translate into German :—

I rejoice at your happiness. You have all you need. What has become of your cousin? It is more than a year since I saw him. He has gone to Bonn, where he has taken the degrees of a doctor. As soon as I had recovered my health, I went to the country, and diverted myself with hunting and fishing. It is good travelling in the spring and in the autumn. I like better to go in a carriage or on horseback, than going on foot. They were writing when I was reading. I have tried to see the king, but I have not succeeded in it; for after I had arrived in the castle, I was told that he had been (pret. subj.) taken ill. These clothes fit me, but they do not suit me. I like these pictures very much. To whom do they belong? They are mine; but I shall give them to you if you promise me to take care of them. Every man is liable to mistake. What did you spend your time in when you were in Venice? Has this man been long in your service? These five years. The town of which I spoke (pret.) to you some days ago, is one of the most beautiful towns of Germany.

15. Translate into English :—

Der spanische Vice-Admiral, Don Pedro Alvarez de Piger, einer der erfahrensten Seeleute jener Zeit, ließ seinen jugendlichen Admiral warnen, den Angriff bei einbrechender Nacht nicht zu wagen. Allein der leichtsinnige, allzuhüthige Rodrigo blieb taub für jeden verständigen Rath, segelte dreist auf das holländische Admiralschiff, die Sonne genannt, los, und kam ihm in der zehnten Abendstunde so nahe, daß er ihm die stolze Aufforderung, sich ohne Weiteres zu ergeben, selbst zurufen konnte. — Spielbergen aber beantwortete dieses Gebot mit einer vollen Salve aus großem und kleinem Geschütz, und so begann denn wirklich unter dem Schatten der einbrechenden Nacht das Seetreffen.

(From Houwald's „Seetreffen bei Nacht.“)

Sich', schlecht und recht ein Bauersmann
Am Wanderstabe schritt daher
Mit grobem Kittel angethan,
An Wuchs und Antlitz hoch und hehr.
Er hörte den Grafen, vernahm sein Wort
Und schaute das nahe Verderben dort.
Und kühn, in Gottes Namen, sprang
Er in den nächsten Fischerkahn;
Trotz Wirbel, Sturm und Wogendrang
Kam der Erretter glücklich an;
Doch wehe! der Rachen war allzu klein,
Um Ketter von Allen zugleich zu sein.
Und dreimal zwang er seinen Kahn,
Trotz Wirbel, Sturm und Wogendrang,
Und dreimal kam er glücklich an,
Bis ihm die Rettung ganz gelang.
Kaum kamen die Letzten in sichern Port,
So rollte das letzte Getrümmer fort.

(From Buerger's „Lied vom braven Mann.“)

Faculty of Arts

GENERAL EXAMINATION

1911-1912

Geology

1911-1912

W. J. Turner, B.A.

1. Describe the various types of igneous rocks, and explain the origin of each.

2. Explain the classification of rocks, according to their origin.

3. Explain the consolidation of sediments, and the modes of migration of organic remains.

4. Describe the various effects of denudation, as acting on horizontal, and contorted beds.

5. Describe the four classes of fossils, with some of their characteristic localities.

6. State the names to which the transport of bodies is attributed, with their mode of action.

7. Describe the typical features of the various types of water deposits.

8. Describe the various forms of fossils, as they occur in England, with the principal formations associated in America.

9. State the subdivisions of the Carboniferous group, and explain the mode of formation of coal.

10. Name the Paleozoic formations occurring in Canada, with their characteristic fossils.

MCGILL UNIVERSITY, MONTREAL.

Faculty of Arts.

SESSIONAL EXAMINATIONS, 1862.

THURSDAY, APRIL 17TH, 2 P.M. TO 5 P.M.

GEOLOGY.

FOURTH YEAR AND ENGINEERING STUDENTS.

Examiner,.....J. W. DAWSON, LL.D.

1. Describe Granite, Gneiss, Syenite, and Dolerite, stating the minerals contained in each.
2. Explain the classification of rocks, according to their origin.
3. Explain the consolidation of sediments, and the modes of mineralisation of organic remains.
4. Describe the various effects of denudation, as acting on horizontal, inclined, and contorted beds.
5. Describe the Post-pliocene deposits, with some of their characteristic fossils.
6. State the causes to which the transport of boulders is attributed, with their mode of action.
7. Describe the typical Eocene deposits of Western Europe.
8. Describe the Jurassic or Oolitic group, as it occurs in England, with the equivalent formations ascertained in America.
9. State the subdivisions of the Carboniferous group, and explain the mode of formation of Coal.
10. Name the Palæozoic formations occurring in Canada, with their European equivalents, and some of their characteristic fossils.

1. Mention some characteristic marine genera of the Upper Silurian, Carboniferous, and the Cretaceous periods, respectively.

1. Describe jointing, slaty structure, and foliation, with the causes which they are attributed.

1. Describe the leading phenomena of volcanic action, and the nature of volcanic products.

1. State the phenomena of earthquakes, and the geographical distribution of seismic and volcanic action.

1. Explain the arrangement, contents, and origin of mineral veins.

1. State the geological and mineralogical relations of Gold, and of the principal ores of Iron and Copper.

11. Describe the jointing, clay matrix, and cohesion with the causes which they are attributed.
12. Describe the leading phenomena of volcanic action, and the nature of volcanic products.
13. State the phenomena of earthquakes, and the geographical distribution of seismic and volcanic action.
14. Explain the arrangement, contacts, and origin of mineral veins.
15. State the geological and mineralogical relations of gold, and of the principal ores of Iron, Lead, Copper, Zinc, and Silver.

QUESTIONS FOR REVIEW

1. Describe the origin, growth, and decay of the various forms of life.
2. Explain the classification of animals, according to their habits.
3. Explain the classification of plants, according to their habits.
4. Describe the various forms of vegetation, and their distribution.
5. Explain the various forms of animal life, and their distribution.
6. Describe the various forms of life, and their distribution.
7. Describe the various forms of life, and their distribution.
8. Describe the various forms of life, and their distribution.
9. Describe the various forms of life, and their distribution.
10. Describe the various forms of life, and their distribution.

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, APRIL, 1862.

WEDNESDAY, APRIL 23RD.—9 A.M. TO 12.

FRENCH.

SECOND YEAR AND ORDINARY B. A.

Examiner,.....P. J. DAREY, M.A.

ra
lisez en anglais :

AGAMEMNON.—Fuyez donc, retournez dans votre Thessalie,
Moi-même je vous rends le serment qui vous lie,
Assez d'autres viendront ⁽¹⁾ à mes ordres soumis,
Se couvrir des ⁽²⁾ lauriers qui vous furent promis ;
Et, par d'heureux exploits forçant la destinée,
Trouveront d'Ilion la fatale journée.
J'entrevois vos mépris, et juge, à vos discours,
Combien j'achèterais vos superbes secours.
De la Grèce déjà vous vous rendez l'arbitre ;
Les rois à vous ouïr m'ont paré d'un vain titre :
Fier de votre valeur, tout, si je vous en crois,
Doit ⁽³⁾ marcher, doit fléchir, doit trembler sous vos
lois.

Un bienfait reproché tint toujours lieu d'offense :
Je veux moins de valeur et plus d'obéissance.
Fuyez. Je ne crains pas votre impuissant cour-
roux ⁽⁴⁾.

Je romps tous les nœuds qui m'attachent à vous.

(Iphigénie.)

(1.) A quel temps est *viendront* ? Comment font l'imparfait du subjonctif et le participe passé.

(2.) Pourquoi Racine a-t-il employé l'article ? Ne dit-on pas *se couvrir de lauriers, il s'est couvert de lauriers* ?

(3.) A quel temps est *doit* ? Est-ce un verbe régulier ou irrégulier ? A quelle conjugaison appartient-il ? Comment fait le futur ?

(4.) Quelle observation faites-vous sur le mot *courroux*. Dans quel genre de style s'en sert-on ? Quelle est le verbe dont *courroux* est le substantif, et de quel verbe latin est-il dérivé ? Quelle est la signification de ce verbe ?

II. De quel acte d'*Iphigénie* et de quelle scène cet extrait est-il pris ? Quels sont les personnages qui apparaissent dans cette scène ? A qui Agamemnon s'adresse-t-il dans le morceau que nous donnons ?

III. Qu'est-ce que la tragédie ? Quelles sont les qualités requises d'une bonne tragédie ? *b.* Pensez-vous que l'*Iphigénie* de Racine possède ces qualités ? *c.* Quel en est le dénouement ? *d.* Quelles passions humaines Racine a-t-il décrites dans *Iphigénie*, et quels sont les personnages qui représentent ces passions ?

IV. Quel autre poète tragique avons-nous eu en France au XVII. siècle ? Quelles sont ses principales pièces ?

V. Le XVIII. siècle a-t-il aussi produit des poètes tragiques ? Quel est le genre de littérature qui a été le plus cultivé dans ce siècle ? Nommez quatre auteurs qui ont vécu alors, et citez en les appréciant au point de vue littéraire, leurs principaux ouvrages.

VI. Traduisez en français : *The whole doctrine of moral duties tends solely to render us happy.* Comment écrivez-vous le français du mot *whole* ? Donnez la règle.

VII. Corrigez ces phrases : (1) Le fils d'*Ulysse* le surpasse déjà en éloquence (Fénélon). (2) Les *objets* de nos vœux le sont de nos plaisirs. Quelle est la règle contre laquelle elles pèchent ?

VIII. Quand le mot *chacun*, précédé d'un substantif pluriel, exige-t-il après lui, *son, sa ses*, et quand *leur, leurs* ? Citez un exemple avec chacun de ces mots.

IX. Dites en quoi consiste l'incorrection de ces phrases : (1) Croyez-vous ramener ces esprits égarés par la douceur ?

2.) Il aime le jeu et à étudier.

3.) Cent navires aux pavillons flottants sortaient et rentraient chaque jour dans ce port.

Corrigez-les.

I. Qu'exprime le mode subjonctif? Après quels verbes emploie-t-on ce mode?

II. Traduisez ces phrases en français: Here is a book for you which you may consult occasionally. Give me a book that I may be able to consult occasionally. Expliquez pourquoi vous ne vous servez pas du même mode dans chacune de ces deux phrases.

III. Dans quel cas s'accorde le participe passé, suivi immédiatement de l'infinitif?—Quand reste-t-il invariable? Donnez un exemple où il varie et un où il reste invariable.

III. Comment appelez-vous cette expression: *Gardez que?* dans ce vers:

Gardez que ce départ ne leur soit révélé.

(Ip. Ac. iv. s. x.)

Est-elle bien française? Quelle est l'expression latine dont elle est, on pourrait presque dire, la traduction?

IV. Traduisez en français:

GLORIOUS DEATH OF LE CHEVALIER D'ASSAS.

In 1760, the hereditary prince of Brunswick was vigorously besieging the town of Wesel. The French sent an army to relieve the town and to force the Brunswickers to raise the siege. The prince hearing of the approach of the French, would not wait for them under the walls of the town, fearing to find himself between two fires; he therefore advanced, and the two armies were soon almost in presence of each other. The French general hearing of his approach, ordered his men to lie down with their arms, and sent forward the young d'Assas, a captain in the regiment d'Auvergne, to reconnoitre. He had not advanced far when he fell into an ambuscade of the advance guard; he was immediately wounded and seized; the soldiers placed their bayonets to his breast, and told him, if he uttered a word, if he attempted to call out, or to give the least alarm, they would instantly plunge them into his heart. He immediately, and undauntedly drew himself up into a commanding attitude, and cried out with all his force: "*A moi Auvergne! faites feu, sur les ennemis.*" He had scarcely pronounced the words when he fell surrounded with bayonets.

Annals of Bravery.

McGILL UNIVERSITY, MONTREAL.

Faculty of Arts.

B. A. EXAMINATION FOR HONOURS, 1862.

FRIDAY, APRIL 25TH, 9 TO 12 A.M.

GREEK. { PINDAR.—OLYMP. ODES.
ÆSCHYLUS.—SEVEN AGAINST THEBES.
ARISTOPHANES.—THE FROGS.
THUCYDIDES.—BOOK VII.
ARISTOTLE.—RHETORIC, BOOK I.

Examiner,.....REV. GEORGE CORNISH, B.A.

Translate, Aristotle, Rhetoric I. a. chap. 3, §§ 5-7. b. chap. 11, 5.

Give an account of the life and writings of Aristotle.

Translate, Æschylus, Seven against Thebes :—a. vss. 182-202. b. 1026-1053.

a. Write a short critique on this play, and point out those peculiar features of it by which the great popularity it enjoyed among the ancients may be accounted for. b. What was the original metre of Greek Tragedy? Who introduced written Tragedy, female characters, and a second and third actor, respectively? c. How many actors are there in this play, and of whom does the chorus consist? d. Give the etymology of the word *Drama*. Explain the terms *Strophe*, *Antistrophe*, and *Epode*. What part of the Greek theatre did the Chorus occupy?

Translate, Aristophanes, The Frogs :—a. vss. 173-208. b. vss. 1514.

a. Give an outline of the plot of this play. b. Explain the allusion in vss. 33-34 ;—'τί γὰρ * * ἐνανμάχουν;' 'ἦ τ' ἔν * * * μακρά.' vs. 73 :—'ὄκ' Ἰοφῶν ζῆ;' Who was this? 129 ;—'ἐς Κεραμεικόν.' Where was this and for what was it famous? 173 ;—'δύο δραχμας;' What was the value of the Attic drachma? 293 ;—'Ἐμπούσα.' What was the popular belief respecting this monster? 569 ;—Who was Cleon, and to what political party did he belong? c. Mention the principal writers of the Old Comedy of Greece.

Translate, Pindar, Ode II. vss. 1-50.

8. *a.* Give a sketch of the life of Pindar. *b.* When were the Olympic Games instituted, and when were they discontinued? Of what contests did they consist? *c.* Explain the method of computing time by Olympiads, and give the date of the First Olympiad.

9. Translate Thucydides, Bk. VII. chaps. 45-47.

10. *a.* Give an account of the principal Greek historians that preceded Thucydides. *b.* Write a sketch of the life of Thucydides, and point out his excellencies as an historian. *c.* How much of the Peloponnesian War does his history comprehend?

11. *a.* How does Thucydides divide his narrative, and for what reason? *b.* Give an account of the Athenian method of computing time, as regards the division of;—1. the *day*:—2. the *month*:—3. the *year*. Explain what were *μῆνες πλήρεις* and *μ. κοῖλοι*. Express in Greek the 1st, 7th, 15th, and 24th of the month.

FRIDAY, APRIL 25TH, 3 TO 6 P.M.

GREEK AND LATIN PROSE COMPOSITION.

Translate into Greek :—

Be well assured, men of Athens, that there are three forms of government among all men, despotism, oligarchy, and democracy. Now, despotisms and oligarchies are governed by the dispositions of their rulers; but democratic states by the established laws. Let no one, therefore, of you be ignorant of this, but let each one clearly understand that whensoever he enters a court of justice in order to sit in judgment on an indictment for unconstitutional measures, on that day he is about to give his vote on his own freedom of speech. On which account the lawgiver set this provision foremost in the oath of the jurists :—‘I will vote in accordance with the laws’; being well aware of this, at any rate, that whenever the laws are strictly maintained, the democracy also is preserved.”

Subject for an Essay in Latin :—

“Socratis Philosophi vita moresque.”

THE HISTORY OF THE
REPUBLIC OF THE UNITED STATES

The first section of the Constitution is devoted to the Executive Power. It vests the Executive Power in a President of the United States, who shall hold his Office for four Years, and until he shall have served that Term of Years he shall be ineligible for another Term. The President shall have the Honor and the Power of Pardoning all Crimes, except Treason, Bribery, and Embezzlement. He shall have the Power to grant Reprieves and Fines, and to suspend the Execution of the Law, until he shall have consulted the Supreme Court, in all Cases not affecting the Honors of the United States. He shall have the Power to nominate and to receive, and to reject and to receive, Ambassadors, Ministers, Consuls, Judges, and Officers of the United States, with the Advice and Consent of the Senate. He shall have the Power to make Treaties, with the Advice and Consent of the Senate, and to receive and to ratify Treaties, made by other States, before the coming of this Constitution. He shall have the Power to nominate and to receive, and to reject and to receive, Judges of the Supreme and inferior Courts, with the Advice and Consent of the Senate. He shall have the Power to nominate and to receive, and to reject and to receive, Officers of the United States, with the Advice and Consent of the Senate. He shall have the Power to grant Pardons, and to grant Reprieves, and to suspend the Execution of the Law, until he shall have consulted the Supreme Court, in all Cases not affecting the Honors of the United States. He shall have the Power to grant Pardons, and to grant Reprieves, and to suspend the Execution of the Law, until he shall have consulted the Supreme Court, in all Cases not affecting the Honors of the United States.

Article II, Section 1, Clause 1.

McGILL UNIVERSITY, MONTREAL.

Faculty of Arts.

B. A. EXAMINATION FOR HONOURS, 1862.

MONDAY, APRIL 28TH, 9 TO 12 A. M.

LATIN. { PLAUTUS.—TRINUMMUS.
TERENCE.—ADELPHI.
TACITUS.—HIST. BOOK I.
CICERO.—EPP. AD ATTICUM, BOOK I.
LUCRETIUS.—BOOKS V. AND VI.

Examiner.....REV. GEORGE CORNISH, B.A.

1. Translate, Tacitus, Hist. I. *a.* Chaps. 27-28. *b.* chap. 51.
2. Write a short critique on the peculiar merits of Tacitus as an historical writer; and also state the principal objections that are brought against his style of composition.
3. Translate, Cicero, Epp. ad Att. I. *a.* Ep. 4. *b.* Ep. 15.
4. Explain the peculiar use of the Imperfect Tense in Latin epistolary correspondence.
5. Translate, Lucretius, Bk. V. vss. 835-875.
6. Translate, Plautus, Trinum.—*a.* Act III. sc. I. *b.* Act IV. sc. I.
7. Point out any old grammatical forms that occur in the above extracts from Plautus and Lucretius.
8. Translate, Terence, Adelphi.—*a.* Act II. scs. 3-4. *b.* Act V. sc. 7.
9. Write a sketch of the rise and progress of Dramatic representation among the Romans.

MONDAY, APRIL 28TH, 3 TO 6 P. M.

GENERAL PAPER.

1. Write a geographical description of the Grecian settlements in Asia Minor and Italy. Give the political divisions of Central Greece.
2. Write a sketch of the government and popular institutions of the Spartans. Who were the Helots?
3. Give an account, with dates, of the origin and principal events of the Persian Wars.
4. What was the period of the Athenian supremacy in the affairs of Greece? Name the statesmen and generals that mainly contributed to the maintenance of that supremacy.
5. Give an account of the Dramatic and Prose writers that flourished between the Persian and the close of the Peloponnesian Wars.
6. State the principal regulations and enactments of the legislation of Draco and Solon. What changes and reforms were effected in the constitution of Athens by Cleisthenes? What was the object of the institution of *Ostracism* at Athens? Describe the method of voting, and the origin of the term. Did it prove advantageous or prejudicial to the interests of the state?
7. Give an account of the Sicilian expedition, and state what you consider to have been the chief causes of its disastrous termination. Describe the geographical situation of the city of Syracuse.
8. Describe the topography of Athens. Name the principal public buildings, and state the purposes for which they were used.
9. By what names do the Greek historians designate the Etruscans? What name did they give themselves? State the general testimony of the ancient writers, Herodotus especially, respecting the origin of this people, and their introduction into Italy.
10. What power did the old Roman law give the creditor over an insolvent debtor? Explain the mutual relations and obligations of the *patronus* and the *cliens*.
11. Write a short account, with dates, of the principal events of the three Punic Wars. Give the derivation of the term *Punic*, and the oldest form of the adjective *Punicus*. To what family of nations did the Carthaginians belong, and what part of the world was their original home?

. Give the dates of the subjugation of Greece by Rome; of the
Mithridatic war under Spartacus; of the battle of Pharsalia; of the death
of Julius Cæsar.

. Explain the difference between *Accent* and *Quantity*. State the
principal rules for the use of Accents in the Greek language. By whom
were they invented? Point out the differences in the meaning, accord-
ing to their accentuation of the following words;—*νομος*. *λευκη*. *καλως*.
εως. *νοσων*. *σιγα*. *ειμι*. *ην*.

10. Give the date of the publication of the book; of the
author; of the title; of the publisher; of the place;
of the year.

11. Explain the difference between the two
kinds of the book; of the author; of the title;
of the publisher; of the place; of the year;
of the date of the publication; of the author;
of the title; of the publisher; of the place;
of the year.

12. Explain the difference between the two
kinds of the book; of the author; of the title;
of the publisher; of the place; of the year;

13. Explain the difference between the two
kinds of the book; of the author; of the title;
of the publisher; of the place; of the year;

14. Explain the difference between the two
kinds of the book; of the author; of the title;
of the publisher; of the place; of the year;

15. Explain the difference between the two
kinds of the book; of the author; of the title;
of the publisher; of the place; of the year;

16. Explain the difference between the two
kinds of the book; of the author; of the title;
of the publisher; of the place; of the year;

17. Explain the difference between the two
kinds of the book; of the author; of the title;
of the publisher; of the place; of the year;

18. Explain the difference between the two
kinds of the book; of the author; of the title;
of the publisher; of the place; of the year;

19. Explain the difference between the two
kinds of the book; of the author; of the title;
of the publisher; of the place; of the year;

20. Explain the difference between the two
kinds of the book; of the author; of the title;
of the publisher; of the place; of the year;

MEDICAL UNIVERSITY, DUBLIN

THE FACULTY OF SURGERY

EXAMINATION IN SURGERY

1888

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THE FACULTY OF SURGERY

EXAMINATION IN SURGERY

1888

MCGILL UNIVERSITY, MONTREAL.

Faculty of Arts.

SESSIONAL EXAMINATIONS, 1862.

SATURDAY, APRIL 26TH, 2 P.M. TO 5 P.M.

HONOUR COURSE IN GEOLOGY AND NATURAL HISTORY.

FOURTH YEAR AND SENIOR STUDENTS IN ENGINEERING.

Examiner, J. W. DAWSON, LL.D.

1. State the chemical and crystallographic differences of the felspars, and their geological relations.
2. Describe chemically the more important ores of iron, and explain their geological distribution.
3. State the composition of serpentine and talc, and explain their occurrence in metamorphic rocks.
4. Describe the mode of occurrence and geological relations of tin, rock-salt, and petroleum.
5. Explain the grounds for the determination of the relative ages of stratified rocks.
6. Explain the distribution of marine animals in depth, and the application of this in palæontology.
7. State the differences between *Endogens* and *Exogens*, and in the latter between Angiosperms and Gymnosperms, and the application of these to the determination of fossil stems, leaves, and fruits.
8. Characterize the stems, leaves, and fructification of *Filices* and *Lycopodiaceæ*.
9. Describe the flora of the carboniferous period, stating the botanical affinities of the principal genera.
10. State the distinctive characters of the *Brachiopoda*, and describe one of the Palæozoic genera.

. Define the class *Protozoa*, and mention the geological relations of its orders, with examples.

. Describe the parts of a *Trilobite*, and state the zoological and geological relations of the order.

. State the characters and geological distribution of *Dinosauria*, *Labyrinthodontia*, and *Pachydermata*.

. State the characters of the corallum in *Zoantharia*, and describe some of the Silurian genera.

. State the geological and zoological or botanical relations of any three of the following genera :—

- | | |
|------------------------------|-----------------------------|
| (a.) <i>Receptaculites</i> . | (f.) <i>Lepidodendron</i> . |
| (b.) <i>Leptaena</i> . | (g.) <i>Ichthyosaurus</i> . |
| (c.) <i>Sigillaria</i> . | (h.) <i>Orthoceras</i> . |
| (d.) <i>Favosites</i> . | (i.) <i>Megatherium</i> . |
| (e.) <i>Calymene</i> . | (k.) <i>Dadoxylon</i> . |

. Describe the Laurentian system in Canada, and mention its European equivalents.

. Describe the principal mineral deposits of the Huronian and Lower Silurian formations in Canada.

. Name the members of the Lower Silurian group in Canada, and describe one of them, with its characteristic fossils.

. Describe the Post-pliocene formation as it occurs in Canada, with its equivalents elsewhere, and its principal fossils.

. Mention the facts to be observed and noted in examining a natural section or exposure of rocks, and the methods of ascertaining and recording them.

. Determine and describe one of the minerals and one of the fossils now being exploited.

1. Define the term "epidemiology" and state its scope.

2. Describe the basic principles of epidemiology and state the biological and psychological relations of the order.

3. State the characteristics and geographical distribution of diseases.

4. State the importance of the miasma in the causation of diseases and describe the miasmatic theory.

5. State the importance of the miasma in the causation of diseases and describe the miasmatic theory.

- (a) Cholera
- (b) Typhoid
- (c) Diphtheria
- (d) Tetanus
- (e) Dysentery
- (f) Malaria
- (g) Tuberculosis
- (h) Leprosy
- (i) Syphilis
- (j) Gonorrhoea

6. Describe the geographical distribution of diseases in Canada and mention its importance.

7. Describe the physical mineral basis of the human and lower animal organisms in Canada.

8. Describe the geographical distribution of diseases in Canada and mention its importance.

9. Describe the geographical distribution of diseases in Canada and mention its importance.

10. Describe the geographical distribution of diseases in Canada and mention its importance.

11. Describe the geographical distribution of diseases in Canada and mention its importance.

12. Describe the geographical distribution of diseases in Canada and mention its importance.

13. Describe the geographical distribution of diseases in Canada and mention its importance.

14. Describe the geographical distribution of diseases in Canada and mention its importance.

15. Describe the geographical distribution of diseases in Canada and mention its importance.

Faculty of Arts

McGILL COLLEGE, MONTREAL

SESSIONAL EXAMINATIONS, 1887

GEOMETRY—ARITHMETIC

FIRST YEAR

Ordinary Examination

James Thomson, B.A.

1. If in two triangles two sides of the one be respectively equal to two sides of the other, and the included angles be equal, the third sides are equal.
2. In any triangle, if one side be greater than another, the angle which is opposite the greater side, is greater than the angle which is opposite the less.
3. The area of a triangle is equal to half the rectangle under its base and altitude.
4. a. If a right line be divided into two parts, the sum of the squares of the whole line and one part, is equal to twice the rectangle under the whole line and that part, together with the square of the other part.
5. Enunciate this proposition in another form, regarding the squares of the two sides of a right-angled triangle, and one of the segments of the hypotenuse.
6. a. One circle cannot touch another, either externally or internally, in more points than one.
7. If the distance between the centers of two circles be less than the sum of their radii, the two circles intersect in two points.
8. a. Cut off from a given circle, a segment which shall contain a given angle.
9. Given the base, perpendicular, and vertical angle of a triangle, construct it.
10. a. If a secant and a tangent be drawn to a circle from a point out of it, the rectangle under the whole secant and external segment is equal to the square of the tangent.

Faculty of Arts.
McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

THURSDAY, APRIL 10TH.—9 A.M. to 1 P.M.

GEOMETRY—ARITHMETIC.

FIRST YEAR.

Ordinary Examination.

Examiner, ALEXANDER JOHNSON, LL.D.

1. If in two triangles two sides of the one be respectively equal to two sides of the other, and the included angles be equal, the triangles are equal in every respect.
2. In any triangle, if one side be greater than another, the angle which is opposite the greater side, is greater than the angle which is opposite the less.
3. The area of a triangle is equal to half the rectangle under its base and altitude.
4. *a.* If a right line be divided into two parts, the sum of the squares of the whole line and one part, is equal to twice the rectangle under the whole line and that part, together with the square of the other.
b. Enunciate this proposition in another form, regarding the whole line and one of the segments as distinct quantities.
5. *a.* One circle cannot touch another, either externally or internally, in more points than one.
b. If the distance between the centres of two circles be less than the difference of their radii, the less circle is wholly contained in the greater.
6. *a.* Cut off from a given circle, a segment which shall contain an angle equal to a given one.
b. Given the base, perpendicular, and vertical angle of a triangle, construct it.
7. *a.* If a secant and a tangent be drawn to a circle from a point without it, the rectangle under the whole secant and external segment is equal to the square of the tangent.

9. If from the same point two tangents be drawn to a circle, the line which joins the points of contact is bisected by the line joining the point of intersection of the tangents to the centre.

10. If a straight line be drawn parallel to one of the sides of a triangle, it cuts the other two sides proportionally.

11. From a given straight line, cut off any required submultiple.

12. In every parallelogram, the parallelograms which are about the diagonal are similar to the whole and to each other.

13. Reduce 3 furlongs 5 yards 2 feet 1 inch to the decimal of a mile.

14. Add $\frac{3}{4} + \frac{1}{8} + 1\frac{7}{8}$, and from the result subtract $\frac{7}{9}$ of 2.

15. Reduce the circulating decimal $.5\dot{6}\dot{4}$ to the equivalent vulgar fraction.

16. If the yearly rent of 325 acres 2 roods of land be \$450, what would be the rent at the same rate of a square mile?

17. Find the interest on £485 7s 6d sterling for 3 years and 8 months at 5 per cent, and reduce the result to dollars and cents; £1 sterling being worth \$4.86.

18. Extract the square root of .075.

Faculty of Arts

MCGILL COLLEGE MONTREAL

SESSIONAL EXAMINATION, 1901

Friday, April 13th--9 A.M. to 1 P.M.

TRIGONOMETRY--ALGEBRA

First Year

Ordinary Examination

Answer,..... Assistant Professor, B.A.

1. Define the unit of circular measure. Define: secant. Find ratio between these two units.

2. Prove $\tan A = \frac{\sin A}{\cos A}$; $\csc A = \frac{1}{\sin A}$; $\sec A = \frac{1}{\cos A}$.

3. State a principle by which the trigonometrical functions of an angle may be determined as positive or negative.

4. Prove $\cos 2A = \cos^2 A - \sin^2 A$.

5. Calculate $\tan 30^\circ$ to five places of decimals.

6. Prove $\tan A + \cot A = \frac{1}{\sin A \cos A}$.

7. Prove $\sin(A-B) = \sin A \cos B - \cos A \sin B$.

8. Calculate $\tan 15^\circ$, positively calculating the sides and angles of 30° and 60° .

9. The two sides of a right angled triangle are 1341 and 1431; calculate the angles and hypotenuse.

10. Define a logarithm. Prove that for $x=0$ for any base.

11. Prove the rules by which the products, quotients, roots and powers are obtained by the aid of logarithms.

12. Divide $6x^3 + 4x^2 - 2x + 1$ by $x^2 + 2x + 1$ and multiply the quotient by $x^2 - 2x + 1$.

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

FRIDAY, APRIL 11th.—9 A.M., to 1 P.M.

TRIGONOMETRY,—ALGEBRA.

FIRST YEAR.

Ordinary Examination.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Define the unit of *circular measure*. Define a *second*. Find the ratio between these two units.

2. Prove $\tan A = \frac{\sin A}{\cos A}$; $\operatorname{cosec} A = \frac{1}{\sin A}$; $\sin A = \frac{\sqrt{\sec^2 A - 1}}{\sec A}$.

3. *a.* State a principle by which the trigonometrical functions of an angle may be determined as positive or negative.

b. Prove $\cos A = -\cos(180^\circ - A)$.

4. Calculate $\tan 60^\circ$ to five places of decimals.

5. Prove $\tan 2A = \frac{2 \tan A}{1 - \tan^2 A}$; $1 + \cos 2A = 2 \cos^2 A$.

6. *a.* Prove $\sin(A - B) = \sin A \cos B - \cos A \sin B$.

b. Calculate hence $\sin 15^\circ$, previously calculating the sines and co-sines of 45° and 60° .

7. The two sides of a right angled triangle are 1341 and 1432; calculate the angles and hypotenuse.

8. Define a *logarithm*. Prove that $\log 1 = 0$ for any base.

Prove the rules by which the products, quotients, roots and powers of numbers are obtained by the aid of logarithms.

9. Divide $6a^4 + 4a^3x - 9a^2x^2 - 3ax^3 + 2x^4$ by $2a^2 + 2ax - x^2$ and multiply the quotient by $x^2 - 2ax + a^2$.

9. Decompose $x^2 + x - 20$ into two factors.

10. Multiply together $\frac{x^2 + y^2}{x - y}$, $\frac{x^2 - y^2}{x + y}$, and $\frac{x^2 - y^2}{x}$ and subtract the product from $\frac{x^2 + 2y^2}{x^4 + y^4}$.

11. Expand $(a + x)^4$ and $(1 - x)^{\frac{1}{2}}$ by the Binomial Theorem.

12. Solve the equations

$$\frac{x + 4}{5} - \frac{3(x - \frac{1}{2})}{2} + \frac{1}{3}(2x + 5) = \frac{5\frac{1}{2}}{6};$$

$$\frac{x}{6} + 3 - \frac{5x}{4} = 10 - \frac{2x}{3};$$

$$\sqrt{a+x} + \sqrt{a-x} = 2\sqrt{x}$$

$$\frac{x + 4}{x - 5} + \frac{2(x - 2)}{x - 3} = 4\frac{1}{2};$$

$$\left. \begin{aligned} x + 2y - 8 &= 0 \\ 3x - 5y + 9 &= 0 \end{aligned} \right\}$$

13. A certain number is composed of 3 digits; the sum of the digits is 11; the digit in the place of the units is double that in the place of the tens, and if 297 be added to the number its digits are inverted; determine the number.

14. Find the sum of the series $1 + \frac{3}{2} + 2 + \frac{5}{2} + \&c.$, to 12 terms.

15. There are four numbers in Arithmetical Progression, the product of the extremes is 28, and that of the means 60; what are the numbers?

10. Decompose $x^2 + x - 30$ into two factors.
11. Multiply together $\frac{x^2 + 9x}{x - y} - \frac{x^2 - 9x}{x + y}$, and sub-
tract the product from $\frac{x^2 + 2y^2}{x + y}$.
12. Expand $(x + y)^2$ and $(x - y)^2$ by the Binomial Theorem.
13. Solve the equations

$$\frac{x + 4}{x} - \frac{2(x - 2)}{x} + \frac{1}{2}(x + 2) = \frac{21}{2}$$

$$\frac{x}{x} + 3 - \frac{2x}{x} = 10 - \frac{2x}{2}$$

$$x + 3 + 3x - 2 = 20 - 2x$$

$$\frac{x + 4}{x} + \frac{2(x - 2)}{x} = 11$$

$$\begin{cases} x + 2x - 2 = 0 \\ 2x - 2x + 2 = 0 \end{cases}$$

14. A certain number is composed of 3 digits; the sum of the digits is 11; the digit in the place of the units is double that in the place of the hundreds, and if not be added to the number, its digits are inverted; determine the number.

15. Find the sum of the series $1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \frac{1}{32} + \frac{1}{64}$ to 12 terms.
16. There are four numbers in Arithmetical Progression, the product of the extremes is 28, and that of the means 60; what are the numbers?

McGILL COLLEGE, MONTREAL

SESSIONAL EXAMINATIONS

Monday, April 10, 9 A.M. to 11 A.M.

Mathematics

1. A right line is drawn parallel to the base of a triangle and intersects the other two sides. Prove that the segments of these sides are proportional.

2. A right triangle is inscribed in a circle. The altitude from the right angle to the hypotenuse is drawn. Prove that the altitude is the geometric mean between the two segments of the hypotenuse.

3. A line is drawn parallel to the base of a triangle and intersects the other two sides. Prove that the segments of these sides are proportional.

4. A right line is drawn parallel to the base of a triangle and intersects the other two sides. Prove that the segments of these sides are proportional.

5. A right line is drawn parallel to the base of a triangle and intersects the other two sides. Prove that the segments of these sides are proportional.

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14. A right line is drawn parallel to the base of a triangle and intersects the other two sides. Prove that the segments of these sides are proportional.

15. A right line is drawn parallel to the base of a triangle and intersects the other two sides. Prove that the segments of these sides are proportional.

Faculty of Arts.
McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

THURSDAY, APRIL 10,—9 A.M. to 1 P.M.

EUCLID, ALGEBRA, ARITHMETIC.

SECOND YEAR.

Ordinary Examination.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. *a.* If a right line cut two parallel lines, (α) the alternate angles are equal; (β) the external angle is equal to the internal and opposite on the same side; (γ) the sum of the two internal angles on the same side is equal to two right angles.

b. If a line be perpendicular to one of two parallel lines, it will be perpendicular also to the other.

2. *a.* Equal triangles standing on equal bases in the same right line, and on the same side of it, are between the same parallels.

b. The line joining the points of bisection of any two sides of a triangle is parallel to the third side, and forms with the segments next the vertex a triangle which is one-fourth of the whole.

3. *a.* Divide a right line into two parts, so that the rectangle under the whole line and one part, shall be equal to the square of the other.

b. If the whole line be 26 inches in length, what are the segments?

4. *a.* If a right line be a tangent to a circle, the right line drawn from the centre to the point of contact is perpendicular to it.

b. If two concentric circles be described, a tangent to the less is bisected at the point of contact.

5. If from a point without a circle two lines be drawn to the circle, one cutting it, the other meeting it, and if the rectangle under the whole secant and external segment be equal to the square of the line which meets it, this latter line is a tangent.

6. Triangles and parallelograms of the same altitude are to one another as their bases.

7. In a right angled triangle, if a perpendicular be drawn from the right angle to the base, the triangles thus formed are similar to the whole and to each other.

8. The diameter of a circle is 20 feet, from a point of it 4 feet distant from the centre, a perpendicular to it is drawn to meet the circumference, find the length of this perpendicular.

9. Similar triangles are to one another in the duplicate ratio of their homologous sides.

10. One side of a triangle is 8 feet in length, from a point in it 13 inches distant from the vertex, a line is drawn parallel to the base, what is the area of the triangle thus cut off, if the area of the whole be 40 square feet.

11. Solve the equations

$$x + \sqrt{x^2 - 8} + 1 = \frac{x^2}{8} + 1.$$

$$\sqrt{x} - 2 = \sqrt{x - 8}.$$

$$\frac{3}{4} - \frac{x - 2}{3} = \frac{2}{5} - \frac{4 + x}{6}.$$

12. Find three numbers such that the first with half the other two, the second with one-third of the other two, and the third with one-fourth of the other two shall be each = 34.

13. Find the sum of a series in Arithmetical Progression.

14. Expand $(a - x)^n$.

15. Find the numerical value of the expression

$$\frac{\sqrt{a^{\frac{1}{2}}x - b^{\frac{1}{2}}y}}{\sqrt{ax + by}} \text{ when } a = 1, b = 4, x = 1, y = \frac{1}{6}, \text{ and reduce the}$$

result to a decimal.

16. Find the value of $\frac{2}{3}$ of $\frac{4\frac{1}{2}}$ of 25 cwt. 3 qrs. 1 lb. and reduce the result to a decimal of 100 cwt.

17. Add together the fractions $\frac{1}{2} + 2\frac{3}{4} + 5\frac{2}{7} + \frac{8}{9}$; multiply the sum and divide half the product by 4 times the third of 7.

18. Find the interest on \$657.40 for three months and 10 days, at 5 per cent. Convert the result into sterling money, a pound being worth

1. In a right angled triangle if a perpendicular is drawn from the right angle to the hypotenuse the triangles thus formed are similar to the whole and to each other.

2. The altitude of a triangle is 20 feet, from a point of 16 feet distant from the center a perpendicular to it is drawn to meet the circumference and the length of the perpendicular is 12 feet.

3. Similar triangles are to one another in the duplicate ratio of their homologous sides.

A line of length 12 feet is drawn from a point in it 18 inches distant from the vertex a line is drawn parallel to the base, what is the area of the triangle thus cut off, if the area of the whole be 40 square feet.

4. Solve the equations

$$x + \sqrt{y} = 2 + 1 = \frac{2}{3} + 1$$

$$\sqrt{x} - 2 = \sqrt{y} - 8$$

5. Find three numbers such that the first will half the other two, the second will one-third of the other two, and the third will one-fourth of the other two shall be each = 34.

6. Find the sum of a series in Arithmetical Progression.

7. Find the numerical value of the expression

$$\sqrt{x^2 - 2x + 1}$$

8. Find the value of the expression

$$\sqrt{x^2 - 2x + 1}$$

9. Find the value of $\frac{1}{2}$ of 20 cwt. 3 qrs. 1 lb. and reduce the result to a decimal of 100 cwt.

10. Find the greatest on 8000 for three months and 10 days at 6 per cent. Convert the result into sterling money, a pound being worth 20 shillings.

11. Add together the fractions $\frac{1}{2} + \frac{3}{4} + \frac{5}{8} + \frac{7}{16}$; multiply the sum by 4 and divide half the product by 5 times the sum of 10 and 15.

12. Find the least on 8000 for three months and 10 days at 6 per cent. Convert the result into sterling money, a pound being worth 20 shillings.

13. Find the value of $\frac{1}{2}$ of 20 cwt. 3 qrs. 1 lb. and reduce the result to a decimal of 100 cwt.

14. Add together the fractions $\frac{1}{2} + \frac{3}{4} + \frac{5}{8} + \frac{7}{16}$; multiply the sum by 4 and divide half the product by 5 times the sum of 10 and 15.

15. Find the least on 8000 for three months and 10 days at 6 per cent. Convert the result into sterling money, a pound being worth 20 shillings.

16. Find the value of $\frac{1}{2}$ of 20 cwt. 3 qrs. 1 lb. and reduce the result to a decimal of 100 cwt.

EXERCISES

McGILL COLLEGE MONTREAL

GEOMETRICAL EXERCISES

Exercise 1. In a triangle ABC, the angle A is 30 degrees, the angle B is 45 degrees, and the side opposite to A is 10. Find the other sides and angles.

Exercise 2. A person standing in the center of a circle of radius 100 feet, observes two points on the circumference at angles of 30 degrees and 45 degrees respectively. Find the distance between these two points.

Exercise 3. Calculate the area of a triangle with sides 13, 14, and 15. Also find the radius of the circle inscribed in the triangle.

1. Prove $\cos(A+B) = \cos A \cos B - \sin A \sin B$
 $1 + \cos A = 2 \cos^2 \frac{A}{2}$

2. Prove that the area of any triangle is equal to

$$\frac{1}{2}(a-b)(c-a)(c-b)$$

$$2. \text{ Prove } \sin A = \sqrt{\frac{(b-c)(b+c)(a-b)(a+c)}{4a^2}}$$

3. Two sides of a triangle are 200 and 210 yards respectively. The angle opposite the former is 50 degrees 15 minutes. Calculate the area.

4. To ascertain the position of a lighthouse, two points A and B, on the coast, a mile and a half distant from each other. At A, the lighthouse is seen with a bearing of 30 degrees; at B, the angle which it subtends is 20 degrees 15 minutes. What are the distances of the lighthouse from A and B?

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, APRIL 1862.

FRIDAY, APRIL 11TH,—9 A.M. TO 1 P.M.

TRIGONOMETRY—CONIC SECTIONS—SOLID GEOMETRY.

SECOND YEAR.

Ordinary Examination.

Examiner.....ALEXANDER JOHNSON, LL.D.

1. A person standing in the centre of a sphere of 2 miles radius, observes that a line on its surface subtends an angle of $4' 35''$, what is its length?

2. Calculate the $\sin 1''$, assuming that the sine of the arc does not differ much from the arc; and then show that if A be the circular measure of any angle and A'' the number of seconds in it,

$$A'' = \frac{A}{\sin 1''}$$

3. Prove $\cos (A + B) = \cos A \cos B - \sin A \sin B$

$$1 + \cos A = 2 \cos^2 \frac{1}{2} A.$$

4. Prove that the area of any triangle is equal to

$$\sqrt{s(s-a)(s-b)(s-c)}$$

5. Prove $\sin \frac{1}{2} A = \sqrt{\frac{(s-b)(s-c)}{bc}}$

6. Two sides of a triangle are 3856 and 4792 yards respectively, and the angle opposite the former is $56^\circ 10' 25''$, calculate the remaining side.

7. To ascertain the position of a buoy; two points, A and B , are taken on the coast, a mile and a half distant from each other. At A the angle which the buoy makes with B is $54^\circ 32'$; at B the angle which it makes with A is $39^\circ 15'$; what are the distances of the buoy from the points A and B ?

From a ship at sea it is found that the angle which a flagstaff on the top of a cliff subtends is $38'$; the elevation of the cliff is 14° ; calculate the ship's distance from the cliff, and also the height of the cliff, if that of the flagstaff is 24 feet.

Define an *ellipse*, and prove that the tangent at any point of it makes equal angles with the lines joining that point to the foci.

10. If the semi-axes, major and minor, of an ellipse be denoted by a and b respectively, show that the area is equal to $\pi a b$.

11. If a tangent be drawn at any point of a parabola to cut the axis, the intercept between the vertex and point of intersection is equal to the abscissa of the point.

12. Draw a tangent to a parabola from a point given without it.

13. If a pair of tangents be drawn from the same point to a parabola and from that point a parallel also be drawn to the axis, it will bisect the chord of contact of the tangents.

14. Define a sphere. Prove that every section of a sphere by a plane is a circle.

15. If two planes cut one another, their common section is a straight line.

16. Define a *right cone*, and a cone in general.

From a point on the axis of a cylinder, a tangent is drawn to the top of a cone which is cut by the cylinder. The elevation of the cone is given, and the height of the cylinder is also given. Find the height of the cone.

A cone is cut by a plane parallel to its base. The radius of the base is 10, and the radius of the section is 6. Find the height of the cone.

A cone is cut by a plane parallel to its base. The height of the cone is 12, and the height of the section is 8. Find the radius of the section.

A cone is cut by a plane parallel to its base. The radius of the base is 10, and the radius of the section is 6. Find the height of the section.

Draw a tangent to a parabola from a point given without it.

If a point is given from which two tangents can be drawn to a parabola, find the locus of the point.

Define a sphere. Prove that every section of a sphere by a plane is a circle.

Define a right cone, and a frustum of a cone.

Find the area of a circle whose circumference is 100.

Find the area of a circle whose radius is 10.

Find the area of a circle whose diameter is 10.

Find the area of a circle whose circumference is 100.

Find the area of a circle whose radius is 10.

Find the area of a circle whose diameter is 10.

McGILL COLLEGE MONTREAL

to take all PHYSICS EXAMINATIONS, both
the ordinary and the special, in accordance with the
regulations of the Faculty of Arts, and to take the
same in the order and manner directed by the Faculty.

Students who are admitted to the Faculty of Arts
and who are required to take the ordinary examinations
in the Faculty of Arts, shall be required to take the
same in the order and manner directed by the Faculty.

Ordinary Examinations
The ordinary examinations in the Faculty of Arts
shall be held in the month of June, and shall consist
of the following subjects:—

1. Classical Latin
The student must be able to read and understand
the Latin text of the principal authors of the Latin
classical period, and must be able to translate
from the Latin into English, and vice versa, the
principal passages of the Latin text.

2. Describe the manner in which Kepler's laws may be
derived from his astronomical observations.
3. Describe the method of determining the density of the Earth
by the method of the plumb-line, caused by a mountain.

4. Define parallel. How is its magnitude found? What is
the advantage of correcting observations for parallel.

5. Explain the phenomena of the tides, showing why there are
two high tides each day, and why there are spring and neap tides.

6. Determine the eccentricity of the lunar orbit in April 1857, the
observed facts that the greatest and least semi-distances were
18° 43' 1" and 14° 43' 2" respectively.

7. The horizontal parallax of Mars is given as 15"; hence find
his distance from the Earth at that time, the diameter of the Earth
7920 miles.

8. Explain by a diagram the comparative heights of day and night
at the Pole and at the Equator.

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

THURSDAY, APRIL 10TH, 9 A.M. TO 1 P.M.

ASTRONOMY — OPTICS.

THIRD YEAR.

Ordinary Examination.

Examiner.....ALEXANDER JOHNSON, LL.D.

1. State Kepler's laws.
If the periodical times of the Earth and Uranus be, respectively, 365.256 days and 30686.821 days, calculate the mean distance of Uranus from the Sun, regarding the mean distance of the Earth as the unit.
2. Describe the manner in which Kepler's first law may be verified.
3. Describe the method of determining the density of the Earth by the deviation of the plumb-line, caused by a mountain.
4. Define *parallax*. How is its magnitude found? What is the advantage of correcting observations for parallax.
5. Explain the phenomena of the tides, showing why there are two tides each day, and why there are spring and neap tides.
6. Determine the eccentricity of the lunar orbit in April 1853, from the observed facts that the greatest and least semi-diameters were then $16' 43''.1$ and $14' 45''.2$ respectively.
7. The horizontal parallax of Mars *in opposition* is $15''$: hence determine his distance from the Earth at that time, the diameter of the Earth being 7926 miles.
8. Explain by a diagram the comparative lengths of day and night at the Pole and at the Equator.

If the horizontal refraction be $33'$, what difference will this cause in the times during which the Sun will appear above and below the horizon at the poles.

9. Prove that the focal length of a spherical mirror is equal to half the radius.

10. State the laws of *refraction*. Define accurately the *index of refraction*. Find the *conjugate focus* of a pencil of rays incident on the surface of a transparent medium. State generally what becomes of the other refracted rays which do not meet in the conjugate focus.

1. Account for the phenomena of the mirage.

2. Find the principal focus of a plano-convex lens of glass, the index of refraction being $\frac{3}{2}$.

3. Define *spherical aberration* of a lens. Show that for lenses of the same focal length the aberration is diminished when the index of refraction of the material of the lens is increased.

4. Find the focal length of the lens formed by joining together a convex lens of crown glass of 1 inch aperture and 3 feet focal length, and a concave lens of flint glass of the same aperture and 4 feet focal length; the dispersive power of the former material being .036, and of the latter .048.

5. Describe the Galilean telescope, and determine its magnifying power.

6. Account for the phenomena of the *rainbow*.

If the horizontal refraction is 50, what difference will this cause in the lines during which the beam will appear above and below the horizon as the poles.

9. Prove that the focal length of a spherical mirror is equal to half the radius.

10. State the laws of refraction. Explain approximately the value of refraction. Find the refractive index of a pencil of rays incident on the surface of a transparent medium. State generally what becomes of those other refracted rays which do not pass in the refractive focus.

11. Account for the phenomena of the mirage.

12. Find the principal focus of a plano-convex lens of glass, the index of refraction being 1.5.

13. Define spherical aberration of a lens. Show that for lenses of the same focal length the aberration is diminished when the index of refraction of the material of the lens is increased.

14. Find the focal length of the lens formed by joining together a convex lens of crown glass of 3 inch aperture and 3 feet focal length and a concave lens of flint glass of the same aperture and 4 feet focal length; the dispersive power of the former material being 0.02, and of the latter 0.08.

15. Describe the Galilean telescope and determine its magnifying power.

16. Account for the phenomena of the rainbow.

17. Explain the formation of the rainbow.

18. Explain the formation of the rainbow.

19. Explain the formation of the rainbow.

20. Explain the formation of the rainbow.

PHYSICS

McGILL COLLEGE, MONTREAL

PHYSICS EXAMINATION, 1901

Friday, August 17th - 9 A.M. to 1 P.M.
The examination will be held in the Physics Laboratory.

Third Year

Answer the following questions in full, showing all the steps of your reasoning.

1. A particle moves in a straight line with a constant acceleration. It starts from rest and travels a distance of 100 feet in 5 seconds. Find its acceleration and its velocity at the end of 5 seconds.

2. A particle moves in a circle of radius r with a constant angular velocity ω . Find the magnitude of its centripetal acceleration.

3. A particle moves in a circle of radius r with a constant speed v . Find the magnitude of its centripetal acceleration.

4. A particle moves in a circle of radius r with a constant angular velocity ω . Find the magnitude of its centripetal acceleration.

5. In the above, find the ratio of the centripetal acceleration to the acceleration due to gravity.

6. It is found that the resistance of a wire is proportional to its length and to the square of its diameter. Find the resistance of a wire of length l and diameter d .

7. A cylindrical tube of uniform thickness is supported at its ends. Find the shape of the tube when it is in equilibrium.

8. A cylindrical tube of uniform thickness is supported at its ends. Find the shape of the tube when it is in equilibrium.

9. A cylindrical tube of uniform thickness is supported at its ends. Find the shape of the tube when it is in equilibrium.

10. A cylindrical tube of uniform thickness is supported at its ends. Find the shape of the tube when it is in equilibrium.

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12. A cylindrical tube of uniform thickness is supported at its ends. Find the shape of the tube when it is in equilibrium.

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14. A cylindrical tube of uniform thickness is supported at its ends. Find the shape of the tube when it is in equilibrium.

15. A cylindrical tube of uniform thickness is supported at its ends. Find the shape of the tube when it is in equilibrium.

16. A cylindrical tube of uniform thickness is supported at its ends. Find the shape of the tube when it is in equilibrium.

17. A cylindrical tube of uniform thickness is supported at its ends. Find the shape of the tube when it is in equilibrium.

18. A cylindrical tube of uniform thickness is supported at its ends. Find the shape of the tube when it is in equilibrium.

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

FRIDAY, APRIL 11th.—9 A.M., to 1 P.M.

MECHANICS,—HYDROSTATICS.

THIRD YEAR.

Ordinary Examinations.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Define the *moment* of a force with respect to a point. Show if two forces meet in a point, their moments with respect to any point situated on their resultant are equal.

2. Find the centre of gravity of a homogeneous thin plate cut into the form of a triangle.

3. In the screw, find the ratio of the power to the resistance parallel to the axis.

If there be 20 turns of a screw in $1\frac{1}{2}$ inch, and if the handle, 1 ft. 6 inches long, be worked with a power of 3 cwt. 2 qr. 5 lb., calculate the resistance.

4. A triangular slab of uniform thickness is supported at its three angular points; whatever be the form of the triangle, the pressures on all the props are equal.

5. State Newton's three laws of motion and the nature of their proof.

In the equation $F = mf$, if the unit of matter be the quantity of matter contained in a cubic inch of distilled water, at 60° Fah., find the unit of weight.

6. Prove the equations $v = ft$; $s = \frac{ft^2}{2}$; $v^2 = 2fs$. when the dynamical force is constant. What are the objections to the use of the term "force" here?

7. The velocity acquired by a body in running any inclined plane is equal to the velocity acquired in falling down the height of the height of the plane.

Show that the velocity acquired by a falling body in down heavy circular arc, whose plane is vertical, is given by the equation

$v^2 = \frac{g}{l} (a^2 - x^2)$ where l is the radius of the circle, and a and x are the chords joining the ends of the arc to the lowest point of the circle.

Prove that if two perfectly elastic and equal balls moving in the same straight line come into collision, they exchange velocities.

At a distance of a quarter of a mile from the bottom of a cliff which is 120 feet high, a shot is to be fired which shall just clear the cliff and pass over it horizontally; calculate the angle and velocity of projection.

What are the distinguishing properties of solids, liquids, gases? The two latter are comprehended under one name. Define Hydrostatics, and state its fundamental principle.

Describe the construction of the *mercurial* barometer, and state the corrections that must be applied to any observations. What is the principle of the *aneroid* barometer?

Define *specific gravity* of a body. What is the meaning of the relation $W = Vs$? How many cubic yards are there in 100 tons of iron if the spec. grav. be 1.27?

Describe the method of finding spec. grav. by means of the specific gravity bottle. How are the *constants* determined? Let the weight of the bottle filled with water be 752.32 grs.; filled with air, be 252.21 grs. Determine the constants, assuming that water is 815 times heavier than air.

A cone floats in water with its vertex downwards; find the depth of the vertex below the surface of the water, the weight of the cone being 200 oz., its height 24 in., and the diameter of the base 12 inches.

Describe the Bramah press.

1. Show that the velocity acquired by a falling body in down heavy
a circular arc whose plane is vertical, is given by the equation

$$v = \sqrt{2gR(1 - \cos \theta)}$$

where R is the radius of the circle, and θ is the angle subtended the ends of the arc to the lowest point of the circle.

2. Prove that if two perfectly elastic and equal balls moving in the
same straight line come into collision, they exchange velocities.

3. At a distance of a quarter of a mile from the bottom of a cliff
which is 120 feet high, a shot is to be fired which shall just clear the
cliff and pass over in horizontally; calculate the angle and velocity of
projection.

4. What are the distinguishing properties of solids, liquids, gases?
The two latter are compared with one another. Define dilatation,
and state its fundamental principle.

5. Describe the construction of the muscular instrument, and state
the directions that give it applied to any observation. What is the
function of the several functions?

6. Define specific gravity of a body. What is the meaning of the
expression $\rho = \frac{W}{V}$? How many cubic feet are there in 100 tons of
iron? $\rho = 490$ lbs per cu. ft.

7. Describe the method of finding the specific gravity of a solid
body. How are the conditions determined? Let the weight of
the body in air be W , and the weight of the displaced water be w .
Determine the constant, assuming that water is 62.5 lbs per cu. ft.

8. A cone floats in water with its vertex downwards; find the depth
of the vertex below the surface of the water, the weight of the cone,
and the diameter of the base if the height is 10 in., and the diameter of the base is 12 in.

9. Describe the process of distillation in such a way as to show
the nature of the apparatus, and the manner in which it is used.
What are the several kinds of distillation, and what are the
principles of them?

10. Describe the process of fermentation in such a way as to show
the nature of the apparatus, and the manner in which it is used.
What are the several kinds of fermentation, and what are the
principles of them?

11. Describe the process of putrefaction in such a way as to show
the nature of the apparatus, and the manner in which it is used.
What are the several kinds of putrefaction, and what are the
principles of them?

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McGILL COLLEGE MONTREAL

SESSIONAL EXAMINATIONS, APRIL, 1881

TRINITY COLLEGE, MONTREAL

LIGHT AND HEAT

THIRD AND FOURTH YEARS

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Describe the principle of Fresnel's experiment for determining velocity of light.

If the distance from the source of light to the reflector be 3410 the revolving disc have 720 teeth, and the first mirror take place it has made 13.8 revolutions in a second, calculate the velocity.

2. Describe the experiment by which Newton showed the composition of solar light, naming the colors in the order of refrangibility from to greatest. To what three primary colors does Sir David Brewster reduce them? What are complementary colors? What are Fraunhofer lines?

3. Account for the fact that white objects viewed through a appear white in the middle, but with fringes of color at the bottom.

4. Account for the phenomena of Newton's rays on the under theory. How is it shown that the color of light depends on the of the wave?

Show fully how the length of the wave is actually measured beginning with the determination of the radius of the convex lens.

5. What is meant by the frequency of light? What is light? Draw a diagram to explain the phenomena of interference of two of homogeneous light.

Mention any experiment exhibiting the effects of diffraction explain them by the principle of interference.

6. How is double refraction, as in the case of Iceland spar, explained by the undulatory theory?

7. Deduce the laws of reflection of light from the undulatory

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SESSIONAL EXAMINATIONS, APRIL, 1862.

FRIDAY, APRIL 11th.—9 A.M. to 1 P.M.

LIGHT AND HEAT.

THIRD AND FOURTH YEARS.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Describe the principle of Fizeau's experiment for determining the velocity of light.

If the distance from the source of light to the reflector be 9440 yards, the revolving disc have 720 teeth, and the first eclipse take place when it has made 12.6 revolutions in a second, calculate the velocity.

2. Describe the experiments by which Newton showed the composition of solar light, naming the colors in the order of refrangibility from least to greatest. To what three primary colors does Sir David Brewster reduce them? What are *complementary* colors? What are Fraunhofer's lines?

3. Account for the fact that white objects, viewed through a prism, appear white in the middle, but with fringes of colors at the boundaries.

4. Account for the phenomena of *Newton's rings*, on the undulatory theory. How is it shown that the color of light depends on the length of the wave?

Show fully how the length of the wave is actually measured, beginning with the determination of the radius of the convex lens.

5. What is meant by the *interference* of light? What by *diffraction*? Draw a diagram to explain the phenomena of interference of two pencils of homogeneous light.

Mention any experiment exhibiting the effects of diffraction, and explain them by the principle of interference.

6. How is *double refraction*, (e. g. in the case of Iceland spar,) explained by the undulatory theory?

7. Deduce the laws of reflection of light from the undulatory theory.

Describe the phenomena which occur when water is cooled down to freezing point. What is the temperature of maximum density?

Convert the temperature of max. density expressed in Fah. degrees into Centigrade and Reaumur.

Calculate the mechanical effect produced by the conversion of a gallon of water into steam at 212° .

1. Explain the mode of action of freezing mixtures.

2. How is the amount of latent heat of water ascertained?

10. Describe the phenomena which occur when water is cooled down to freezing point. What is the temperature of maximum density?

11. Describe the temperature of maximum density expressed in $^{\circ}\text{C}$ degrees into Centigrade and Fahrenheit.

12. Calculate the mechanical effect produced by the conversion of a gallon of water into steam at 212°F .

13. Explain the mode of action of freezing mixtures.

14. How is the amount of latent heat of water ascertained?

Latent heat of water

15. Describe the method of determining the latent heat of water.

1. Describe the method of determining the latent heat of water by the method of the ice calorimeter.

2. Describe the method of determining the latent heat of water by the method of the steam calorimeter.

3. Describe the method of determining the latent heat of water by the method of the calorimeter of the ice and steam.

4. Describe the method of determining the latent heat of water by the method of the calorimeter of the ice and steam.

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10. Describe the method of determining the latent heat of water by the method of the calorimeter of the ice and steam.

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SESSIONAL EXAMINATIONS, 1862.

TUESDAY, APRIL 15th,—9 A.M. TO 1 P.M.

GREEK.—HOMER.—ILIAD, BKS. III. & IV.

FIRST YEAR.

Examiner,.....REV. GEORGE CORNISH, B.A.

1. Translate, Bk. III. vss. 95–115.

2. *a.* At what period, according to Herodotus, did Homer live? What country presents the best claims for the honour of being his birth-place? *b.* In what manner were the Homeric poems originally preserved? Give a description of the *ραψωδοί*, and also the meaning and derivation of the term. *c.* What are the two accounts of the introduction of these poems into Greece? Translate the following passage from Cicero, and, in connection with it, state generally the testimony of other ancient writers on the same point:—"Pisistratus primus Homeri libros, confusos antea, sic disposuisse dicitur, ut nunc habemus."

3. Translate, Bk. III, vss. 324–350.

4. *a.* Give an account of the progress of textual criticism on the Homeric poems after the time of Pisistratus. To whom did the copy (*διόρθωσις*) called *ἡ ἐκ τοῦ νάρθηκος* belong? Why was it so named, and by whom was it said to have been revised? *b.* Name the four great critics to whose labours we owe the text of Homer as we now have it. When did they flourish and where did they live?

5. Translate, Bk. III. vss. 418–436.

6. *a.* Define that kind of verse which is called *dactylic hexameter acatalectic*, and write down the metrical scheme of the same. *b.* Explain the form and the nature of the Digamma. On what metrical grounds is it introduced into the poems of Homer? *c.* In what syllables of each foot, in hexameter verse, do the *arsis* and *thesis* respectively occur? What effect may these severally produce on the quantity of these syllables? *d.* Scan vss. 75–81, Bk. IV. explaining any peculiarities of metre that occur in any of them.

7. *a.* What explanation may be given of the dialectic peculiarities, as they have been termed, of the poems of Homer? *b.* State the peculiar usages of the language of these poems in respect to the article, case-suffixes, the augment, and prepositions.

Translate, Bk. IV. vss. 155-182.

Explain the following forms of verbs, and write down the 1st Sing.

Ind. of each :—*κόσμηθεν, ἀλεξέμεν, ἄλτο, νεέκεσεν, μιγείης, ὄρωρεν, πέσθε, ἔβαν, πέπηγεν, ἐσσί, δεδήματο, παρμέμβλωκε, ἐκγεγάσι, μιάνην,*

Translate, Bk. IV. a. vss. 382-400. b. 446-456.

Narrate the legend of the expeditions against Thebes to which allusion is made in extract a. In vs. 383, some read *Ἀσωπόνδ*;—how do you construe the sentence with this reading? What river is here meant?

Turn the following nouns and adjectives into Attic :—*ὄρεσφι, κρησσι, ξείνος, βίηφιν, ὄχεσφιν, ἠτήρ, κεινήσιν, κυδαλίμοιο, εἰφύεες, πολίων, βαλῆι, ἀθανάτησι θεῆς, πολέας.*

Give the formation, derivation and meaning of the following words which occur in Bks. III. & IV :—*ἀθέσφατον, χαμάζε, παλίνορσος, πύλλα, ἀμφίπολοι, τηλυγέτην, τανύπεπλος, ζάπεδον, ἰόμοροι, κωλεμέως.*

a. Define the terms *Enclitics* and *Atonics*. b. Decline the following nouns, accentuating them throughout :—*λόγος, δῆμος, ναύτης, παῖς, κρησπος, πόλις.* c. Distinguish between the words *ῆ, ῆ̄, ῆ̂, ῆ̃.*

a. When and by what is the English indefinite article to be translated into Greek? b. To what is an adverb with the article equivalent? c. Illustrate the rule for the use of the article in the Infinitive mood with the article? d. Illustrate the rule for the use of *αὐτός*, in its various significations, in connection with, or without the article. e. State the rule for the use of the adjective in the neuter with an adverb. f. State the difference in meaning between the Imperfect and Aorist tenses : between *μῆ* with the Present Imperative, and *μῆ* with the Aorist Subjunctive. g. What is the fundamental notion of the Genitive and after what adjectives and adverbs is it used?

Translate into Greek :—

The king used to praise those who managed the affairs of the state and the same king also used to rejoice when his citizens were numerous.

The general of the Athenians led his army into the country of the enemy, and laid it waste.

The philosopher himself said that it was a praiseworthy thing to speak of all men, and to treat them well.

We must take in hand the work of rendering assistance to our country.

If you are present you will confer great benefits upon your friends, and they, if they had been wise, would not have left the city.

He struck the slave on the head with his staff.

10. The first of the following forms of verbs and with down the list...

11. Write the form of the verb in the brackets to which it is referred...

12. Write the following sentences and change them into the form...

13. Write the following sentences and change them into the form...

14. Write the following sentences and change them into the form...

15. Write the following sentences and change them into the form...

16. Write the following sentences and change them into the form...

17. Write the following sentences and change them into the form...

18. Write the following sentences and change them into the form...

19. Write the following sentences and change them into the form...

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SESSIONAL EXAMINATIONS, 1862.

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

LATIN.—VIRGIL. (THE ECLOGUES.
 (GEORGICS, BOOK I.

FIRST YEAR.

Examiner,.....REV. GEORGE CORNISH, B.A.

1. Translate, Eclogue I., vss. 60-84.

5. *a.* State the facts which form the historical groundwork of this eclogue, and the date of their occurrence. What real persons are the speakers in it supposed to represent? *b.* Give the force of the preposition 'de' in 'depellere,' vs. 22. Construe vss. 54-56. In vs. 73, for 'produxit' the old editions read 'perduxit':—what is the difference in the meaning of the two words? *c.* Give the modern names and countries of the Arar, Tigris, and Oaxes.

3. *a.* Name the place and year of the birth of Virgil, and write a sketch of his life, mentioning particularly the most famous of his contemporaries in literature and politics. Where and when did he die, and where was he buried? *b.* Enumerate the principal Latin poets prior to the Augustan age, and state what was the prevailing kind of poetry during the infancy of Latin literature.

4. Translate, Eclogue IV., vss. 4-25.

5. *a.* Give the date of the composition of Eclogue IV. To whom has the hero of the poem been referred? *b.* Give an account of the Sybilline oracles. How do you translate and interpret vs. 60? Is the reading 'ulērunt,' in vs. 61, admissible?

6. Translate, Eclogue VII., vss. 21-44.

7. Name the Greek poet whom Virgil took as his model in the composition of the Eclogues. Point out also the inconsistencies and conven-

tionalties into which he has fallen, in regard to the characters, localities, scenery, &c., of these poems. On the other hand, state what you conceive to be their beauties and merits.

8. Translate, *Georgics*, I., vss. 43-70.

9. Give a concise account of the matters treated of in the first book of the *Georgics*. To what sources is Virgil said to have been indebted for the plan and materials of the *Georgics*? With what object has it been supposed they were written, and at whose instigation? How long, according to the biographer of Virgil, was he engaged in their composition? On what grounds has a higher rank been assigned to them than to the other poems of Virgil?

10. Translate, *Georgics*, I., vss. 231-258.

11. *a.* Write short explanatory notes on:—*Ecl.* *a.* IV. 31-36. *β.* V. 20-23. *γ.* VI. 41-44. *δ.* VIII. 56. *ε.* IX. 54. *ζ.* *Georgics*, I. 28. *η.* I. 39. *θ.* I. 56-59. *b.* In *Georgics* I., vs. 145, on what grounds do you defend the reading 'vicit'? Scan *Ecl.* IV. vss. 4-10: in vs. 5, is the usual quantity given to the penultimate of 'integro'?

12. Give the etymology of the following words, which occur in these poems of Virgil:—*catulos*, *peculi*, *arbusta*, *teguri*, *novalia*, *mulctram*, *ulnas*, *inrita*, *forsitan*, *gemmæ*, *putres*, *situ*, *robigo*, *tribula*. How do you explain the form 'die' in *Georgics* I. 208? and the word 'cujum' in *Ecl.* III. 1?

13. *a.* Decline the following nouns, naming the gender of each:—*lampas*, *poema*, *bos*, *falx*, *imber*, *caro*, *lapis*, *carmen*, *iter*, *salus*. *b.* Give the 1st sing. Pres. Ind. of the following verbs, and state what form of the verb they respectively are:—*consevimus*, *trivisse*, *habitaverunt*, *risere*, *sequere*, *sequere*, *vexasse*, *requierunt*, *ruperunt*, *potuere*.

14. *a.* With what class of verbs is the construction of the Accusative with the Infinitive used? What verbs take that of *ut* with the subjunctive? *b.* State the various ways of expressing a purpose in Latin. *c.* What is meant by dependent questions? In what mood does the verb of a dependent clause stand? *d.* What is the construction with *partitive* adjectives? *e.* Mention those compound verbs that are construed with the dative.

15. Translate into Latin:—

He said in the Senate that he was both sorry and ashamed that all the best citizens had been banished.

The general has published a proclamation that no one leave the city,
something which ought to have been done long ago, but there are some
to blame him for this.

He told many falsehoods about his affairs, in order that he might the
more easily be able to impose upon his friends.

Nothing should deter the good citizen from rendering obedience to
the laws and watching over the interests of his country.

Any man may make a mistake, but a fool only will persist in his
mistake.

He asked why this had been done.

Is it then uncertain whether they have conquered or not ?

The general has published a proclamation that on one part - the other which rights to have been long ago interpreted as who have him for this.

He told many things about his office in order that he might be more ready to take to himself upon his friends -

Nothing should be for the good unless there is something to be done and nothing for the interest of the country.

And now my dear friends, and a few more will be sent to you.

It is also possible whether they have been sent or not.

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Faculty of Arts

MCGILL COLLEGE MONTREAL

EMERSONIAN EXAMINATIONS

Monday, June 15th—9 A.M. 1871

Examinations in English Literature and History
Second Year
Prof. G. C. Colman, B.A.

1. Translate—St. John—Hebrew, ver. 100-101.

2. a. Write a sketch of the life of Kierkegaard, giving the date of birth and death. Mention the leading events in the history of his life which took place during his lifetime. b. Point out the chief characteristics and motifs in Kierkegaard's work. c. Write a paragraph of the history of the life of the Rev. John V. Or when was the church of the Holy Spirit? d. Explain the construction of ver. 100-101, and show in what the difference between the two is. In ver. 100, what is the purpose of the construction? In ver. 101, what is the purpose of the construction? In ver. 102, what is the purpose of the construction?

3. a. Explain the meaning of the word "Kierkegaard" in the title of the book. b. Explain the meaning of the word "Kierkegaard" in the title of the book. c. Explain the meaning of the word "Kierkegaard" in the title of the book. d. Explain the meaning of the word "Kierkegaard" in the title of the book. e. Explain the meaning of the word "Kierkegaard" in the title of the book. f. Explain the meaning of the word "Kierkegaard" in the title of the book. g. Explain the meaning of the word "Kierkegaard" in the title of the book. h. Explain the meaning of the word "Kierkegaard" in the title of the book. i. Explain the meaning of the word "Kierkegaard" in the title of the book. j. Explain the meaning of the word "Kierkegaard" in the title of the book. k. Explain the meaning of the word "Kierkegaard" in the title of the book. l. Explain the meaning of the word "Kierkegaard" in the title of the book. m. Explain the meaning of the word "Kierkegaard" in the title of the book. n. Explain the meaning of the word "Kierkegaard" in the title of the book. o. Explain the meaning of the word "Kierkegaard" in the title of the book. p. Explain the meaning of the word "Kierkegaard" in the title of the book. q. Explain the meaning of the word "Kierkegaard" in the title of the book. r. Explain the meaning of the word "Kierkegaard" in the title of the book. s. Explain the meaning of the word "Kierkegaard" in the title of the book. t. Explain the meaning of the word "Kierkegaard" in the title of the book. u. Explain the meaning of the word "Kierkegaard" in the title of the book. v. Explain the meaning of the word "Kierkegaard" in the title of the book. w. Explain the meaning of the word "Kierkegaard" in the title of the book. x. Explain the meaning of the word "Kierkegaard" in the title of the book. y. Explain the meaning of the word "Kierkegaard" in the title of the book. z. Explain the meaning of the word "Kierkegaard" in the title of the book.

4. a. Write down the date from that occurs in the above passage. b. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. c. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. d. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. e. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. f. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. g. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. h. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. i. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. j. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. k. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. l. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. m. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. n. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. o. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. p. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. q. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. r. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. s. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. t. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. u. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. v. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. w. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. x. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. y. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book. z. Explain the words "Kierkegaard" and "Kierkegaard" in the title of the book.

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McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

TUESDAY, APRIL 15th,—9 A.M., to 1 P.M.

GREEK.—EURIPIDES.—HECUBA.

SECOND YEAR.

Examiner.....REV. GEORGE CORNISH, B.A.

1. Translate,—Ed. Oxon.—Hecuba, vss. 299-331.
2. *a.* Write a sketch of the life of Euripides, giving the dates of his birth and death. Mention the leading events in the history of Greece which took place during his life-time. *b.* Point out his chief characteristics and merits as a dramatic poet. *c.* Write a synopsis of the Hecuba. Where is the scene of the play laid? Of whom does the chorus consist?
3. Explain the construction of vss. 299-300, and show in what sense the dative τῷ θυμονμένῳ is used. In vss. 317, 318, with what do you connect καθ' ἡμέραν, and how do you construe these verses? In vs. 323 for what does σέθεν stand? In 330 does ὡς ἂν express the result or the purpose?
4. Translate, Hecuba, vss. 543-570.
5. *a.* Explain the meaning of μή τις ἄφηται in vs. 548. In vs. 550, should we read ἐλευθέρα θάνω or ἐλευθέρως θάνω? What would be the force and meaning of the latter reading? On what grounds are vss. 556, 557 rejected by most modern editors? Give the two meanings which, according to the Scholiast, the word ἐπωμίδος has. *b.* Translate, and explain the grammatical construction of vss. 435-437. Upon what does the genitive νάσων depend, in vs. 455. In vs. 489, what is the subject of κεκτῆσθαι?
6. Translate, Hecuba, vss. 905-952.
7. *a.* Write down the Doric forms that occur in the above passage. Explain the words ξυστόνι; ἀναδέτοις μίτραισιν; ἐνόπτρων ἀτέρμονας αἰγᾶς; ἐπιδέμμιος. *b.* Scan vss. 1-9 of this play, give the proper designation of the metre, and explain the terms which are used. Write down the normal scheme of the metre, and also the scheme with those other feet, in their proper places, which are admissible into it. Point out on which syllable in each foot the ictus falls. *c.* Define the terms *arsis*, *cæsura*, *strophe*, *antistrophe*, and *epode*.

. Translate, Hecuba, vss. 1150-1182.

. What is the force of ὑποπτος, in vs. 1135, and also of the particle ὄν in the same verse? Give the etymology of ἀριστεράς, and explain why the word came to be used in the sense it has. Give Hermann's emendation for θάκων, * * ἦνον θ', in vs. 1153, 1154, and point out the objections to the common reading. How is the passage to be interpreted with his emendation? In 1166, why is the genitive κόμης used? πύργας: what were these?

. Explain the derivation and composition of the following words, which occur in this play: ἀθραυστος, δορίληπτος, ἀκραφόνες, ἐκβλητον, ἠγρία, νήμεμον, πρηνεμένης, πόρπας, λώβαν, πανδύρτοις, προσοιστέος, ἀνόνητα.

. Parse and explain the following verbs: ἐφέξετε, ἀμβήσει, τλήθι, ἔρξε, λεηλατοῦντες, ἐπέμψω, πείσει, χρανεῖ, ὀφλήσομεν, ἦψω, κεκαρσαι, ἦσω.

. Translate, Hecuba, vss. 1254-1277.

. In vss. 351, 355, and 615, why are the prepositions ὑπο, μέτα, and παροxytone? What is this throwing back of the accent called? Mention some of the general laws of accentuation. State the difference between enclitics and atonics. Write down the latter, and explain under what circumstances they assume the accent. Give the difference in meaning between the following words: πείθω and πειθῶ; εἶπε and εἶπέ; καί and ἀλλά; σίγα and σίγα; ἰδοῦ and ἰδοῦ; θέα and θεά.

. a. Give the various meanings of the middle voice. b. What is the signification of the perfect 2? Mention five verbs as instances. c. When subject and the predicate refer to the same object, what is the construction? d. How are verbals in -τεος formed? What grammatical construction do they take? With what do they correspond in Latin? State the fundamental notion of the genitive and also of the dative. What cases do the prepositiona περί, ὑπό, πρός, ἐπί, and ἀντί, govern usually?

. Translate into Greek:—

Never flatter those who act unjustly towards their parents and friends. We must persuade the citizens to set about the work, both of rendering honour to their country, and of depriving the enemy of their ships. If we do this, they will be prosperous and wise. The wise and good benefit their country: the former by their wisdom, the latter by their virtue. The Romans have become more powerful than ever they were. The gates stand open night and day.

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

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

LATIN. TACITUS.—GERMANIA AND AGRICOLA.

SECOND YEAR.

Examiner.....Rev. GEORGE CORNISH, B.A.

1 Translate, *Germania*, Chap. X.

2 a. Write a sketch of the life of Tacitus. b. Give the names and
of the emperors during whose reign he lived. In whose reign
the *Agricola* written? c. Name the principal Roman Historians
to the age of Tacitus, and the works of these now extant. d. What
the peculiar features of the style of Tacitus? e. What writers
es Tacitus wrote accounts of Britain?

3 Translate, *Germania*, Chap. XXIV.

4 a. Explain the words 'nudi,' 'infestas frameas'; state the differ-
in meaning between the words 'quæstum' and 'mercedem'; 'extre-
and 'novissimus'? Was gambling prohibited by law at Rome? To
circumstance does the expression 'quod mirere' refer? b. Point
t. what respects the social habits and customs of the Romans dif-
from those enumerated in chap. 22. c. What causes have oper-
to render it difficult to fix with precision the localities of the various
oes of Germany?

5 Translate, *Germania*, Chap. XXXVII.

6 Write short notes, with dates, explanatory of the several historical
ons in Chap. 37.

7 Translate accurately, adding an explanatory note when necessary,
e following passages:—

8 "adventibus et hospitibus mixtos."

9 "apud illos memoria et annalium genus est."

0 "omnes non gentis evaluisse."

5. "*pecorum fecunda, ne armentis * * frontis.*"
 6. "*vix uni alterive cassis aut galea.*"
 7. "*nec regibus infinita aut libera potestas.*"
 ib. "*turram et cuneum facit.*"
 9. "*lucos et nemora consecrant.*"
 10. "*auspicia sortesque * * observant.*"
 ib. "*ter singulos tollit * * * interpretatur.*"
 16. "*Colunt discreti ac diversi.*"
 ib. "*Connexis et cohærentibus ædificiis.*"
 20. "*Si liberi * * patruī, avunculi. Quanto plus propinquorum quo major—affinium numerus.*"

8. a. "Nox ducere diem videtur."—Was this mode of computing time peculiar to the Germans among the ancient nations? Mention some English words in common use now derived from this custom. b. Point out what may be regarded in the institutions and customs of the ancient Germans as the rudiments of the Feudal system; knighthood; judicial combat; blazonry; and debts of honour, &c.

9. Translate, Agricola, Chap. X.

10. a. Point out any mistakes made by Tacitus in the geographical description of Chap. 10. b. Write down the modern names of;—Rhenus, Amisia, Visurgis, Albis, Clota, Bodotria, Taus, Orcades, and Mona (of Tacitus).

11. Translate, Agricola, Chap. XXXII.

12. State briefly the comparative merits of the speeches of Galgacus and Agricola. What grounds does the speech of the former furnish for supposing that Tacitus favoured the side of the Britons? Mention instances in the literature both of Greece and of England of speeches composed in a manner similar to these by Tacitus.

13. Translate, Agricola, Chap. XXXIX.

14. Agricola, Chap. XXI. How does Ritter commence this Chap.? What are the various readings for:—*Centurionem, tributorum exactionem, ut civitates proximis hibernis, and ludere pretio?*

Give the exact import of the prepositions used by Tacitus in the following expressions:—*Citra Romanum sanguinem bellanti; ex magnitudine deorum arbitrantur; in hæc munera uxor accipitur; pro solita Germanorum inertia; juxta libertatem; submittere crinem; ingemere agris.*

15. a. Agricola, 44. "*Natus erat Agricola * * * * Collega Pris-coque consulibus.*" What other readings are given besides this? b. "*Idibus Junii*": "*decimo kalendas Septembris.*" Express these dates

According to our mode of reckoning. What part of speech, and what is "Septembris"? Give the full expression for the latter of the above extracts. Give the divisions of the Roman month.

a. What cases are used in Latin to express; 1. A definite point of time, at which a thing is done? 2. Duration through any length of time? 3. A point or space of time *in the future* for which arrangements were made? 4. The town *at which* a thing is done? 5. Motion *to a place*;—*from* a place? b. State the rule for the use of the *Ablative Absolute*: for the use of *Qui* with the *subjunctive*: for *Dum*, &c., with the *indicative*, and with the *subjunctive*.

c. Translate into Latin;—

Learning that he was intending to leave Capua on the 16th of April, I waited for him in Rome.

His being the case, there is no doubt that the consul will lead back his army to the city by the 12th of May, and deliver the citizens from their dangers and fears.

Valerius came to the tribunes crying out, 'What is this? Are you going to overthrow the state under the guidance of App. Herdonius?' Translate both in *oratio recta* and in *oratio obliqua*.)

according to our mode of reasoning. What part of speech and what
case is "September"? Give the full expression for the latter of the
above extracts. Give the divisions of the Roman month.

18. What cases are used in Latin to express: 1. A definite point of
time or when a thing is done? 2. Motion through any length of
time? 3. A point or space of time in the year or a day or a moment
of time? 4. The time or when a thing is done? 5. Motion to a
place? 6. State the rule for the use of the relative
pronoun for the use of the relative pronoun in the Latin
language and give the construction.

19. Translate into Latin: —
Saying that he was intending to leave Capua on the first of April,
I asked for him in vain.
The being the case, that is the doubt that the consul will lead back
the army to the city by the first of May, and direct the citizens from
the dangers and fears.
A. Valerius came to the tribunal crying out, What is this? Are you
going to overthrow the state under the violence of App. Claudius?
(Claudius both in Latin and in Greek.)

20. Translate into Latin: —
The consul, when he saw that the army was in danger, he
ordered the citizens to be armed, and he himself led them
to the field of Mars, where he met the army of the enemy.
The consul, when he saw that the army was in danger, he
ordered the citizens to be armed, and he himself led them
to the field of Mars, where he met the army of the enemy.

21. Translate into Latin: —
The consul, when he saw that the army was in danger, he
ordered the citizens to be armed, and he himself led them
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The consul, when he saw that the army was in danger, he
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22. Translate into Latin: —
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to the field of Mars, where he met the army of the enemy.

23. Translate into Latin: —
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The consul, when he saw that the army was in danger, he
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1870

MCGILL COLLEGE MONTREAL

DEPARTMENT OF HISTORY

1870-1871

HISTORY - HISTORY OF CANADA

1870-1871

1870-1871

1. Give an account of the early settlement of the

2. Explain the three parts of the Constitution of 1867 and the account of their respective functions. A. What was the arrangement with the Federal Provinces that existed? B. Explain the arrangement and the

3. Explain the operation of the Constitution. A. What was the arrangement? B. Explain the arrangement and the

4. Mention with dates the most important of the acts by which the British North America Act of 1867

5. Name the divisions and subdivisions of land made by the British North America Act. A. What was the arrangement of the various laws? B. What was the primary object of these laws and to what kind of land did they apply? C. In connection with the subject, define the following terms: Dominion, Province, County, Township, Parish, Manse, etc.

6. Write a short account, with dates, of the principal events that have occurred since the foundation of the Dominion of Canada. To what kind of nation is the Dominion of Canada? To what kind of nation is the Dominion of Canada? To what kind of nation is the Dominion of Canada? To what kind of nation is the Dominion of Canada?

7. Give an account of the progress of the Dominion of Canada since its foundation, and the means of collecting it during the past few years.

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

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

HISTORY.—HISTORY OF ROME.

FIRST AND SECOND YEARS.

Examiner.....REV. GEORGE CORNISH, B.A.

1. Give an account of Greek colonization in Italy.
2. *a.* Explain the three kinds of Comitia in early Roman history, with an account of their respective functions. *b.* When, and under what circumstances, were the Tribuni Plebis first created? *c.* Explain their *auxilium* and *intercessio*.
3. Explain the expression *patres conscripti*. Of whom was the Senate composed? Distinguish between *populus* and *plebs*.
4. Mention, with dates, the most important of the wars by which Rome made herself mistress of Italy.
5. *a.* Name the divisions and subdivisions of land made by the Roman jurists. *b.* Write an account of the agrarian laws. What was the primary object of these laws, and to what kind of land did their provisions apply? *c.* In connection with this subject, define the terms *possessio*, *possessores*, *possidere*.
6. Write a short account, with dates, of the principal events of the three Punic wars. Give the derivation of the term *Punic*, and the oldest form of the adjective *punicus*. To what family of nations did the Carthaginians belong, and what part of the world was their original home?
7. Give an account of the sources from which the revenue of Rome was derived, and the mode of collecting it, during the period of the republic.

8. Mention the reforms which the Gracchi sought to introduce in the Roman constitution, and point out in what respects these reforms were needed.

9. Give a brief account of the conspiracy of Catiline.

10. Define the sites, and give the results, with dates, of the battles of Pharsalia and Philippi.

11. Write a sketch of the life of C. Julius Cæsar.

7. Mention the reasons which the Council thought fit to introduce in the
present case, and give the results, with dates, of the action of
the Council.

8. Give a full account of the proceedings of the Council, and
of the action of the Council, and give the results, with dates, of the action of
the Council.

9. With reference to the Council, give the results, with dates, of the action of
the Council.

10. With reference to the Council, give the results, with dates, of the action of
the Council.

11. With reference to the Council, give the results, with dates, of the action of
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14. With reference to the Council, give the results, with dates, of the action of
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16. With reference to the Council, give the results, with dates, of the action of
the Council.

17. With reference to the Council, give the results, with dates, of the action of
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18. With reference to the Council, give the results, with dates, of the action of
the Council.

Journal of the

Massachusetts Historical Society

Proceedings of the Society for the Year 1850

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Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

TUESDAY, APRIL 15TH, 9 A.M. TO 1 P.M.

GREEK.—SOPHOCLES.—ANTIGONE.

THIRD YEAR.

Ordinary Examination.

Examiner,REV. GEORGE CORNISH, B.A.

1. Translate, *Antigone* (Ed. Tauchnitz), vss. 162-190.

2. *a.* Mention the most remarkable circumstances in the life of Sophocles, and give a brief abstract of Athenian affairs during that period, assigning dates. *b.* In what other dramas, both of Sophocles, and of Æschylus and Euripides, do the fortunes of the house of Œdipus form the subject? State the position in the series of events which the *Antigone* occupies. *c.* Write a brief analysis of the plot of this play.

3. Translate, *Antigone*, vss. 497-530.

4. *a.* In what places of an *iambic trimeter acatalectic* verse, are anapæsts, dactyls, and spondees admitted? *b.* Write down the scale of the above metre, and also that of the *anapestic dimeter*, mentioning the various isochronous feet that are admissible into them respectively. *c.* Scan vss. 522-530.

5. *a.* Enumerate the four Bacchic festivals that were celebrated in Attica, and state at what ones theatrical exhibitions took place. *b.* Enumerate the principal parts of the Greek theatre, and define the following stage-contrivances:—*θεολογεῖον*, *μηχανή*, *γέρανός*, *βροντεῖον*, and *ἐκκύκλημα*. In what part of the *Antigone* is this last used? *c.* How were the expenses of paying and furnishing the chorus defrayed? Explain *χορὸν δίδουαι*, and the duties of the *χοροδιδάσκαλος*.

6. Translate, *Antigone*, vss. 839-882.

7. *a.* With what case is the verb *ψάβειν* usually construed? Explain the construction of vss. 857-862. Give the reasons for regarding *μερίμνας* as the accusative. *b.* Write down the various readings for *τριπδλιστον οἶτον*. *c.* Write down the Doric forms that occur in vss. 839-882.

8. Translate, *Antigone*, vss. 993-1022.

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

WEDNESDAY, APRIL 16th, 9 A.M. to 1 P.M.

LATIN.—HORACE.—SATIRES, BOOK I.

THIRD YEAR.

Ordinary Examination.

Examiner,..... REV. GEORGE CORNISH, B.A.

Translate, Sat. I., vss. 27-60.

a. Give a short account of what is known respecting Horace's life, his rank, education, and friends, with the date and place of his birth, confirming your statements from his own writings, particularly from his Satires. b. By what writers had Satire been cultivated prior to the time of Horace?

2. State the subject of Sat. I., and give an account of Horace's mode of treating it. In what does it resemble any of Juvenal's? b. Various readings have been conjectured for 'gravis annis,' vs. 4? 'Pavidus hic caupo,' vs. 29? How do you explain the use of the subjunctive, 'triverit,' in vs. 45? Explain the grammatical construction of vs. 5. Explain the grammatical construction of vss. 49-51:—'Vel diducit * * * mille arct.' And of vss. 19-22:—'Atque licet esse * * * ut præbeat aurem.' In vs. 86, with what do you connect 'po'?

4 Translate, Sat. III., vss. 19-54.

5. a. In vss. 45-49, some editors write the words 'pullum,' 'varum,' 'sericum,' with capital initials:—translate and explain accordingly. Give the etymology of the word 'polypus,' and explain why the first syllable is long. Give the construction and supply the ellipsis of vss. 2-4:—'At pater * * * non fastidire.' b. Write short explanatory notes on:—

Vs. 6:—'Ab ovo usque ad mala.'

" 7:—'Modo summa voce * * * quattuor ima.'

- Vs. 15:—' *Decies centena dedisses * * * nil erat in loculis!*
 " 24:—' *Stultus et * * * dignusque notari.*
 " 70:—' *Cum mea compenset vitiis bona.*
 " 87:—' *Cum tristes misero venere Kalendæ.*
 " 91:—' *Evandri manibus tritum dejecit.*
 " 137:—' *Dum tu quadrante lavatum Rex ibis.*'

6. Translate, Sat. IV., vss. 63-85.

7. Sat. IV.:—' *dignus describi:*'—give the force of the latter word. What is meant by the *Old*, the *Middle* and the *New* Comedy of Greece? Mention the principal writers in each. Is the judgment of Horace on Lucilius, in this passage, altogether fair, and in accordance with the opinions of other ancient critics? Vs. 48, &c. To what comedy is the allusion here made? vss. 60-62. Give the construction. From what poet are these vss. quoted? 69-70. Explain the construction and supply the ellipsis. 94. What person is here meant?

8. Translate, Sat. V., vss. 1-24.

9. *a.* By what gate did Horace and his companion leave Rome to start on this journey? Where does Juvenal speak of it, and how does he designate it? *b.* In what year, A. U. C. was this journey undertaken? What persons formed the party? What was the object of the journey? Trace the route taken, giving the geographical situation of the principal places and their modern names.

10. Translate, Sat. V., vss. 50-70. What is the force of 'notos' in vs. 77.

11. Give the composition, derivation and meaning of the following words:—*pusillo*, *parochi*, *prolutus*, *vappa*, *æruugo*, *loligo*, *scutica*, *tripes*, *sincerum*, *tritum*, *latro*, *convictor*.

12. Parse the following verbs: *fateare*, *peccaro*, *erepsemus*, *triverit*, *compilent*, *obtulerim*, *ligurrierit*, *fregerit*, *finxerunt*, *illeverit*.

13. Turn the following sentence into the *oratio obliqua*:

Ego arma capio, voco omnes Quirites ad arma. Si quis impediet jam ego consularis imperii oblitus, quisquis ille erit, ubicumque erit pro hoste habebo.

14. *a.* Write down the principal verbs that are followed by the Accusative with the Infinitive. *b.* Give the interrogative particles, and point out the exact difference in meaning between them. *c.* In what mood does the verb of dependent questions stand? *d.* What are *deponent* and *neuter-passive* verbs? What participle have they which other verbs have not? *e.* State the difference in usage between the *Gerund* and the *Gerundive*.

5. Translate into Latin :—

Mylla with a smaller number of men was besieging troops which had yet suffered no loss nor disaster, (*integer atque incolumis*) and were also supplied with an abundance of everything; for every day a large number of ships arrived from all parts (*adv.*) with provisions. Whilst he having consumed all the corn round about, was reduced to extremity (*angustiae*); but still his men bore their privations with extraordinary patience. For they called to mind that, after suffering the same things in Bithynia the year before, they had by their exertions and patient endurance (*patientia*), brought a very formidable war to an end (*confi-*
ce).

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

THURSDAY, APRIL 24TH, 9 A.M. TO 12 M.

ENGLISH.

FIRST YEAR.

Examiner,.....REV. DR. LEACH.

1. Decline the Anglo-Saxon personal pronouns *Te, Thu, He*; the Demonstrative *Se, Seo, Thaet*; the Interrogative *Hwa, Hwa, Hwaet*. Give the corresponding English words, and those thence derived.
2. Give examples of "Excess of expression" in gender, number, and comparison.
3. Explain the difference between etymological and logical sequence in application to the personal pronouns and the irregular comparatives and superlatives.
4. Is the superlative degree formed from the positive directly, or from the comparative, and how is the "s" in the superlative accounted for?
5. Upon what hypothesis is the letter "n" in "seven," "nine," and "ten" accounted for?
6. What part of speech were "a" and "the" originally, and by what process did they come to be considered as belonging to a different part of speech (articles)?
7. Give examples of "diminutive forms," both of Gothic and of classical origin.
8. Mention some of the words in English that may be considered as "augmentatives"; trace them to their sources. Give the termination of patronymics in Anglo-Saxon.
9. What is the significance of "s" in "Wales," and the meaning of "wal" in "walnuts"?
10. Show the several points of contrast between a noun and a verb, 1. grammatically, 2. logically.

11. Give examples of the name of the people inhabiting a country being transferred to the country.

12. Show that verbs in general are naturally declinable as nouns are; that they were actually declined as nouns in Anglo-Saxon, and that fragments of this declension remain in the present English.

13. Give an account of the four classes of derived verbs as opposed to simple, with examples of each class.

14. Compare the personal inflections of verbs in the present English with those of the Latin and Anglo-Saxon.

15. How is the "t" in the 2nd pers. sing. in the forms "art," "wert," "shalt," "wilt," &c., accounted for?

16. Which is the only subjunctive inflection in English; and why is "be," as opposed to "am," not to be regarded as a subjunctive form?

17. Explain the different reasons for the termination "ed" in the preterites "filled," "slighted," "moved."

18. Give the expedients for distinguishing the preterite form from the present when the root ends with the same sound with which the affix begins, and the case in which the present and preterite remain of necessity the same.

19. State the principle which, in regard to etymological irregularities, gives us the most correct views of the structure of language.

20. Give the terminal form of the present participle in Anglo-Saxon and the predominant form of the same in Old English.

21. What is the regular termination of the past participle in Anglo-Saxon, and in what lights may English words be viewed, in which that termination is wanting?

22. State the general rule with respect to compound words, and explain the three classes of exceptions to it.

23. Show why the relative must agree with its antecedent in number and gender, and why it may not agree with it in case.

24. State some of the different modes of expressing in English and other languages, indeterminate propositions.

5. Show that it is not a matter of indifference whether we say "the first" or "the first two."

6. Translate into English verse the following lines :

"Invitus tunc me cum scis, Nasica, vocatum ;
Excusatum habeas me rogo, cœno domi."

"Incipe, vivendi recte qui prorogat horam
Rusticus expectat dum labitur amnis, at ille
Labitur et labetur in omne volubilis ævum."

"Certain rimeur qui jamais ne repose
Me dit hier arrogance
Qu'il ne sait point écrire en prose :
Lisez ses vers ; vous verrez comme il ment."

10. Show that it is not a matter of indifference whether we say "the
we did" or "the first two."

11. Consider the following list:
and the first two items are the same, but the second item is not
the first item. Show that the list is not a matter of indifference.

12. Consider the following list:
the first item is the same as the second item, but the second item is not
the first item. Show that the list is not a matter of indifference.

13. Consider the following list:
the first item is the same as the second item, but the second item is not
the first item. Show that the list is not a matter of indifference.

14. Consider the following list:
the first item is the same as the second item, but the second item is not
the first item. Show that the list is not a matter of indifference.

15. Consider the following list:
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20. Consider the following list:
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the first item. Show that the list is not a matter of indifference.

21. Consider the following list:
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the first item. Show that the list is not a matter of indifference.

McGILL COLLEGE

SESSIONAL EXAMINATIONS, 1912

ENGLISH LITERATURE

TRINITY TERM, 1912

ENGLISH LITERATURE

Session Year

The following questions are to be answered in the examination.

1. State the two leading facts taught by the history of literature.

2. What is the chief characteristic of the literature of the Middle Ages?

3. What is the chief characteristic of the literature of the Renaissance?

4. What is the chief characteristic of the literature of the 17th century?

5. What is the chief characteristic of the literature of the 18th century?

6. What is the chief characteristic of the literature of the 19th century?

7. What is the chief characteristic of the literature of the 20th century?

8. Why is the literature of the Anglo-Saxon period so important?

9. What is the chief characteristic of the literature of the Middle Ages?

10. What is the chief characteristic of the literature of the Renaissance?

11. What is the chief characteristic of the literature of the 17th century?

12. What is the chief characteristic of the literature of the 18th century?

13. What is the chief characteristic of the literature of the 19th century?

14. What is the chief characteristic of the literature of the 20th century?

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

THURSDAY, APRIL 24TH, 12 M. TO 3 P. M.

ENGLISH LITERATURE.

SECOND YEAR.

Examiner,.....REV. DR. LEACH.

1. State the two leading facts taught by the Roman or classical period of the history of English literature.
2. What effect had the Roman occupation upon the nationality and language of the Britons?
3. What historical or legendary incidents form the basis of the literature of the Cymric Celts, and to what date are its remains to be referred?
4. Whence arose the cultivation of Latin in the dark ages, and to what uses was it applied?
5. Show how the new impulses given by Christianity affected the civilization and literature of the countries that accepted it during the Anglo-Saxon times?
6. Which are the principal names in literature that are to be referred to the Anglo-Saxon period?
7. Give the "trivium" and "quadrivium" in which at this period universal knowledge was thought to be comprised?
8. Why is the literature of the Anglo-Saxon of a very peculiar character, different from the similar remains, both in poetry and prose, that we have from other nations?
9. What poetical relics are there of poems composed before the immigrations to England?
10. What are the peculiar features of Anglo-Saxon versification, and whence are they supposed to have been derived?
11. What are the characteristics of Anglo-Saxon prose; to what period are the principal extant specimens to be referred, and what is mainly the subject-matter of them?

2. What were the different orders of men that settled in England after the Norman conquest?
3. How far throughout the country did the Anglo-Saxon tongue then extend?
4. Mention some of the principal events that distinguished the 13th century?
5. In the 13th century, who, on the continent, were famous for their attract speculations, and who in England?
6. Give an account of the *Gesta Romanorum*.
7. Mention some of the classical authors whose works contain least of Oriental origin.
8. What use is supposed to have been made of the "*Gesta*" in early times, and was there any similarity between them and the chivalrous romances of a later period?
9. Give an account of the troubadours and trouvères; why so called; their species of poetry respectively; and distinguishing the fabliaux from the chivalrous romances.
10. In what manner did the Norman conquest affect the ancient tongue of England, and in what work is resistance to the change of language strongly marked?

11. Translate and parse the following passage:—

Tha waes hyre gecyrd the thar ealdor waes. thaet thar waere cumen
 swa cyngc mid his athume and mid his dohtor mid micclum gifum. Mid
 tha the heo thaet gehirde. heo hi silfe mid cynelicum reafe gefraet-
 we. and mid purpran gescridde. and hire heafod mid golde and mid
 gimon geglaengde. and mid micclum faemna heape ymbtrimed. com
 to anes tham cyngc. Heo waes sothlice thearle wlitig and for thare
 melan lufe thare claennesse, hi saedon ealle thaet thar naere nan dia-
 na swa gecweme swa heo."

12. Translate the following lines into English verse:—

"Saxonibus postquam dederat fortuna (Britannis
 Expulsis) sedes et tutam pace quietem :
 Gens, armis, mores languamque ornare, relictis ;
 Atque ferox animo nuper mollescere coepit.
 Usque sed Angliacæ perdurat gratia linguæ.
 Lingua antiqua fuit priscis bene nota colonis
 Qui quondam fluvios Albim Rhenumque biberunt
 Quo sermone latus mundi Boreale repletur :
 Hinc Scotiæ fontes et nostræ semina linguæ."

10. What was the object of the expedition to the
north of the Arctic circle?

11. How do you describe the country to the north of the
Arctic circle?

LAWRENCE COLLEGE MONTREAL

12. What is the name of the principal river of the
continent?

13. In the 17th century, who was the discoverer of the
continent of North America, and who is supposed to
have discovered the Gulf of St. Lawrence?

14. Give an account of the French-English
struggle for the continent.

15. Mention some of the principal cities which were
founded in the 17th century.

16. What is supposed to have been the result of the
struggle between the French and the English?
What is the result of the struggle between the
English and the French?

17. Give an account of the British-English struggle
for the continent, and mention some of the principal
cities which were founded in the 18th century.

18. In what manner did the British-English struggle
for the continent, and mention some of the principal
cities which were founded in the 19th century.

19. What is the result of the struggle between the
British-English and the French?

20. What is the result of the struggle between the
British-English and the French?

21. What is the result of the struggle between the
British-English and the French?

22. What is the result of the struggle between the
British-English and the French?

23. What is the result of the struggle between the
British-English and the French?

24. What is the result of the struggle between the
British-English and the French?

25. What is the result of the struggle between the
British-English and the French?

REVISION OF 1892

THE MOTT COLLEGE, MONTREAL

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Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

TUESDAY, APRIL 22ND, 10 A.M. TO 1 P.M.

LOGIC.

SECOND YEAR.

Examiner,.....REV. DR. LEACH.

1. State generally the characteristics of every valid process of reasoning.

2. Which are the sources, speaking generally, from which all fallacies arise, and under what denomination may the ultimate source of all error be placed?

3. Give an example of a valid argument, as to form, by which there is proved a falsehood; and an example of an invalid argument, in which the conclusion expresses a judgment materially true.

4. What flaw, in respect of form or matter, or both, is there in the following argument:—

Quidquid non perdidisti, habes;
Sed aurum habes;
Aurum non perdidisti.

5. Explain what are meant by cognitions clear and obscure, confused and distinct, adequate and inadequate, symbolical and notative.

6. Enumerate and explain shortly the sources of invalid conceptions, as stated in the text-book, and in the order there given.

7. What are stated in Chap. II. to be the criteria of all first truths? Explain them, and distinguish between the valid judgments, conformable to the principle given, and those denominated problematical.

8. State the principal opinions that have been entertained with regard to the origin of our notion of cause and effect.

9. Among invalid assumptions as to matters of fact, explain that made (1) in regard to the quantity or quality of propositions; (2) by assuming an accident as an essential or general characteristic; and give examples.

10. Give examples of fallacies:—(1) Those affirming a certainty when the facts only authorize a probability. (2) Those refusing to place facts under the principle or class to which they belong, and placing them under another to which they do not belong. (3) Those assuming that facts are not real, when they are affirmed by valid evidence.

11. Explain the fallacy of assumptions that violate the laws of identity and difference.

12. Explain the three logical laws of identity, difference, and excluded middle, and give the primary formulæ of them.

13. Explain (1) the fallacy denominated *petitio principii*, and give an example; (2) the fallacy of arguing in a circle; (3) the fallacies of composition and division; and give examples.

14. Give an example of a conditional syllogism, of which the premises are void of logical consequence.

15. Give an example of a disjunctive syllogism, of which the premises are void of logical consequence.

16. Explain (1) the fallacy denominated *ignoratio elenchi*; (2) the fallacy of objections; (3) the fallacy of conclusions based upon false analogies.

17. What are meant by real and nominal definitions?

18. What are meant by subjective and objective definitions?

19. Give the rules for logical definition.

20. Give the rules for logical division.

21. Explain the analytic and synthetic orders for the arrangement of the *membra dividenda*.

22. Give the canons of order for the synthetic method.

1. State the principle of identity and give an example with regard to the logic of our world of space and time.
2. Among several assumptions as to matters of fact explain that which is (1) a matter of quality of propositions; (2) a matter of quantity of propositions; (3) a matter of modality of propositions; (4) a matter of relation of propositions.
3. Give examples of (1) the fallacy of ambiguity; (2) the fallacy of equivocation; (3) the fallacy of composition and division; and give examples.
4. Explain the fallacy of ambiguity that exists in the laws of identity and difference.
5. Explain the three logical laws of identity, difference and excluded middle, and give the ordinary language of them.
6. Explain (1) the fallacy of composition and division; and give an example; (2) the fallacy of equivocation; (3) the fallacy of composition and division; and give examples.
7. Give an example of a compound syllogism of which the premises are both logical propositions.
8. Give an example of a hypothetical syllogism of which the premises are both logical propositions.
9. Explain (1) the fallacy of composition and division; (2) the fallacy of equivocation; (3) the fallacy of composition and division; and give examples.
10. What are meant by real and nominal definitions?
11. What are meant by subjective and objective definitions?
12. Give the rules for logical definition.
13. Give the method for logical definition.
14. Explain the way to and synthetic order for the arrangement of the members of a syllogism.
15. Give the canon of order for the synthetic method.

Faculty of Arts

McGILL COLLEGE, MONTREAL

SESSIONAL EXAMINATION, 1881

TUESDAY, JUNE 27TH, 1 P.M. TO 4 P.M.

Latin Year.

1. What does natural right signify as the most perfect and final way of making a promise?
2. What is involved in the consciousness of our acts when we usually refer to God as our witness and judge?
3. Why may the expression "I solemnly swear" not be used in the name of God, as in an oath?
4. What does the oath of a witness imply, and how is it to be taken as a rule of evidence?
5. What is an oath of office—and what is only a duty to be sworn to official conduct which he afterwards binds to do veracily?
6. What effect may the absence and insertion of the State be thought to have on the interpretation of oaths of office?
7. What does a glaring discrepancy between the terms of an oath and the practical interpretation of it, what ought to be done, and what countervailing considerations are suggested by situations?
8. By the light of what principle are "forced interrogations" to be judged?
9. What is implied in the obligation of national defence?
10. What forms of religious coercion does the self-protection of Government require to be refused?

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

TUESDAY, APRIL 22ND, 1 P.M. TO 4 P.M.

MENTAL AND MORAL PHILOSOPHY.

THIRD YEAR.

Examiner REV. DR. LEACH.

1. What does natural piety suggest as the most solemn and formal way of making a promise?
2. What is involved in the consequences of our acts when we purposely refer to God as our witness and judge?
3. Why may the expression "I solemnly affirm" not be used instead of the name of God, as in an oath?
4. What duty do oaths of assertion respecting one's income, rewards, or bribes at elections, &c., impose?
5. What is an oath of office—and what is one's duty if he engage himself to official conduct which he afterwards finds to be wrong?
6. What effect may the silence and inaction of the State be thought to have on the interpretation of oaths of office?
7. When there is a glaring discrepancy between the terms of an official oath and the practical interpretation of it, what ought to be done, and what counterbalancing considerations are suggested by alterations?
8. By the light of what principle are "forced interpretations" to be judged?
9. What is implied in the obligation of national defence.
10. What forms of religious sedition does the self-preservation of government require to be repressed?

11. As to Atheism, what is the determination of most states, and why that determination ?
12. In government, which are the two elements necessary to moral action, and how are they to be combined ?
13. Show that the Patriarchal theory of government has never been fully accepted, and in what respects it fails.
14. Show the difficulties that attend the social contract view, and enumerate the rights of government that cannot result from agreement among individuals.
15. What reasons may be given for the employment of the term "compact" in reference to the state; and what is this contract ?
16. What are Paley's objections to the doctrine of an original compact, and how may the conception of it be justified ?
17. Show that the doctrine of the people as the source of political power, assumes a social contract.
18. What objections lie against the *language* of Paley in the application of his doctrine ?
19. With regard to actual governments, explain the assertion that "we never can have the idea liberated from the fact ?"
20. In countries where the representative system has been established, what is usually done to counterbalance it, and what end is this intended to secure ?
21. Reply to the assertion that protection of life and property are the sole duties of States.
22. Does justice require equality, and what would result from attempting to establish equality ?
23. In what way ought the laws to strive to remedy inequalities ?

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

TUESDAY, APRIL 22ND, 1 P.M. TO 4 P.M.

INTELLECTUAL PHILOSOPHY.

THIRD YEAR.

Examiner,.....REV. DR. LEACH.

1. Show that the classification given of mental phenomena, is distinct and comprehensive.
2. State some of the arguments that serve to prove the essential unity of the human mind.
3. Explain the terms "contingent" and "necessary," as applied to the phenomena of the intelligence.
4. How are the ideas of body and space, succession and time, effect and cause to be regarded in reference to this division?
5. Explain the terms conditioned and relative, unconditioned and absolute.
6. What is meant by a sensible representation as distinguished from a pure rational conception?
7. What is meant by an idea being the logical antecedent of another?
8. What is meant by an idea being the chronological antecedent of another?
9. Which are the functions of the intelligence called primary, and why are they so called?
10. Explain the distinction between spontaneous and reflective consciousness?
11. Show the necessity of relying on the testimony of consciousness.

12. Show the grounds of distinction between the primary, the secun-
do-primary, and the secondary qualities of matter.
13. Explain the terms representative and presentative as applied to
knowledge.
14. State the theory of perception given, and the reasons adduced in
support of it.
15. State the leading doctrines of the two classes of the other theories
on the subject of perception.
16. State the three forms of classification given.
17. Give a short account of the leading doctrines of the Realists, the
Nominalists, and the Conceptualists.
18. State the law of association of ideas, as given, and enumerate
the principal relations and determining circumstances by which thoughts
and perceptions suggest others.

Faculty of Arts

MCGILL COLLEGE MONTREAL

Examination, June 11th & 12th 1900

Department of Chemistry
100, St. James Street, Montreal

Answer to the following questions in your own words

1. Define Chemical Affinity

2. State the laws of combining proportions, and illustrate one of them by examples

3. Explain the terms Element and Atom, as used in Chemistry

4. Explain Chemical notation, and give examples

5. Under what conditions does lead become latent?

6. State the properties of Oxygen, and mention its principal compounds with Hydrogen and Nitrogen

7. Name the principal compound of Carbon with Oxygen. State its composition and properties

8. State the composition of Ethane, and the ethyl form in which it occurs in nature and in the air

9. State the composition, mode of preparation, and properties of some mineral sulphuric Acid

10. Explain entirely completely and the structure of Amine

11. Describe Thiophene and Thiophenated Hydrogen

12. Name the elements of the Chlorine group, and describe one of them with its Hydrogen Acid

Faculty of Arts.

MCGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

THURSDAY, APRIL 17TH, 9 A.M. TO 12 NOON.

ELEMENTARY CHEMISTRY.

FIRST YEAR.

Examiner,.....J. W. DAWSON, LL.D.

1. Define Chemical Affinity.
2. State the laws of combining proportion, and illustrate one of them by examples.
3. Explain the terms Element and Atom, as used in Chemistry.
4. Explain Chemical Notation, and give examples.
5. Under what conditions does heat become latent?
6. State the properties of Oxygen, and mention its principal compounds with Hydrogen and Nitrogen.
7. Name the principal compound of Carbon with Oxygen. State its composition and properties.
8. State the composition of Silica, and the principal forms in which it occurs in nature and in the arts.
9. State the composition, mode of preparation, and properties of commercial Sulphuric Acid.
10. Explain ordinary combustion and the structure of flame.
11. Describe Phosphorus and Phosphuretted Hydrogen.
12. Name the elements of the Chlorine group, and describe one of them, with its Hydrogen Acid.

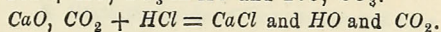
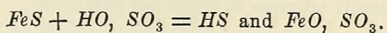
13. What are Salt Radicals and Basyles, and how are their compounds related to those viewed as consisting of an acid and base?

14. Describe one of the metals of the alkalis, with its oxide.

15. How may compounds of *Calcium* be distinguished from those of *Magnesium* and *Barium*.

16. State the composition of the ordinary ores of iron, the chemical principles involved in their reduction, and the composition of cast-iron and steel.

17. What substances and changes are indicated by the formulæ :—



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McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

SATURDAY, APRIL 19TH, 9 A.M. TO 12 NOON.

BOTANY.

SECOND YEAR.

Examiner, J. W. DAWSON, LL.D.

1. Describe the elementary vegetable cell.
2. Name the kinds of vascular tissue, and describe one of them.
3. State the mode of occurrence and uses of Starch and Chlorophyll.
4. Describe the structures in the blade of the leaf, and their functions.
5. Describe fully the structure of the Exogenous stem.
6. Define indefinite Inflorescence, and describe its principal varieties.
7. Name the circles of organs in a perfect flower, and describe fully the Stamen.
8. Describe the Ovule, and state the changes which it undergoes in fertilization and ripening.
9. Describe the organs of fructification in Mosses, and compare them with those in Ferns.
10. State the difference between a natural and artificial system in Botany.
11. State the difference between a species and a variety.
12. What are Angiosperms, as distinguished from Gymnosperms?
13. State the distinctive characters of *Filices* and *Lycopodiaceæ*.
14. State the characters and place in the system of *Ranunculaceæ*, *Cyperaceæ*, and *Polypodineæ*.
15. Explain the terms sporangium, cremocarp, stigma, and achenium, describing the parts to which they refer.
16. Describe the specimens exhibited, in relation to the forms of their leaves, and their inflorescence; and refer two of them to their series, classes, and orders.
17. State the external conditions affecting the geographical distribution of plants.

Journal of the

MCGILL COLLEGE MONTREAL

EXPERIMENTAL ANATOMY 1904

1904

1904

1904

W. G. DAWSON, M.D., F.R.C.S.

1. The structure of the human eye is described.

2. The structure of the human eye is described.

3. The structure of the human eye is described.

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25. The structure of the human eye is described.

Faculty of Arts.

MCGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

SATURDAY, APRIL 19TH, 2 P. M. TO 5 P. M.

ZOÖLOGY.

THIRD YEAR.

Examiner..... J. W. DAWSON, LL.D.

1. Define organization, and state the distinction between the animal and the plant.
2. Name the principal animal tissues, and describe one.
3. Describe the structure of the ear.
4. Explain the function of respiration.
5. State the characters of the *Articulata*, as a Province of the Animal Kingdom.
6. State the characters of the *Protozoa*, and reasons for and against recognizing them as a separate Province.
7. Describe *Actinia*, and refer this genus to its place in the classification.
8. State the characters of the *Brachiopoda*, and give examples.
9. Describe *Lumbricus* and *Serpula*, with the characters of the class to which they belong.
10. State the difference between Pteropods and Gasteropods.
11. How are *Batrachia* distinguished from *Reptilia* proper?
12. Name the orders of *Acalephæ*, and describe one.
13. Name the orders of *Insecta*, and describe one.

14. Give the distinctive characters of the class *Aves*.
15. Characterize the *Marsupialia* and *Rodentia* as orders of mammals.
16. Refer the specimens exhibited to their places in the classification.
17. State what you know of any three of the following orders and families: *Asteroidea*, *Cheilostomata*, *Mytilidæ*, *Pulmonifera*, *Nautilidæ*, *Decapoda*, *Pulmo-trachearia*, *Acanthopteri*.

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

WEDNESDAY, APRIL 23rd—9 to 12 A.M.

FRENCH.

FIRST YEAR.

Examiner,..... P. J. DAREY, M.A.

Traduisez en anglais :

LE MARÉCHAL DE BIRON À HENRI IV.

Quoi Sire, on (1) vous conseille de monter sur mer, comme s'il n'y avait (2) pas d'autre moyen de conserver votre royaume que de le quitter ! Si vous n'étiez pas en France, il faudrait (3) percer au travers de (4) tous les hasards et de tous les obstacles pour y (5) venir ; et maintenant que vous y êtes on voudrait que vous en sortissiez (6) ; et vos amis seraient d'avis que vous fissiez (7) de votre bon gré ce que les plus grands efforts de vos ennemis ne sauraient vous contraindre de faire. En l'état où vous êtes, sortir seulement de la France pour vingt-quatre heures, c'est s'en bannir pour jamais. Le péril, au reste, n'est pas si grand qu'on vous le dépeint : ceux qui pensent vous envelopper sont, ou ceux-mêmes que nous avons tenus (8) enfermés si lâchement dans Paris, ou gens qui ne valent (9) pas mieux et qui auront plus d'affaires entre eux-mêmes que contre nous. Enfin, Sire, nous sommes en France, il nous y faut enterrer : il s'agit d'un royaume, il faut l'emporter ou y perdre la vie ; et quand même il n'y aurait point d'autre sûreté pour votre personne que la fuite, je sais bien que vous aimeriez mieux mille fois mourir de pied ferme, que de vous sauver par ce moyen. (10)

MEZERAY. *Histoire de France.*

(1). Qu'est-ce que *on* ? Quelles sont les différentes manières de le traduire en anglais ? De quel nombre est-il en français ?

(2). Quelle observation faites-vous sur le verbe *il y avait*. Quelle sorte de verbe est-ce ?

(3). Quelle observation faites-vous sur *faudrait*? A quel temps est-il? Est-ce un temps primitif ou un temps dérivé. S'il est primitif quel temps forme-t-il, s'il est dérivé de quel temps est-il formé, et comment ?

(4). Quelle différence y a-t-il entre *au travers de* et *à travers le* ?

(5). A quelle partie du discours *y* appartient-il ?

(6). A quel temps est *sortissiez*? De quel temps se forme-t-il, et comment est-il formé ?

(7). A quel temps et à quel mode est *fissiez*. Pourquoi est-il à ce mode et à ce temps-là ?

(8). Pourquoi *tenus* a-t-il une *s*? Donnez la règle.

(9). Quel est l'infinitif, le futur, le présent et l'imparfait du subjonctif du verbe *valent*.

(10). Nommez cinq verbes irréguliers pris dans ce morceau-ci et donnez au moins trois exemples de leur irrégularité.

II. Traduisez en français : *Several eagles were taken by the Germans after the defeat of Varus*. Comment écrivez-vous le français du mot *taken*? Pourquoi? Donnez la règle qui se rapporte au mot *aigle*.

III. Traduisez en français : *Silk-worms are so common in Tonquin that silk is no dearer there than cotton*. Comment écrivez-vous *silk-worms* en français? Donnez la règle.

IV. Traduisez en français : *Lyons and Marseilles are next to Paris, the wealthiest and most important chief cities of France*. Comment écrivez-vous *chief-cities*, en français? Donnez la règle.

V. Nommez six auteurs français appartenant au dix-septième siècle.

(1). Dites dans quel genre de littérature chacun d'eux s'est illustré. Indiquez un ou deux de leurs ouvrages principaux.

(2). Quels sont, pensez-vous, les deux plus grands écrivains de ce siècle? Sur quoi fondez-vous cette opinion ?

(3). Dites quels furent les deux plus grands orateurs de la chaire chrétienne à cette époque.

Traduisez en français :

VI. MASSACRE AT THE CORONATION OF WILLIAM I. AT LONDON.

William I, Duke of Normandy, may be said to have been crowned in the character of a conqueror. Having, by the battle of Hastings, made himself master of England, Christmas-day 1066 was appointed for his coronation, at Westminster. He was surrounded by the Norman Barons, and a full attendance of the English nobles and prelates. Aldred, then archbishop of York, put the questions of the recognition to his new subjects, and the bishop of Constance, who was in his train, put them to the Normans.

The assent of both nations was given with loud acclamation. So boisterous indeed was their loyalty at this part of the ceremony, that the Norman soldiers of William, who were on the outside of the Abbey church, affected to consider the shouts as the signal of insurrection, and immediately set fire to the houses of the neighbourhood, and began to plunder, to the great mortification of the king. All now became confusion in the interior of the Abbey : the Norman Barons prepared for battle ; the native nobles regarded themselves as victims selected for slaughter, and the king is said to have been left alone with the ecclesiastics to conclude the ceremony.

LINGARD.

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

WEDNESDAY, APRIL 23RD, 1½ P.M. TO 5 P.M.

GERMAN.

THIRD YEAR.

Examiner,.....PROFESSOR C. F. A. MARKGRAF.

1. Give the genitive singular and the nominative plural of *Dheim*, *Soldat*, *Krieg*, *Fluß*, *Herr*, *Land*, *Schmerz*, *Uebel*, *Griech*, *Platz*, *Stunde*, *Lärm*, *Aufgabe*, *Wind*, *Untmann*, *Schwager*, *Vorsatz*, *Berg*, *Halstuch*, *Boden*; and state the gender and signification of each noun.

2. Decline, — diligent scholars, — yonder green fields, — my brown coats, — in the four cases plural.

3. To what declension belong Neuter Nouns? What is their characteristic ending in the nominative plural? When do they modify the radical vowel in the plural? when not?

4. How are Diminutives formed from German substantives, and which of them are masculine? which neuter? Give examples.

5. When do Adjectives terminate in „e“ when in „en“ in the nominative plural?

6. Give the degrees of Comparison of *fromm*, *lang*, *blau*, *tapfer*, *bald*, *kurz*, *artig*, *viel*, *nahe*, *gern*.

7. What may the neuter Pronoun „es“ relate to in German? Give examples.

8. How do you express the genitives, “of him, of it, of them,” when relating to persons, and when to things?

9. Explain the use of the Particles „hin“ and „her“, and write a few short sentences by way of illustration.

10. Form the Past Participle of the following Verbs: *holen*, *schreiben*, *schicken*, *aufheben*, *bleiben*, *essen*, *buchstabiren*, *leihen*, *verlangen*, *ausziehen*, *zerreißen*, *wegnehmen*.

11. What do you understand by Verbs Separable and Inseparable? Give a few verbs of each class, in the present infinitive, with zu, and in the past participle.

12. How is the Passive Voice formed in German Verbs? Give the 1st pers. sing. of the present and preterit tenses of this voice of rufen, tadeln, loben and strafen.

13. Mention those Prepositions which sometimes denote rest, sometimes motion.

14. Correct the following sentences:—

Was Bücher haben die Kaufmänner in Ihre Waarenlager? Er hat zu Hause gekommen. Ich ihn sehen werde, wenn ich komme zurück. Ich nicht Lust habe zu sprechen deutsch, weil ich kann es nur schlecht sprechen. Anhören Sie mich? Ich höre Sie zu, aber es schwer ist, zu verstehen Sie.

15. Translate into German:—

We have not been willing to go out. Where is the house of which you have spoken to us? I have received the presents which you have promised me. You must lose no time if you wish to see my brother, because he intends to depart to-night. What did you do (pret.) after supper? I have been obliged to write some letters. I am tired to stand. Let us go home. All that I have seen is very fine. Which of these two men is the greater? The cloth of your coat is finer than mine, but my coat is better made than yours. You have never had a mind to learn much. I looked this morning for the book which you have asked me for, but I have not been able to find it. Take off your hat. The people who have lived with us have gone to Italy. What day and at what o'clock will (fut.) your relation come to us? Next Monday, at a quarter to three. I expect a friend of mine. Skilful men are esteemed and rewarded, but the awkward and (the) ignorant are despised.

16. Translate into English:—

Gerade so wie ich tritt ja Odysseus unerkannt in den Hof des Cumäos, seines alten Dieners. Dieser sitzt auch im Vorhause in dem umschatteten Platze, weist die Hunde zur Ruhe, und nachdem er dem Fremden einen hohen Sitz von weichen Fellen bereitet hat, heißt er ihn Platz nehmen, und setzt ihm Wein und Speise vor. Und da sich Odysseus der freundlichen Bewirthung erfreut und dem Geber Segen dafür wünscht, sagt dieser: „Es ist mir nicht gestattet, auch wenn ein schlechterer Mann als du hierher käme, einen Fremden zu verachten; denn alle Fremden und Armen stehen unter Obhut der Götter.“

(Fragment from „Gastfreundschaft“ by Friedrich Jakobs.)

Sie sprach's. Der ernste, richtende Augenblick
Kam mit dem Herold näher. „Ich liebe dich!“
Sprach schnell mit Flammenblick Teutona,
„Brittin, ich liebe dich mit Bewunderung!

Doch dich nicht heißer, als die Unsterblichkeit
Und jene Palmen! Rühre, dein Genius
Gebeut er's, sie vor mir; doch faß' ich,
Wenn du sie fassst, dann gleich die Kron' auch.

Und, o wie heb' ich! o ihr Unsterblichen!
Vielleicht erreich' ich früher das hohe Ziel!
Dann mag, o dann an meine leichte
Fliegende Locke dein Athem hauchen!“

Der Herold klang! sie flogen mit Adlereil'.
Die weite Laufbahn stäubte, wie Wolken, auf.
Ich sah: Vorbei der Eiche wehte
Dunkler der Staub, und mein Blick verlor sie.

(From „Die beiden Musen“ by Klopstock.)

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

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

GEOMETRY.

FIRST YEAR.

Honour Examination.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Describe a circle touching three given circles.
2. The radical axes of every pair of a system of three circles meet in a point.
3. If a quadrilateral be inscribed in a given circle, so that three of its sides may pass through three given points in a right line, the fourth side will constantly pass through another fixed point in the same right line (the successive order of the sides being assigned).
4. Prove and reciprocate the following theorem :— If a quadrilateral be inscribed in a circle, the rectangles, under the perpendiculars drawn from any point in the circumference to each pair of opposite sides, are equal.
5. If any number of right lines pass through a point, the locus of their poles, with respect to a circle, is the polar of the point.
6. If a triangle be inscribed in a circle, the tangents at the angles intersect the opposite sides in three points in one right line.
7. If the sides of a variable triangle pass through three given points in a right line, and if two angles move on given right lines, the third angle will always lie on one of two definite right lines, passing through the intersection of the two given lines.
8. If three right lines be drawn from the angles of a triangle to the opposite sides, and pass through the same point, the continued products of the alternate segments of the sides will be equal.

9. State and prove the fundamental property of an *harmonic pencil*.
10. The reciprocals of lines in harmonic proportion are in arithmetical proportion.
11. Find the centre of a circle such that the tangents drawn to it from three given points shall be equal.
12. Find the locus of a point such that the sum of the squares of its distances from any number of given points shall be constant.
13. Given two lines in position and magnitude, find the locus of the common vertex of two triangles standing on these lines, such that the sum of their areas shall be constant.
14. Draw a parallel to the base of a triangle, so that the sum of the lower segments of the sides shall be equal to a given line.
15. Given sum of sides and difference of base angles, and difference of segments of base made by the perpendicular, let fall from the vertical angle: construct the triangle.
16. Prove that the line drawn from the vertex of a triangle, trisecting the base, trisects every parallel to the base.

Faculty of Arts.

MCGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, APRIL, 1862.

MONDAY, APRIL 28TH.—9 A.M. TO 1 P. M.

ALGEBRA.

FIRST YEAR.

Honour Examinations.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Resolve $\frac{4x^2 - 8x + 1}{x^3 - 2x^2 + x}$ into partial fractions.
2. Expand a^x in a series of powers of x .
3. Define the base of the Napierian system of logarithms, and calculate its value to six places of decimals.
4. Prove $\log_{.e}(y+z) = \log_{.e} y + 2 \left\{ \frac{z}{2y+z} + \frac{1}{3} \left(\frac{z}{2y+z} \right)^3 + \&c. \right\}$
5. Calculate the common logarithm of 2049, assuming that $\log_{.10} 2 = 2.302585076$, and $\log_{.10} 3 = .693147176$.
6. If 6 white and 5 black balls be in a bag, what is the probability that a person will draw out first a white and then a black ball?
7. How would you calculate the present value of an annuity of $\text{£}P$, to be continued during the life of an individual of given age, allowing compound interest for the money? How also, if continued as long as either of two specified individuals is living?
8. If P represent the population of any place, at a certain time, and every year the number of deaths is $\frac{1}{p}$ th, and the number of deaths $\frac{1}{q}$ th of the whole population at the beginning of that year; what will be the amount of population at the end of n years from that time.

9. Find in what time a sum of money will double itself, put out at 8 per cent per annum, compound interest.
10. Sum the series $1^3 + 2^3 + 3^3 + \&c.$, to n terms.
11. Prove the Binomial Theorem for a fractional positive index.
12. Show that the sum of all the coefficients of an expanded binomial, is equal to 2^n , n being the index of the binomial.
13. Find the number of permutations that can be formed out of the letters of the word *Mississippi*.
14. Find the sum of the series $1 + \frac{1}{2} + \frac{1}{4} + \&c.$, ad infinitum.

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

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

CALCULUS AND ANALYTIC GEOMETRY.

SECOND YEAR.

Honour Examination.

Examiner ALEXANDER JOHNSON, LL.D.

1. Find the formula of reduction for

$$\int_x \frac{x^n}{\sqrt{a^2 - x^2}}$$

2. Integrate $\int_x \frac{2x + 3}{x^3 + x^2 - 2x}$

3. Find the following integrals:

$$\int_x e^{ax} \cos nx; \int_x \frac{1}{a + b \tan x}; \int_x \frac{1}{1 + x + x^2}$$

4. Prove by integration that the area of a cycloid is three times the area of the generating circle.

5. Prove MacLaurin's Theorem, and show by it that

$$\tan^{-1} x = x - \frac{x^3}{3} + \frac{x^5}{5} - \frac{x^7}{7} + \&c.$$

6. If $u = e^{ax} \cos nx$, find $\frac{d^m u}{dx^m}$

7. Find the co-ordinates of the centre of the circle of curvature at any part of the curve

$$Ax^2 + Bxy + Cy^2 + Dx + Ey + F = 0.$$

8. Find the equation of the *evolute* of the ellipse.

9. A line of constant length moves about in the legs of a given angle; find the locus described by a fixed point on it.

10. In the ellipse the line joining the focus to the pole of any chord passing through it is perpendicular to that chord.

11. Find the axes of the ellipse $14x^2 - 4xy + 11y^2 = 60$, and transform the equation to them.

12. Show that the equation of the circle inscribed in the triangle, the equations of whose sides are $\alpha = 0$, $\beta = 0$, $\gamma = 0$, and whose angles are $A B C$, is

$$\alpha^{\frac{1}{2}} \cos \frac{1}{2} A + \beta^{\frac{1}{2}} \cos \frac{1}{2} B + \gamma^{\frac{1}{2}} \cos \frac{1}{2} C = 0$$

13. Show that the equation of every right line can be expressed in *trilinear* co-ordinates.

14. Find the anharmonic ratio of the four lines $\alpha - k\beta$, $\alpha - l\beta$, $\alpha - m\beta$, and $\alpha - n\beta$.

15. Find the condition that the line $Ax + By + C = 0$ should touch the circle $(x - a)^2 + (y - b)^2 = r^2$.

16. Find the formula of transformation of co-ordinates from any one set of oblique axes to any other.

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

MONDAY, APRIL 28TH, 9 A.M. TO 1 P.M.

ALGEBRA—TRIGONOMETRY—PURE GEOMETRY.

SECOND YEAR.

Honour Examination.

Examiner,.....ALEX. JOHNSON, LL.D.

1. Show that the conditions that $ax^3 + bx^2y + cxy^2 + dy^3 = 0$, and $a'x^3 + b'x^2y + c'xy^2 + d'y^3 = 0$, should have two common factors, are given by the system of determinants.

$$\begin{vmatrix} a, & b, & c, & d, & 0, \\ 0, & a, & b, & c, & d, \\ a', & b', & c', & d', & 0, \\ 0, & a', & b', & c', & d', \end{vmatrix} = 0.$$

2. How would you form the eliminant of three homogeneous equations, in three variables of the m^{th} , n^{th} , and p^{th} degrees respectively?

3. Express the sum of the squares of the differences of the roots of an equation, by a determinant.

4. Write out fully the determinant $(a_1 b_2 c_3 d_4)$; stating the rule for change of signs.

5. Determine, by Sturm's theorem, the number and situation of the real roots of the equation

$$x^4 - 4x^3 - 3x + 23 = 0$$

6. Apply Newton's method of approximation to find to four places of decimals the positive root of the equation

$$x^3 - 7x - 7 = 0$$

7. Transform the equation $x^4 - 12x^3 + 17x^2 - 9x + 7 = 0$, into another, in which the second term shall be absent.

8. Show that imaginary roots enter in pairs.

9. Given any equation, find another such that the real roots of the latter may separate those of the former.

10. The side and adjacent angle of a right-angled spherical triangle are respectively $119^\circ 11'$ and $126^\circ 54'$: find the hypotenuse.

11. Any two sides of a spherical triangle are greater than the third.

12. Prove Lhuilier's formula for the spherical excess.

$$\tan \frac{1}{4} E = \sqrt{\tan \frac{1}{2} s \tan \frac{1}{2} (s-a) \tan \frac{1}{2} (s-b) \tan \frac{1}{2} (s-c)}$$

13. If a transversal be drawn cutting the sides of a *polygon* (or sides produced), the continued products of the alternate segments are equal.

14. The six centres of similitude of three circles taken in pairs, lie three by three on four right lines.

15. Describe a circle touching three given circles.

16. For a hexagon inscribed in a circle, the sixty Pascal's lines consist of twenty sets of three, each set passing through a point.

1. The distance between the points $P_1(x_1, y_1)$ and $P_2(x_2, y_2)$ is given by the formula $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$.

2. The slope of a line passing through the points $P_1(x_1, y_1)$ and $P_2(x_2, y_2)$ is given by the formula $m = \frac{y_2 - y_1}{x_2 - x_1}$.

3. The equation of a line passing through the point $P_1(x_1, y_1)$ and having a slope m is given by the point-slope formula $y - y_1 = m(x - x_1)$.

4. The equation of a line passing through the points $P_1(x_1, y_1)$ and $P_2(x_2, y_2)$ is given by the two-point formula $y - y_1 = \frac{y_2 - y_1}{x_2 - x_1}(x - x_1)$.

5. The equation of a line passing through the point $P_1(x_1, y_1)$ and perpendicular to a line with slope m is given by the formula $y - y_1 = -\frac{1}{m}(x - x_1)$.

6. The equation of a line passing through the point $P_1(x_1, y_1)$ and parallel to a line with slope m is given by the formula $y - y_1 = m(x - x_1)$.

7. The equation of a line passing through the point $P_1(x_1, y_1)$ and having a y-intercept b is given by the formula $y = mx + b$.

8. The equation of a line passing through the point $P_1(x_1, y_1)$ and having a y-intercept b is given by the formula $y = mx + b$.

9. The equation of a line passing through the point $P_1(x_1, y_1)$ and having a y-intercept b is given by the formula $y = mx + b$.

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16. The equation of a line passing through the point $P_1(x_1, y_1)$ and having a y-intercept b is given by the formula $y = mx + b$.

Faculty of Arts,

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

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

ASTRONOMY--OPTICS.

THIRD YEAR.

Honour Examination.

Examiner..... ALEXANDER JOHNSON, LL.D.

1. Regarding the Earth as an oblate spheroid of which the equatorial radius is a , the difference of the semi-axes c , and r the radius of curvature at any point whose latitude is l , show that approximately

$$r = a - 2c + 3c \sin^2 l.$$

2. If D and D' be the lengths of two degrees of the meridian whose middle points are respectively in latitude l and l' , prove that approximately

$$\frac{c}{a} = \frac{D - D'}{3 (D' \sin^2 l - D \sin^2 l')}$$

Calculate the ellipticity from the data

$$\begin{array}{ll} l = 44^\circ 51' 2'' & D = 111108 \text{ metres} \\ l' = 66^\circ 20' 10'' & D' = 111488 \end{array}$$

3. Prove the theorem that if e be very small and $u = m + e \sin u$,

$$\begin{aligned} \text{then } f(u) &= f(m) + e \sin m f'(m) \\ &+ \frac{e^2}{2} \left\{ \sin^2 m f''(m) \right\}' + \frac{e^3}{6} \left\{ \sin^3 m f'''(m) \right\}'' + \&c. \end{aligned}$$

4. Find the true anomaly in terms of the mean; neglecting e^3 and higher powers.

5. Show that three complete observations are theoretically sufficient for determining the elements of a planet's orbit.

6. Explain the best practical methods of correcting the nearly known elements of an orbit, in the cases of the longitude of the node and the inclination of the orbit.
7. Calculate the aberration in right ascension and declination on the day of the vernal equinox of a star whose R. A. is 17h. 30m. 30s. and N. Dec. $50^{\circ} 30'$.
8. Find the refraction, considering the atmosphere homogeneous. How may the accuracy of any table of refractions be ascertained.
9. Find how much the time of a star's rising is altered by refraction.
10. On the 22d Sept. 1851, the Sun's declination observed at Greenwich was $3^{\circ} 51''.53$ N., and on the 23rd it was $19^{\circ} 33''.76$ S.; the sidereal interval of the transits was 24h. 3m. 36.13s. What was the Sun's right ascension at noon Sept. 23rd?
11. At a place in longitude $70^{\circ} 45'$ W. the meridian altitude of the Sun's lower lim was *observed* to be $65^{\circ} 23' 38''$ on a day when the declination of the Sun, as given in the Nautical Almanac, was N. $13^{\circ} 21' 26''.2$, and his semi-diameter $15' 55''.3$. The declination on the following day was N. $13^{\circ} 40' 45''$. Calculate the latitude, introducing all necessary corrections.
12. Find the length of the day at any place.
13. Show that conic sections are the only curves which will reflect rays, proceeding from a point, *accurately* to a point.
14. Investigate the best form of a lens of crown glass ($\mu = \frac{3}{2}$) for the correction of aberration, showing that the ratio of the radii of the two surfaces will be as 1 : 6.

6. Explain the last question regarding the nearly known elements of an orbit in the case of the longitude of the node and the inclination of the orbit.

7. Calculate the variation in the eccentricity and the longitude of the perihelion of the comet of 1858, whose $h = 1.1$, $q = 0.004$, and $M = 0.00033$.

8. Find the variation, considering the atmospheric drag, of the semi-major axis of a comet's orbit.

9. Find how much the time of a star's flight is altered by refraction.

10. On the 15th Dec. 1871, the Sun's declination observed at Greenwich was $23^{\circ} 26' 10''$, and on the 15th Dec. 1872, the declination of the Sun's axis was $23^{\circ} 26' 10''$. What was the Sun's axial interval of the transit was 211.50. 25.12. What was the Sun's axial inclination of the transit?

11. At a place in longitude $75^{\circ} 45' W$, the meridian altitude of the Sun's lower limb was observed to be $53^{\circ} 30' 30''$ on a day when the declination of the Sun was $18^{\circ} 10' 00''$. The refraction was $34''$, and the semi-diameter $16' 10''$. The refraction was the following day was $34''$, and the semi-diameter $16' 10''$. Calculate the refraction on the necessary correction.

12. Find the length of the day at any place.

13. Show that some sections are the only curves that will reflect rays proceeding from a point, according to a point.

14. Investigate the best form of a lens of crown glass ($n = 1.5$) for the correction of aberration, showing that the ratio of the radii of the two surfaces will be as 1 : 2.

15. A lens is made of two pieces of glass, the refractive indices of which are 1.5 and 1.6. The radii of curvature of the two surfaces are R_1 and R_2 . Find the focal length of the lens.

16. A lens is made of two pieces of glass, the refractive indices of which are 1.5 and 1.6. The radii of curvature of the two surfaces are R_1 and R_2 . Find the focal length of the lens.

17. A lens is made of two pieces of glass, the refractive indices of which are 1.5 and 1.6. The radii of curvature of the two surfaces are R_1 and R_2 . Find the focal length of the lens.

18. A lens is made of two pieces of glass, the refractive indices of which are 1.5 and 1.6. The radii of curvature of the two surfaces are R_1 and R_2 . Find the focal length of the lens.

19. A lens is made of two pieces of glass, the refractive indices of which are 1.5 and 1.6. The radii of curvature of the two surfaces are R_1 and R_2 . Find the focal length of the lens.

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

FRIDAY, APRIL 25TH, 9 TO 12 A.M.

GREEK. { SOPHOCLES.—PHILOCTETES.
EURIPIDES.—ALCESTIS.
PLATO.—CRITO.
ÆSCHINES.—ORAT. AGAINST CTESIPHON.

THIRD YEAR.

Honour Examination.

Examiner,.....REV. GEORGE CORNISH, B.A.

1. Translate, Sophocles, Philoctetes :—*a.* vss. 391—425 ; *b.* vss. 1047—1094.

2. *a.* Give the legend of Philoctetes, and point out in what particulars Sophocles has departed from it in this play. *b.* Write down the scheme of the metre called Trochaic Tetrameter Catalectic, and also Anapæstic Dimeter Acatalectic. *c.* 'σύμβολον.' Explain this word, and the custom connected with the use of the σύμβολον to which allusion is here made. *d.* Give the exact meaning and force of the prepositions used in the following expressions ;—vs. 60. ἐν λιταῖς. 90. πρὸς βίαν. 148. πρὸς ἐμὴν χεῖρα. 904. ἔξω τοῦ φυτεύσαντος. 963. ἐν σοί. 1268. ἐκ λόγων καλῶν. *e.* 287. διακονεῖσθαι :—What is the quantity of the 2nd syllable? Give the reason for this by pointing out the derivation of the word. 473. ἐν παρέργῳ θοῦ :—Explain this, and give the Latin for it. 519—520. Upon what does the Genitive τῆς νόσου depend?

3. Translate, Euripides, Alcestis :—*a.* vss. 142—198 ; *b.* vss. 962—1007.

4. *a.* Write the plot of this Drama. What place in the list of the plays of Euripides is this supposed to occupy? On what ground is it said to be the last of a Tetralogy? *b.* What is the force of the particle γέ in answers to questions? *c.* State the general rule for the use of the Article, as a relative pronoun, by the Tragic poets.

5. Translate, Plato, Crito:—*a.* § 4; *b.* §§ 16, 17.

6. *a.* What is the subject of the Crito? Write a sketch of the line of argument employed by Socrates. *b.* Give an account of the leading Greek Philosophers and Sophists who flourished before the time of Socrates. *c.* Mention the most eminent followers and disciples of Socrates, and state what you regard to be the leading tenets of his philosophy.

7. Translate, Æschines against Ctesiphon:—§§ 145—147.

8. *a.* In what year B. C. was the speech against Ctesiphon delivered, and how many years after the moving of the indictment? *b.* Mention the points of policy on which Æschines and Demosthenes, as statesmen, were at issue with one another. *c.* What are the strong points in the argument of this speech? How does Demosthenes meet them?

9. *a.* State and illustrate the precise meaning of the following expressions and terms, as used in the courts and public assembly of Athens;—*είσαγγελία. άγων. κρίσεις. γραφή. έπιτιμία. λογιστοί. δικασταί. νόμος. προβούλευμα. ψήφισμα.* *b.* Distinguish between;—*θείναι νόμους, θέσθαι νόμους: γράφειν παράνομα, γράφεσθαι παρανόμων: άποψηφίζεσθαι, καταψηφίζεσθαι: δίκην φέγγειν, δ. όφλισκάνειν: ό διώκων, ό φέγγων.*

FRIDAY, APRIL 25TH, 3 TO 6 P. M.

GREEK AND LATIN PROSE COMPOSITION.

Translate into Greek :—

“My father, Cephalus, was induced by Pericles to come to this country, and he lived here thirty years, and neither we nor he at any time prosecuted any man at law, or were prosecuted, but we lived so modestly under the popular government, as neither to trespass against others nor to be wronged by others. But when the Thirty, profligates and false-accusers as they were, entered on the government, they alleged that it was necessary to purify the state from the wicked, and that the rest of the citizens should devote themselves to virtue and justice. But though they spoke thus, they did not venture to act thus, as I, after speaking of my own affairs, will endeavour to convince you in reference to yours.”

Translate into Latin :—

“Hannibal, escaping with a few horsemen in the midst of the tumult, fled to Adrumetum; having made trial of all expedients both before and after the battle, and during the action, before he left the field. In the vanguard he stationed the elephants, in order that their capricious onset and irresistible strength might prevent the Romans from following their standards and keeping their ranks, wherein they mainly trusted. Next he placed the auxiliary forces in front of the Carthaginian line, in order that these men, whom pay, not patriotism, attached to Carthage, might not find a passage open to flight. Next he stationed the Carthaginian and African soldiers, where all his hope lay, that they who were equal in all other respects might have the advantage in this, that they would be fresh when contending with men who were tired and wounded. The Italians he drew up furthest in the rear, separated by an interval, as he was doubtful whether they were allies or foes. Hannibal retired to Adrumetum, and on returning to Carthage, whither he was summoned, thirty-six years after he had left it as a boy, declared in the senate that he had been conquered, not merely in a battle but in a campaign, and that the only hope of safety lay in suing for peace.

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

MONDAY, APRIL 28TH, 9 TO 12 A. M.

THIRD YEAR.

LATIN. } LIVY.—BOOK XXI.
CICERO.—PRO MURENA.
CICERO.—DE SENECTUTE.
TERENCE.—ANDRIA.

Honour Examinations.

Examiner..... Rev. GEORGE CORNISH, B.A.

1. Translate, Livy, Book XXI, Chap. 21.
2. How many of the books of the History of Livy remain? Give a short account of the style and character of the writings of Livy.
3. Enumerate the principal historians among the Romans. Can you point out any resemblance, as regards style, intellectual qualifications, &c., between any of them and Herodotus and Thucydides?
4. Translate, Cicero, De Senectute:—*a.* Chap. III. *b.* Chap. XIII.
5. Translate, Cicero, Pro Murena, Chap. XXXVIII.
6. Give a general account of the Philosophical writings of Cicero.
7. Translate, Terence, Andria:—*a.* Act II, sc. 3. *b.* Act V. sc. 3.
8. "Malevoli vetris poetæ." Andria, Prolog. 6-7.—What poet is here alluded to? What was the ground of his hostility against Terence? What was the charge he continually urged against him? Write a sketch of the life of Terence.
9. Write a brief account of the rise and progress of Dramatic Literature among the Romans, mentioning the principal writers therein, and those whom they took as their models, in respect to treatment of subject, characters, plot, &c. In what respect is Terence held to be superior to Plautus, and in what his inferior?

MONDAY, APRIL 28TH, 3 TO 6 P.M.

GENERAL PAPER.

1. Give an account of the legislation of Solon at Athens. Write a sketch of the life of Pisistratus. For what is the literary world supposed to be indebted to him?
2. Describe the constitution and social customs of the Spartans. What great objects were aimed at by them?
3. Give an account of the Greek system of colonisation. Enumerate the principal colonies that were established by the several states, in Asia Minor, Italy, and Sicily.
4. Mention the principal writers in the Lyric, Epic, and Dramatic literature of both Greece and Rome. Give the names of the seven sages. What kind of poetry was cultivated by them?
5. Give the dates of the commencement and termination of the Peloponnesian War, together with a brief account of the events that gave rise to it.
6. What were the qualifications of birth requisite for citizenship at Athens? What alteration in the law, on this subject, is said to have been made in the time of Pericles, and why?
7. Give the date of the accession of Philip. Between what powers did the Sacred War commence? What reasons did Philip assign for his interference? What advantages did he gain by his termination of it? By what decisive battle did Philip completely establish the supremacy of Macedonia over the other states of Greece?
8. State the character, composition, and object of the Amphictyonic Council.
9. Who was the first Dictator at Rome; and on what occasion was he appointed? When was the Consulship first thrown open to the *Plebeians*? What were the powers of the *Tribuni Plebis*?
10. Give the dates of the following events;—The expulsion of the Tarquins; taking of Rome by the Gauls; defeat of Pyrrhus; the second Punic War; the destruction of Carthage; the conspiracy of Catiline.

11. Give the geographical situations of Capua, Saguntum, Carthage, Utica, Massilia, Tarentum, Corinth, and Rhodes.

12. *a.* How is the lack of the *Perf. Part. Act.*, in Latin, commonly supplied? *b.* Explain the following expressions; Sestertium sexagies. HS. M.DC., and HS. $\overline{\text{M.DCC}}$. *c.* Translate, according to our mode of reckoning, a. d. VI. Kal: Apr: . Id: Quint: . Prid: Non: Mart: .

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SESSIONAL EXAMINATIONS, 1862.

THURSDAY, APRIL 17TH, 2 P. M. TO 5 P. M.

HEBREW.

JUNIOR CLASS.

Examiner.....Rev. A. DE SOLA, LL.D.

1. What have you to remark respecting the antiquity of the Assyrian character?
2. State the main characteristics of the Hebrew orthographical system, and briefly recapitulate the various opinions propounded as to the age of the vowel points.
3. How do you distinguish between *Kamets Rahab* and *Kamets Hatoof*?
4. When is *Sheva* syllabical; when mute; when compounded?
5. Give the rules for distinguishing *Dagesh lene* and *Dagesh forte*, and some examples of assimilation of *Dagesh*.
6. Explain *Raphe*, *Mappick*, and *Makkaph*; and the effect of *Metheg* on syllabication.
7. State briefly a few of the uses of the (טעמים) accents.
8. Give a few examples to show how the definite article may be compounded with a preceding preposition.
9. What is the distinctive termination of nouns plural masculine, also singular and plural feminine, and the dual.
10. Write in full the absolute and fragmentary forms of the pronouns, and add the latter to a noun and adjective (e. g. איש טוב) in the masculine gender.
11. Give the names, significations, and characteristics of the *Binyanim* or verbal forms.

12. Write out and point the verb סקר in Kal and Niphal forms.

13. Translate into Hebrew :

The good man ; good men ; my good man ; our father ; these men have come to see the nakedness of the land ; the Lord shall appoint (יסקר) a man over the congregation. This house is small ; that house is larger than this. A good name is better than oil.

14. Translate into English :

אדני אלהים אל שדי ברא את העולם תבל ומלאה את השמים וכל צבאם מעל את הארץ
וצאצאיה מתחת ואת כל היקום אשר בה צבא השמים השמש והירח הכוכבים והמנלות

12. Write out and point the verb in the following sentences.

13. Translate into Hebrew:

The good man; good man; my good man; our father; these men have come to see the neighbors of the land; the Lord shall appoint (you) a man over the congregation. This house is small; that house is larger than this. A good name is better than oil.

14. Translate into English:

For the man who is righteous in his ways, you shall be blessed. Righteousness shall be his reward, and his wages shall be peace.

15. Write out the following in Hebrew:

1. The man who is righteous in his ways, you shall be blessed. Righteousness shall be his reward, and his wages shall be peace.

2. The man who is righteous in his ways, you shall be blessed. Righteousness shall be his reward, and his wages shall be peace.

3. The man who is righteous in his ways, you shall be blessed. Righteousness shall be his reward, and his wages shall be peace.

4. The man who is righteous in his ways, you shall be blessed. Righteousness shall be his reward, and his wages shall be peace.

5. The man who is righteous in his ways, you shall be blessed. Righteousness shall be his reward, and his wages shall be peace.

6. The man who is righteous in his ways, you shall be blessed. Righteousness shall be his reward, and his wages shall be peace.

7. The man who is righteous in his ways, you shall be blessed. Righteousness shall be his reward, and his wages shall be peace.

8. The man who is righteous in his ways, you shall be blessed. Righteousness shall be his reward, and his wages shall be peace.

9. The man who is righteous in his ways, you shall be blessed. Righteousness shall be his reward, and his wages shall be peace.

10. The man who is righteous in his ways, you shall be blessed. Righteousness shall be his reward, and his wages shall be peace.

11. Write out the following in Hebrew:

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SESSIONAL EXAMINATIONS, 1862.

THURSDAY, APRIL 17TH, 2 P. M. TO 5 P. M.

HEBREW.

SENIOR CLASS.

Examiner.....REV. A. DE SOLA, LL.D.

1. Write out the irregular verb וַיִּבֶן in the *Kal* form.
2. What are the main characteristics of verbs *Pe guttural*?
3. Write out a verb *Pé Cheth* in the *Niphal* form.
4. State some of the characteristics of Hebrew poetry, and give some examples of the various kinds of Parallelism.
5. Give a free version of the Third Psalm.
6. How do you form the construct state of singular nouns ending in ן , and of nouns formed of an immutable vowel in the nominative?
7. When is the definite article properly omitted?
8. Add the objective pronominal suffixes to the preterite tense of the verb לָמַד .
9. What have you to remark as to the ו consecutive of Gesenius, and the ו conversive of the older Hebrew grammarians?
10. Translate into Hebrew :

Put thy trust in the Lord. In order to be governor in the land. With one hand. Horses and bulls. Man is dust of the earth. The people heard the Lord. He speaks as a friend to me. Moses led the people in the wilderness. To the upright there ariseth light in darkness.

11. Give the participles of the verb למד in the Kal, Niphal, Piel, Pual, and Hiphil forms.

12. Translate into English :

הכילי

כילי ישן וירא בחלומו
והנה נותן לדל מלחמו
ויבהל וייקז ונשבע באמונה
לבלתי תת עוד לעיניו שינה

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McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

MONDAY, APRIL 14th,—9 A.M. to 12 NOON.

ENGINEERING.

EXAMINERS . . . W. SHANLY, C. E., PROF. M. J. HAMILTON, C. E.

1. State in what particulars the adjustments and construction of the Transit Theodolite differ from those of the Theodolite.

2. Demonstrate the principle on which the arc of the box sextant is divided.

3. If in taking an altitude of the sun with the sextant, an artificial horizon is used, how is the angle formed at the eye by the object and the horizontal determined?

4. If the limb of an instrument be divided into half degrees, and 59 of these divisions correspond with 60 divisions on the vernier; required the degree of accuracy to which the instrument will read.

5. Draw on plan No. 1 such lines as you would employ in making a survey of the property which it represents.

6. Give the field notes of the line $A B$, plan No. 2, the scale being 4 chains (66 feet), to one inch.

7. How are plans enlarged and reduced?

8. Show that the area of the trapezoid $A B C D$ is equal to

$$\frac{A + B}{A - B} \sqrt{S (S - C) (S - D) (S + B - A)}.$$

when $S = \frac{1}{2} (A + C + D - B)$ and the sides A and B are parallel.

9. If the chain used in the survey represented by plan No. 3, were one link too short, what would be its correct area?

10. Balance and plot the following field notes:—

<i>Bearing.</i>	<i>Distance.</i>
N. 20 W.	3.47
N. $47\frac{1}{2}$ E.	5.05
S. $61\frac{1}{4}$ E.	3.90
S. $29\frac{3}{4}$ W.	4.30
S. 75 W.	3.97

11. The two parallel sides of a trapezoid are 40 chains and 60 chains (100 feet), and the third side, making an angle of $64^{\circ} 45'$ with the longer of the parallel sides, is 30 chains. Required the area in acres, roods, and perches.

12. From a trapezoidal field, $A B C D$, it is required to cut off a part equal to 60 acres, by a line parallel to $A B$, which is 40 chains (66 feet), the angles $D A B$ and $C B A$ being respectively 80° and 84° .

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SESSIONAL EXAMINATIONS, 1862.

MONDAY, APRIL 14th,—2 P. M. to 5 P. M.

ENGINEERING.

Examiners, . . . W. SHANLY, C. E., PROF. M. J. HAMILTON, C. E.

1. The radius of a curve is 6500 feet, and the angle included between the tangents is $122^{\circ} 40'$. Required the distance of the intersection of the tangents from the point of curve, and the deflection angle for chords of 100 feet.
2. Required the number of chords in the above curve, and if a sub-chord the sub-deflection angle.
3. The radii of two curves given in position are given; it is required to find a point on one of them, so that a tangent to it at that point will also be a tangent to the other.
4. How does the Dumpy Level differ from the Y Level?
5. Describe the adjustments of the latter.
6. The reduced levels at stations 1, 2, 3, 4, 5, 6, and 7, taken 100 feet apart, are 169.2, 172.3, 174.1, 175.7, 177.6, 180.4, 175.02; the height of grade at station 1 is 169.2, and at station 20 is 188.6; required the depth of cutting at each point.
7. Required the cubic content, in yards, in the above cutting, the bottom width being 20 feet, and the slopes 2 to 1.
8. Give a detailed description of the mode of conducting a Railway Survey.
9. Describe the mode of setting out curves by offsets.
10. The radius of a curve is 3000 feet, and the length of the chord 100 feet. Required the length of the first and second offsets.

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SESSIONAL EXAMINATIONS, 1862.

TUESDAY, APRIL 15TH.—2 P. M. to 5 P. M.

ENGINEERING.

Examiners, . . . W. SHANLY, C. E., PROF. M. J. HAMILTON, C. E.

1. If d equal the perpendicular distance of the centre of gravity of a right section of a retaining wall, from the vertical drawn from the top of the intrados, a , the width of the wall at top, ϕ the angle which the extrados makes with the horizontal, ϕ' the angle which the intrados makes with the horizontal, and h the vertical height of the wall; show that

$$d = \frac{\frac{1}{3} h^2 (\cot^2 \phi - \cot^2 \phi') + a h \cot \phi + a^2}{h (\cot \phi - \cot \phi') + 2a}$$

2. A wall 30 feet high, 6 feet wide at the bottom, and 4 feet at the top,—the back being vertical,—sustains a bank of earth, on a level with the top, the natural slope of which is $52^\circ 20'$, and the weight of a cubic foot 100 lbs. Will the wall stand or fall, the weight of a cubic foot of the masonry being 150 lbs?

3. If the wall (question 2) will stand; required its modulus of stability.

4. What is meant by *borrowing* and *spoiling* earth?

5. When does it become judicious to spoil and borrow?

6. For what purpose are cross-sections of cuttings employed?

7. What is the object of setting out slope stakes?

8. Describe the mode of setting them out.

9. The span of a Howe Truss Bridge is 150 feet, height from centre to centre of chords 18 feet, weight of bridge per foot run 800 lbs., and of load per foot run 2000 lbs., resisting sectional area of each upper chord 200 square inches, and of each lower chord 140 square inches. Required the pressure on the upper, and strain on the lower chords per square inch, the load being supported by two trusses.

10. If arches having a versine of 22 feet be introduced into the above bridge one on each side of each truss; required the dimensions at the centre and springing, supposing them to sustain the whole weight and taking the safe load at 1000 lbs. per square inch.

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MCGILL COLLEGE, MONTREAL

GENERAL EXAMINATION, 1903

Thursday, June 12th - 9 a.m. to 5 p.m.

ENGINEERING

Candidates: W. Murray, G. E. Fournier, M. J. Hamilton, C. E.

1. It is equal the perpendicular distance of the centre of gravity of a right section of a retaining wall, from the vertical drawn from the top of the masonry, to the centre of the wall at top, and the angle which the vertical makes with the horizontal, γ , the angle which the tangent to the curve at the top of the wall makes with the horizontal, and β the vertical height of the wall; show that

$$\beta = \frac{1}{2} h^2 (\cot^2 \gamma - \cot^2 \beta) + h \cot \gamma + \frac{1}{2} h^2 (\cot^2 \gamma + \cot^2 \beta)$$

2. A wall 20 feet high, 6 feet wide at the bottom, and 4 feet at the top—the back being vertical—contains a bank of earth, on a level with the top, the natural slope of which is $37^\circ 30'$, and the weight of a cubic foot of soil 100 lbs. Will the wall stand or fall, the weight of a cubic foot of the masonry being 150 lbs?

3. If the wall (question 2) will stand; required its modulus of stability.

4. What is meant by bowstring and spilling earth?

5. How does it become injurious to spoil and bowing?

6. For what purpose are cross-sections of cuttings employed?

7. What is the object of setting out slope stakes?

8. Describe the mode of setting them out.

9. The span of a Howe Truss Bridge is 100 feet, height from centre to centre of chords 18 feet, weight of bridge per foot run 100 lbs, and of load per foot run 2000 lbs, vertical sectional area of each upper chord 200 square inches, and of each lower chord 150 square inches. Required the pressure on the upper, and strain on the lower chords per square inch, the load being supported by two trusses.

10. It is required to lay a truss of 20 feet to be introduced into the above bridge on each side of each truss; required the dimensions of the centre and spacing, supposing them to sustain the whole weight, and taking the safe load at 1000 lbs. per square inch.

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SESSIONAL EXAMINATIONS, 1862.

TUESDAY 15TH, 9 A.M. TO 12 P.M.

ENGINEERING.

Examiners, . . . Wm. SHANLY, C.E., PROF. M. J. HAMILTON, C. E.

1. The span of a semicircular arch with parallel arched surfaces is 20 feet, the thickness at the crown 1.5 foot, and the weight of a cubic foot of the material 150 lbs. Required the pressure per square inch on the keystone.
2. Determine the angle of rupture measured from the crown in the above arch.
3. Describe the mode of constructing the arch, (question 1).
4. If the abutments (in question 1) be 12 feet high; required their thickness.
5. How many cubic yards of masonry in the bridge, Drawing No. 2.
6. Give a Bill of materials of the bridge, Drawing No. 1.
7. Give a sketch and description of the best mode of forming the surface or crust of a macadamized road.
8. The span of a suspension bridge from centre to centre of towers is 600 feet, weight of bridge between towers 650 tons (2000 lbs. per ton), deflection of the cables 40 feet, and the safe load per square inch 7.5 tons. Required the sectional area of the cables at the saddles.
9. Required the movements of the saddles (question 8) for an increase of temperature of 100° Fah., the land cables being $\frac{2}{3}$ of the length of the cables between the towers.
10. Required the deflection due to a uniform load of 100 tons (question 8), the anchor chains being each 30 feet long.

McGILL UNIVERSITY, MONTREAL.

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ENGINEERING DIPLOMA.

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

SPECIAL EXAMINATION IN MATHEMATICS AND NATURAL PHILOSOPHY.

Examiner.....ALEXANDER JOHNSON, LL.D.

1. A rectangular beam has one end firmly imbedded in masonry ; at the other end, a force (P) is applied in a direction perpendicular to its length :

- a. Find the curvature of the beam at any given point.
- b. Find its deflection; first proving *geometrically* the value for the radius of curvature of any curve, when the curvature is small.
- c. Calculate the deflection, when the length of the projecting part is 15 feet ; its breadth is 3 inches, and depth, 6 inches ; and a pressure of 2 cwts. is applied at the end (neglecting the weight of the beam) ; the modulus of elasticity being 1450000.

2. What must be the depth of a beam (s. g. = .753) of Riga fir, 4 inches wide, 30 feet long, that will just sustain a weight of $\frac{1}{2}$ a ton at its middle, taking its own weight into account ; the modulus of rupture being 6612 lbs. per square inch ?

N. B. — Prove your formula.

3. It is required to compress a substance with a force of 10,000 lbs. The screw with which this is done has a diameter of 3 inches, and its thread makes one turn to the inch ; the arm of the lever is 2 feet long : determine the pressure that would be required, taking into account the friction on the end of the screw, as well as that on the thread ; the co-efficient of friction being 0.16.

Prove your formula.

4. A cone, with its vertex downward, contains mercury ; the depth of the liquid is 6 inches, and radius of surface 2 inches : if the temperature be raised 50° Fah., determine the rise in the centre of gravity, neglecting the expansion of the vessel, and supposing mercury to expand by the $\frac{1}{10000}$ th part of its volume for every degree.

5. A weight of 1 ton is hung at a distance of 1 foot from one end of a beam of oak, (s. g. = .934) which is 30 feet long and 2 feet square: at what distance from that end must be the point of support on which the beam, when horizontal, will rest; and what will be the pressure on that point?
6. *a.* A shaft has to be sunk a depth of 130 fathoms, through chalk (sp. gr. = 2.315): the diameter of the shaft is 10 feet: how many units of work must be expended on raising the materials?
- b.* If the work is to be done in 24 weeks by a steam-engine, working 8 hours a day, 6 days a week, what must be the horse-power of the engine?
7. A town is situated 25 miles from the mouth of a coal-pit, from which coal is taken to the town by a level railway, on which the resistance is 10 lbs. per ton; the engine is of 15-horse power, and weighs, with its tender, 10 tons; each truck weighs 3 tons, and contains 7 tons of coal; on each journey the engine takes 5 full trucks, and returns with 5 empty ones: supposing no time to be lost at the ends of the journey, how many tons of coal will be taken to the town in 48 hours?
8. The mean section of a stream is 11 feet by $1\frac{1}{2}$ feet; its mean velocity is $2\frac{1}{2}$ miles per hour; it has a fall of 6 feet; on it is erected a wheel whose modulus is 0.7; this wheel is employed to raise the hammers of a forge, each of which weighs 2 tons, and has a lift of $1\frac{1}{2}$ feet: how many lifts of a hammer will the wheel yield per minute?
9. A wall of brickwork (sp. gr. = 2.168) 3 feet thick, is supported, at intervals of 10 feet, by sandstone columns 9 inches in diameter: to what height can the wall be carried, supposing the crushing pressure of sandstone to be 4000 lbs. per square inch, and assuming the working stress to be $\frac{1}{10}$ th of the ultimate strength.
10. If the wrought-iron rails on a railway are 10 miles long, when at a temperature of 32° , by how much will they be lengthened, if their temperature is raised to 88° Fah.; the co-efficient of expansion for 1° being .00000642?
11. A locomotive engine, weighing 9 tons, passes round a curve 600 yards in radius, at the rate of 30 miles an hour: if the centrifugal force is to be counteracted by an elevation of the outer rail, what ought this elevation to be, the space between the rails being 4 feet 9 inches?
12. Calculate the total pressure on a gate 12 feet wide in a canal-lock, when the water rises to the height of 20 feet against it.
13. Calculate the height of a mountain from the following observations (the mercury and air being supposed of same temperature):—
- | | |
|-----------------------------|--------------------------------|
| At lower station:— | At upper station:— |
| Barometer, 29.567 inches. | Barometer, 27.54 inches. |
| Thermometer, 55° . | Thermometer, $42^{\circ}.36$. |

McGILL UNIVERSITY, MONTREAL.

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SESSIONAL EXAMINATIONS, 1862.

MONDAY, APRIL 28TH.—9 A. M. TO 1 P. M.

ENGINEERING DIPLOMA.

Special Examination in Mathematics and Natural Philosophy.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. To find the height of a hill, a horizontal base-line, in the same vertical plane with its top was measured, 130 feet long, and the angles of elevation of the top of the hill, measured at the extremities of the base were 31° and 46° ; find its height.
2. Find the distance between two objects that are invisible from each other, having given that their distances from a station at which they are visible are 882 yds, and 1008 yds, and the angle at this station, subtended by the distance of the objects = $45^\circ 40'$.
3. Find the area of a trapezoidal field whose parallel sides are 950 ft. and 754 ft., and breadth, 570 ft.
4. State and prove the rule for calculating the dip of the horizon.
5. At a place in lat. $25^\circ 40'$ N. the sun's *correct* central altitude was found to be $10^\circ 6' 27''$, when his declination was $8^\circ 5' 56''$ S. What was his distance from the meridian?
6. At a place north of the equator, the *observed* zenith distance of a star, whose declination was $28^\circ 22' 47''.70$, N. was $23^\circ 5' 24''.05$. Find the latitude.
7. Taking your data from the Nautical Almanac before you, calculate the sun's declination on any day you choose in May, at noon, in a place whose longitude is $54^\circ 32' 10''$ E.
8. Explain in detail the lunar method of finding the longitude.

FACULTY OF LAW.

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McGILL UNIVERSITY, MONTREAL.

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LL.B. EXAMINATIONS, 1862.

TUESDAY, APRIL 22nd—4 to 6 P.M.

ROMAN LAW.

THIRD YEAR.

Examiner,.....PROFESSOR F. W. TORRANCE.

1. Who were the "*hæredes sui*," properly so called?
2. What is the meaning of "*possessio bonorum*"? how many kinds were there in the jurisprudence of Justinian? Name them and point out their differences.
3. Whence arise obligations?
4. Explain "*mutuum*," "*commodatum*," "*depositum*," and "*pignus*."
5. What do you understand by the three *beneficia*, 1. *divisionis*, 2. *cessionis actionum*, 3. *ordinis sive excussionis*? Explain fully.
6. What are the three requisites of a sale?
7. At whose risk is the thing sold? State the rule with its qualifications.
8. When Titius agreed with a goldsmith that the latter should make him rings of a certain weight and form, out of gold belonging to the goldsmith, was the contract *locatio-conductio*, or *emptio-venditio*?
9. What is *Emphyteusis*?
10. How was partnership terminated? To what actions did this contract give rise?
11. What were the actions arising from *mandatum*?

EVIDENCE.—LOWER CANADA LAW.

1. In what cases do the English rules apply?
2. In what cases is oral testimony admissible?

3. In oral testimony, how many witnesses are requisite? Is interest or relationship a bar to their examination? What is the effect of interest and of relationship?

4. Can a wife or husband be a witness for or against the other? If so, in what cases?

5. Does the law of evidence concerning commercial matters apply to a sale by a non-trader to a trader? does it apply to a sale by a non-trader to a non-trader?

6. What was the rule applied in the Superior Court in *Desbarats vs Murray*, 3 L. C. Jurist, 27, and by the Superior Court and Court of Appeal, in *Carden vs. Findlay*?

3. In what cases, how many witnesses are required? In what cases or relations a bar to their examination? What is the effect of a husband and of reticence?

4. Can a wife or husband be a witness for or against the other? In what cases?

5. Does the law of evidence concerning commercial matters apply to a wife by a non-widow to a husband? Does it apply to a wife by a non-widow to a non-widow?

6. What was the rule applied in the Superior Court in *Hobbs vs. Hobbs* as to the admissibility of evidence in the Superior Court and Court of Appeals, in *Crane vs. Crane*?

7. In what cases is a husband or wife a witness for or against the other? In what cases is a husband or wife a witness for or against the other? In what cases is a husband or wife a witness for or against the other?

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MCGILL UNIVERSITY, MONTREAL.

Faculty of Law.

LL.B. EXAMINATIONS, 1862.

WEDNESDAY, APRIL 23RD.—4 TO 6 P. M.

CAUTIONNEMENT, ETC.

THIRD YEAR.

Examiner,.....PROFESSOR LA FRENAYE.

1. Qu'est-ce que le contrat de dépôt ?
2. Quelle est la différence entre le dépôt nécessaire et le dépôt volontaire ?
3. Quelles sont les obligations des aubergistes ou hôteliers comme dépositaires des effets apportés par le voyageur qui loge chez eux ?
4. Quelles sont les diverses espèces de séquestre ?
5. Quelles sont les obligations d'un gardien d'office et du séquestre judiciaire ?
6. Qu'est-ce que la contrainte par corps ?
7. Dans quel cas peut s'exercer la contrainte par corps, d'après les lois du Bas-Canada ?
8. Quel est le privilège du locateur sur les meubles de son locataire, et par quel moyen peut-il être exercé ?
9. Quelle est la nature et l'étendue du cautionnement ?
10. Quel recours a la caution qui a payé, contre le débiteur principal ?
11. Quelle est la différence entre la caution volontaire et la caution judiciaire ?
12. Qu'entendez-vous par la rébellion à justice, et quelles en sont les conséquences ?

Faculty of Law.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

MONDAY, APRIL 21ST, 1862.

COMMERCIAL LAW.

Examiner PROF. ABBOTT, B.C.L.

FIRST YEAR.

Obligations.

1. Define the word "obligation" in its legal sense. Describe the distinction between an obligation and a contract.
2. Detail and define the leading classes of contracts. State to which of those classes the several contracts of sale, insurance, deposit, letting for hire, and exchange, belong.
3. What is the effect of fraud in the inception of a contract? Of consent extorted by violence? and state any distinction that may arise between the effect of the resort to violence by one of the contracting parties; and of violence or forcible constraint by a stranger to the contract, without participation by the contracting party.
4. What is the effect of inequality in a contract? State any distinctions which may arise upon the extent of the inequality; and also with regard to the relations of the contracting parties to each other.
5. What is meant by an accessory obligation? Which are the ordinary accessory obligations? What is the difference between the effect of the extinction of an accessory obligation, upon the principal obligation to which it attaches; and that of the extinction of a principal obligation upon its accessory.
6. What is the effect as regards the debtor, of payment to one of several creditors *in solido*? And as regards the co-creditors, of the institution of proceedings against the debtor by one of such creditors.

7. What is the effect upon the co-debtors *in solido* of the payment of the debt by one of them? And as regards prescription, of the demand upon one of such debtors? And what are the rights of the debtor who pays, against his co-debtors *in solido*? State distinctions that may arise from a difference in the shares in the indebtedness of the co-debtors *inter se*.

8. What are the rights of a surety who pays the debt of his principal? Define subrogation. Is it necessary for the surety paying the debt to demand a subrogation from the creditor at the time of payment? Is there any difference in this respect between the rights of the surety against his principal—and those of the debtor *in solido* who pays the debt, against his co-debtors *in solido*.

9. Define the exceptions of division and discussion—when may they be opposed? How may the surety be deprived of them? What is their effect?

10. Define divisible and indivisible obligations. Explain the difference between natural division and civil or legal division. What is the effect upon the heirs of the debtor of an indivisible obligation *in faciendo*, of his neglect to perform such obligation?

11. Detail and describe the various modes, exclusive of payment of performance, in which obligations may be extinguished. State the rules and distinctions with regard to those which are extinguished by the death of either party to them.

12. Are there any cases in which payment to the debtor himself will not discharge an obligation? If so state some of them—and, how in such cases, the debtor may obtain such discharge.

Insurance.

1. In what collection of laws is insurance first mentioned?
2. What species of insurance was first used?
3. When was the first fire insurance company established?
4. Define insurance.
5. To what purposes may the principles of insurance be applied?
6. What is meant by insurable interest?
7. To what extent must it be possessed by the assured?
8. State the peculiar features of a mutual insurance company.

9. State the peculiar features of a proprietary company.
10. State the peculiar features of a mixed company.
11. What is a warranty, and what a representation?
12. What facts must be stated on procuring a policy of life assurance; and what is the effect of concealing them? Answer at length, with distinctions.
13. What are the rules respecting concealment of material facts, when an agent effects insurance?
14. What is the effect of the non-payment of the premium?
15. What amount is payable under a life policy, on the determination of the risk?
16. When, and under what circumstances, may the assured demand a return of premiums?
17. Can a policy be assigned; and, if so, in what manner?
18. What is the nature of the declaration required from the assured against fire, on effecting insurance; and the effect of it if false?
19. In case of a loss, what preliminary proof is necessary before demanding or enforcing payment of it from the insurer?
20. If there be several insurances, in different offices of premises consumed or injured, must each office pay the full amount of its own policy; and if not, how is the allotment to be made?
21. Define "civil commotion," "usurped power."
22. What is meant by the expression, "lost or not lost" in a marine policy?
23. What is illicit trade; and to what extent, if any, may goods used in such a trade be insured?
24. What is meant by contraband of war, and to what extent may goods contraband of war be insured?
25. What is an open policy?
26. What is a valued policy; and what is the effect of the valuation contained in it?

27. What is re-assurance, and double insurance? How far are they, or either of them allowable?

28. What are the perils insured against, in a policy of marine insurance?

29. When does such policy attach, and when does it terminate?

30. What is abandonment? In what cases may it be made, and what is its effect?

Promissory Notes and Bills.

1. What are the essential requisites of a promissory Note? Of a Bill of exchange?

2. What parties to Bills and to Notes stand in analogous positions?

3. How many different kinds of Promissory Notes are there?

4. What are the peculiar privileges attached to Bills and Notes? and why are such privileges granted to these species of contracts?

5. How may the rights of property in Bills and Notes be transferred?

6. When must a Bill or Note be presented for payment; and in this connection—what are days of grace? What do you understand by the term “a month”? What is the rule respecting Holidays?

7. If a Bill or Note be not paid at maturity: within what time should it be protested? What is the effect of the neglect to protest a Bill or Note as regards the Maker? the Drawer? the Acceptor? the Endorsers?

8. Are there any valid excuses for the non-presentment for acceptance or payment of a Bill or Note: and if there be, what are they?

9. How would a Bill or Note be affected by the absence of consideration, either partial or total, in its inception?

10. How will a Bill or Note be affected by the illegality of its consideration either partial or total?

Answer these two questions at length, stating all distinctions arising from the position of the various parties to such Bill or Note, by whom such failure or illegality of consideration might be set up as a defence.

11. How may the liability of the endorsers upon a Bill or Note be extinguished otherwise than by payment? Also that of the drawer or payee; the maker or acceptor?

12. What is the effect of notice of absence of consideration, upon the holder of a Bill or Note? Answer stating distinctions.

Faculty of Law.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

TUESDAY, APRIL 22ND, 4 P.M. TO 6 P.M.

ROMAN LAW.

FIRST YEAR.

Examiner, PROF. F. W. TORRANCE.

1. Explain the meaning, in the jurisprudence of Justinian, of the expressions, "The Digest," "The Institutes," "The Code," and "The Novels;" and give a short account of each.
2. Shortly explain the expressions, "jus publicum," "jus privatum," "jus scriptum," "jus non scriptum."
3. Explain the different modes of manumission of slaves among the Romans.
4. Give an account of the different restrictions imposed upon the unlimited power of manumission of slaves.
5. What did the power of the Roman father over his child consist in; and how was it dissolved?
6. Give the history of the "dos" of the wife.
7. How was the Roman marriage made and dissolved?
8. Explain the different kinds of illegitimate children. How was legitimation effected?
9. How many kinds of tutors were there? Explain each shortly. What were the duties of the tutor, before, during, and after his gestion?
10. In what cases was a "curator" appointed?
11. In what cases did the tutor and curator give security? Is there any, and what, protection provided by our law to the minor, in relation to his tutor?
12. In what cases did the offices of tutor and curator terminate?

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

WEDNESDAY, APRIL 23RD.—4 TO 6 P. M.

COUTUMES, ORDONNANCES, &C.

FIRST YEAR.

Examiner,.....PROFESSOR LA FRENAYE.

1. Quelle était la différence en France entre les pays coutumiers et les pays de droit écrit, et quelle est la nécessité d'établir cette distinction en Bas-Canada ?
2. En quelle année la Coutume de Paris fut-elle rédigée par écrit, et en quelle année fut-elle réformée, et comment fut-elle introduite dans le pays ?
3. Pourquoi suivons-nous la jurisprudence du parlement de Paris ?
4. Quelle était la formalité essentielle à suivre pour donner force de loi aux ordonnances des rois de France ?
5. Qu'entendez-vous par le conseil supérieur de Québec, et définissez ses pouvoirs ?
6. Quelle est la division des biens apportée par la coutume, et indiquez les différentes sortes et espèces de biens qu'elle reconnaît ?
7. Quelles sont les différentes prescriptions établies par la coutume de Paris ?
8. Donnez un aperçu du titre 5 de la coutume, concernant les actions personnelles et d'hypothèque.
9. Quel est l'effet de la séparation de biens entre conjoints, d'après les différents articles du titre 10 de la coutume ?
10. Définissez les devoirs et les fonctions des experts dont il est question en l'article 184 de la coutume.
11. Donnez la forme et division des testaments, suivant l'article 289 du titre 14 de la coutume.
12. Quelles sont les principales modifications apportées à la coutume de Paris par nos lois statutaires ?

Faculty of Arts

McGILL COLLEGE MONTREAL

GENERAL EXAMINATIONS

1900-1901

PHILOSOPHY

THIRD YEAR

.....

1. Quelle est la différence de l'âme entre les deux conceptions de
ce pays de droit divin, et quelle est la différence d'après votre opinion
entre les deux conceptions ?

2. Les deux conceptions de l'âme de Tertullien et de Plotin ont-elles
un point de vue commun sur la nature de l'âme ?

3. Pourquoi n'est-ce pas une conception de l'âme de Plotin ?

4. Quelle est la différence essentielle entre les deux conceptions de
ce pays de droit divin et de l'âme de Plotin ?

5. Comment se fait-il que la conception de l'âme de Plotin est
différente de celle de Tertullien ?

6. Quelle est la différence essentielle entre les deux conceptions de
ce pays de droit divin et de l'âme de Plotin ?

7. Pourquoi n'est-ce pas une conception de l'âme de Plotin ?

8. Quelle est la différence essentielle entre les deux conceptions de
ce pays de droit divin et de l'âme de Plotin ?

9. Quelle est la différence essentielle entre les deux conceptions de
ce pays de droit divin et de l'âme de Plotin ?

Faculty of Law.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

THURSDAY, APRIL 24TH, 4 P.M. TO 6 P.M.

DROIT CIVIL ET COUTUMIER.

FIRST YEAR.

Examiner,..... PROFESSOR LAFLAMME.

1. Donnez les différentes divisions et définitions du droit et de la loi ?
2. Quelle est d'après nos lois la position d'un aubain relativement à l'acquisition et à la transmission des biens ?
3. Quel est l'effet de l'absence, et comment se règlent les droits d'un absent ?
4. Combien y a-t-il d'espèces d'empêchements au mariage ?
5. Comment se prouve le mariage ?
6. Dans quelles circonstances les enfans nés d'un commerce illégitime peuvent-ils être légitimés ?
7. Le mariage peut-il être cassé, et pour quelles causes ?
8. Quelles sont les causes qui peuvent donner lieu à la séparation du corps, et quels en sont les effets ?
9. Quel est l'effet de la puissance paternelle en Canada ?
10. Combien d'espèces de tutelle en vertu de nos lois ? Quand a-t-elle lieu ? comment est-elle établie ?
11. Quelles sont les personnes capables d'exercer la tutelle ? peut-on s'en exempter, et énumérez les causes d'excuse ?
12. Quels sont les devoirs du tuteur ?
13. Comment divise-t-on les servitudes ?
14. Comment s'établissent et s'éteignent les servitudes ?
15. Quelles sont les principales dispositions de la coutume de Paris concernant les murs mitoyens ?
16. Quelles sont les obligations de l'usufruitier ?

Faculty of Law.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, APRIL, 1862.

TUESDAY, APRIL 22ND, 4 P.M. to 6 P.M.

ROMAN LAW.

SECOND YEAR.

Examiner,.....PROF. F. W. TORRANCE.

1. How many kinds of "res" *extra patrimonium* were there? Define each kind, and give examples.
2. Among which of the modes of acquiring property, are "occupatio," "accessio," and "traditio," ranged?
3. Explain fully the different divisions and kinds of accession and tradition, giving examples.
4. What were the opinions of Roman juriconsults with regard to the question, whether the substance formed should belong to the person forming it, or to the proprietor of the material? Which opinion did Justinian adopt?
5. What conditions required to be complied with, in order to transfer property?
6. What was the difference between rural and urban servitudes?
7. What were the conditions necessary, in order to acquire by "usucapio"?
8. What were the rules of prescription adopted by Justinian?
9. What were the rights of the husband over the dotal property?
10. Name the different "*peculia*" of children, and explain their differences.
11. What were the primitive forms of wills at Rome? What were the forms under Justinian?
12. Could a legatee, fidei-commissary, or a testamentary tutor, be a witness to a will by which he was named?

Faculty of Arts.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

WEDNESDAY, APRIL 23RD.—4 TO 6 P. M.

BIBLIOGRAPHIE ET STATUTS.

SECOND YEAR.

Examiner,.....PROFESSOR LA FRENAYE.

1. Quels sont les auteurs qui ont commenté la coutume de Paris, tant l'ancienne que la nouvelle ?
2. Quels sont les auteurs qui ont recueilli les arrêts du Parlement de Paris, et du Châtelet de Paris ?
3. Quels sont les principaux auteurs qui ont traité du droit commercial, et que nous devons consulter ?
4. Quels sont les meilleurs auteurs qui ont commenté les ordonnances des rois de France ?
5. Quels sont les auteurs les plus accrédités sur le droit civil français ?
6. Quels sont les auteurs à consulter en matière d'injures ou de libelle ?
7. Quels sont les auteurs que nous devons consulter sur la preuve ; *on evidence* ?
8. Quels sont les auteurs qui ont traité de la procédure ?
9. Quels sont les auteurs que nous consultons le plus fréquemment sur les différentes parties du droit anglais en force en Bas-Canada, comme les writs de prérogative, le procès par jury au civil, etc. ?
10. Quels sont les différents auteurs à consulter sur les testaments ?
11. Quelles sont les principales dispositions de l'ordonnance de 1785 ?
12. Quelles sont les principales dispositions du statut établissant les bureaux d'enregistrement ?

Faculty of Law.

McGILL COLLEGE, MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

THURSDAY, APRIL 24TH, 4 P.M. TO 6 P.M.

DROIT CIVIL ET COUTUMIER.

SECOND AND THIRD YEAR.

Examiner,.....PROFESSOR LAFLAMME.

1. Quest-ce que la succession ?
2. Quelles sont les personnes capables de transmettre leur succession ?
3. Quel est l'ordre de succéder d'après la coutume de Paris ?
4. La représentation est elle admise dans la coutume de Paris, et dans quels cas ?
5. Quand la succession d'un défunt est elle déferée à ses père, mère, ou autres ascendants ?
6. Comment se transmet la succession des propres, et quelles sont les règles de notre droit relativement à cette espèce de biens ?
7. Comment s'accepte une succession ?
8. Quels sont les effets du partage ?
9. Donnez la définition des différentes espèces de testament d'après nos lois, et les conditions voulues pour leur validité.
10. Quels sont les devoirs de l'exécuteur testamentaire ?
11. Enumérez les différentes formalités exigées pour la validité d'un acte de donation.
12. Combien d'espèces de substitutions et quelles choses peuvent être l'objet des substitutions ?

HIGH SCHOOL DEPARTMENT.

HIGH SCHOOL
OF
MCGILL COLLEGE,
MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

THURSDAY, June 12th, 9 to 12 A.M.

SIXTH FORM.

LATIN. { LIVY.—BOOK XXI.
 { HORACE.—ARS POETICA.

Examiner REV. GEORGE CORNISH, B. A.

1. Translate:—Et jam omnia trans Iberum præter Saguntinos Carthaginiensium erant. Cum Saguntinis bellum nondum erat, ceterum jam belli causa certamina, cum finitimis serebantur, maxime Turdetanis. Quibus cum adesset idem, qui litis erat sator, nec certamen juris, sed vim quæri apparet, legati a Saguntinis Roman missi, auxilium ad bellum jam haud dubie imminens orantes. Consules tunc Romæ erant P. Cornelius Scipio et Tib. Sempronius Longus: qui cum, legatis in senatum introductis, de republica retulissent, placuissetque mitti legatos in Hispaniam ad res sociorum inspiciendas, quibus si videretur digna causa, et Hannibali denuntiarent, ut ab Saguntinis, sociis populi Romani, abstineret, et Carthaginem in Africam trajicerent ac sociorum populi Romani querimonias deferrent,—hac legatione decreta necdum missa, omnium spe celerius Saguntum oppugnari allatum est. Tunc relata de integro res ad senatum; et alii, provincias consulibus Hispaniam atque Africam decernentes, terra marique rem gerendam censebant, alii totum in Hispaniam Hannibalemque intenderant bellum. Erant, qui non temere movendam rem tantam, expectandosque ex Hispania legatos censerent. Hæc sententia, quæ tutissima videbatur, vicit: legatique eo maturius missi, P. Valerius Flaccus et Q. Bæbius Tamphilus, Saguntum ad Hannibalem atque inde Carthaginem, si non absisteretur bello, ad ducem ipsum in pœnam fœderis ruptipendendum.

2. a. State the subject of this Book of the History of Livy. In which of

the Punic Wars did the events therein recorded take place? *b.* Give the dates, mentioning also the principal battles, of these Wars, severally. *c.* What is there peculiar in the construction of the clause '*auxilium ad bellum jam haud dubie imminens orantes?*' Give the more usual construction,

3. Translate:—P. Cornelius consul, triduo fere postquam Hannibal a ripa Rhodani movit, quadrato agmine ad castra hostium venerat, nullam dimicandi moram facturum. Ceterum ubi deserta munimenta nec facile se tantum progressos assecuturum vidit, ad mare ac naves rediit, tutius faciliusque ita descendenti ab Alpibus Hannibali occurrurus. Ne tamen nuda auxiliis Romanis Hispania esset, quam provinciam sortitus erat, Cn. Scipionem fratrem cum maxima parte copiarum adversus Hasdrubalem misit, non ad tuendos tantummodo veteres socios conciliandosque novos, sed etiam ad pellendum Hispania Hasdrubalem: ipse cum admodum exiguis copiis Genuam repetit, eo qui circa Padum erat, exercitu Italiam defensurus.

4. State the geographical positions and the modern names of the Iberus, Rhodanus, Ticinus, Padus, and Trebia. Give the situations of Saguntum, Carthago, Genua, and Gades.

5. Translate, *Ars Poetica*:—*a.* vss. 73-85; *b.* 99-111; *c.* Explain the allusion to Archilochus in extract *a.* Describe the *socci* and *cothurni*; What does the poet here mean by these expressions?

6. Write a sketch of the life of Horace, with the dates of his birth and death. Name the most celebrated of his friends and contemporaries in literature and politics.

7. Translate *Ars Poetica*, vss. 275-294.

8. *a.* State the classes into which Greek Comedy was divided, and name the principal writers in each. *b.* Explain the following terms which are found used in connection with the ancient Drama: *persona*, *palla*; *prætextæ*, *togatæ*; *crepidatæ*, *palliatæ*. Give the quantity of the penultimate of *persona*. What objection is there to its derivation from *personare*? *c.* What great public works are alluded to in vss. 63 to 68?

9. Give the proper designation of the metre used in the *Ars Poetica*: write down the scale of it and scan vss. 140-145.

10. Give the etymology of the following words:—*ambitus*, *amphora*, *simplex*, *nomen*, *pugilem*, *exsul*, *sesquipedalia*, *impiger*, *ignota*, *patulum ærugo*, *bidental*.

11. Decline the following words: *crus*, *bos*, *animal*, *celer*, *uter*, *alius*, *ipse*, *ōs*, *ōs*.

12. Write down the comparative and superlative of:—*liber, gracilis, multus, parvus, bonus.*

13. Give the perfect and supine of the following verbs:—*spondeo, tego, frango, tundo, scindo, fodio, peto, freno.*

14. *a.* State the exact difference in meaning between the pronouns *hic, ille, iste, is*; also between the verbs *rogo, postulo, and flagito; simulare and dissimulare; noscere, scire and callere.* *b.* State the rule for the use of the Ablative Absolute. *c.* What is the construction in the Passive of (1) Verbs that govern the Dative, and (2) two Accusatives, in the Active.

15. Translate into Latin:

a. He sent his son to Rome to be educated.

b. The number of the soldiers was so great that they could scarcely be counted.

c. Liars are not believed, even when they speak the truth.

d. He says that I am writing. He said that I was writing. He says that I wrote. He said that I had written.

e. Having gained a great victory, the general slew the captives he had taken.

(N.B.—Translate the first clause in as many ways as you can.)

f. Cicero, the consul, lived at Rome; Socrates, the philosopher, taught at Athens; Hannibal, that greatest of generals, was born at Carthage in the year 247 B.C.

HIGH SCHOOL

OF

MCGILL COLLEGE,

MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

FRIDAY, JUNE 13TH, 9 TO 12 A.M.

SIXTH FORM.

GREEK. { HERODOTUS, BOOK I., SELECTED.
 EURIPIDES.—HECUBA, VSS. 1 TO 400.

Examiner..... REV. GEORGE CORNISH, B.A.

1. Translate, Herodotus, Bk. I., Chap. xiv.
2. Write a sketch of the life of Herodotus, giving the dates of his birth and death. State what you conceive to be the leading characteristics of his style as an Historian.
3. *a.* Give an account of the different Lydian dynasties, mentioning the names and dates of those kings that composed the last. *b.* State the difference in meaning between the words *τύραννος* and *βασιλεύς* as used by the Greeks. Explain the form *Σάρδεις*, and give the Attic and Latin forms of it. *c.* What is meant in Herodotus by the *Ἐρυθρὴ θάλασσα*?
4. *a.* Translate and give the force of the expressions *οὕτω δὴ*; *καὶ δὴ*; and *καὶ δὴ καὶ*, as used by Herodotus. *b.* Translate Chap. 6, *πρὸ δὴ τῆς Κροίσου ἀρχῆς * * * ἐξ ἐπιδρομῆς ἀρπαγῆς*. What is there peculiar in the use of *πρεσβύτερον* in this passage?
5. Translate, Herodotus, Bk. I., Chap. lxxiv.
6. Mention some of the peculiarities of the Ionic dialect. Turn the following words into Attic:—*βασιλιήτην, πιθῶν, ἐγνέατο, οἰκός, τρώματα, θωῶμα, ἐπίστιος, πλεῦνας, φαίνας*.
7. *a.* Give the composition and derivation of the following words, and the cognate forms of any of them that occur in Latin or English;—*τρώματα, ἐντεταμένως, σπονδάς, κρητῆρα, ναυπηγίην, κτήνεα, θέσμια, συνεχέως, ἀπωστοί, μοιραν, ζεύγος, νεήλυδα*. *b.* Parse the following verbs:—*κατελείν, προσπταίσας, ἐνεπίμπρη, ἐστάμεναι, καταστράφατο, συντεταραγμένος, ἐπώρα, ἀποθορόντες, συνεπεπτάκεε*.
8. Translate, Euripides, Hecuba, vss. 21–41.

9. *a.* Write down the metrical scale of the Iambic Trimeter Acatalectic. Under what conditions can the Anapæst occupy any other place than the first? Who, according to Horace, was the inventor of Iambics? *b.* Scan vss. 4, 10, 13, 59-64, 240-245.

10. Translate, Hecuba;—*a.* vss. 239-250; *b.* vss. 381-401.

11. Explain the construction of vss. 299, 300, and show in what sense the dative τῷ θυμουμένῳ is used. In vs. 323 for what does σέθεν stand? In 330, does ὡς ἄν express the result or the purpose? In vs. 34, for what does πάρα stand? In vss. 351 and 355, why are the prepositions ὑπο and μέτα paroxytone? What is this throwing back of the accent called?

12. *a.* Name the *Principal* and *Historical* Tenses. *b.* What is the difference in meaning between μή with the Imperat. Present and with the Aorist Subjunctive? What is the difference in meaning between the Imperfect and Aorist Tenses? *c.* When and by what is the English indefinite article to be translated into Greek? To what is an adverb with the article equivalent? and the Infinitive mood with the article? *d.* Illustrate the rule for the use of ἀντὸς, in its various significations, in connection with, or without the article.

13. Translate into Greek:—

a. The king used to praise those who managed the affairs of the state well, and the same king also used to rejoice when his citizens were prosperous.

b. The general of the Athenians led his army into the country of the enemy, and laid it waste.

c. The philosopher himself said that it was a praiseworthy thing to speak well of all men, and to treat them well.

d. If these things are in my power, I will do them.

e. Those things happened during the lifetime of his father.

f. The king ravaged the half of the Peloponnesus.

g. Never flatter those who act unjustly.

HIGH SCHOOL
OF
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MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

THURSDAY, JUNE 12TH. 9 TO 12 A. M.

FIFTH FORM.

LATIN. {CICERO.—ORATIONS AGAINST CATILINE.
 {VIRGIL.—ÆNEID, BK. I.

Examiner,REV. GEORGE CORNISH, B. A.

1. Translate, Oration I., Chap. 5.

2. Write a sketch of the life of Cicero, including an account of the conspiracy of Catiline. What age and rank were requisite for the office of Consul? Can you give the etymology of the word *consul*?

3. "Ante diem duodecimum kalendas Novembris." Explain the construction, and state which noun the preposition "ante" governs in this phrase. What part of speech and what case is Novembris? Name the divisions of the Roman month, and the days on which they respectively commenced. To what day of what month, according to our mode of reckoning, does the above mentioned day correspond?

4. Write explanatory notes on the following expressions occurring in Orat. I. :
 - a. § 2. "Consul videret, ne quid respublica detrimenti caperet."
 - b. § 4. "De republica sententiam rogo."
 - c. § 5. "Consule designato."
 - d. § 6. "Quas omnes * * * proximis Idibus senties."
 - e. § 11. "An leges, quæ * * * rogatæ sunt."
 - f. § 12. "Si in hunc animadvertissem."
 - g. § 13. "Malleolos."

5. Translate, Oration II., Chap. 11.

6. "In campo, in foro, in curia :"—What places are alluded to here ? State the difference between the meaning of;—*inimicus* and *hostis*: *litera*, *literæ* and *mandata*: *murus*, *paries*, and *mænia*: *obliti* and *obliti*: *impedēre* and *impedēre*:

7. Translate Orat. III., Cap. 4.

8. Parse and give the etymology, together with the cognate words in English, of such as have them, of;—*satellitem*, *infitiari*, *recognosce*, *inusta*, *meditere*, *peperit*, *irretisses*, *adulta*, *incolumes*, *prostratus*, *perculsum*, *sodalem*, *profuderunt*, *propagarit*, *ruperit*.

9. a. State the exact meaning of the expressions;—"Rem ad senatum referre"; and "Rem ad senatum deferre." b. § 4. "Ex fati Sibyllinis;"—Give an account of these. What were the Saturnalia? c. § 5. Translate and explain the words *tabellas*, *linum*, *incidimus*, *signum*, *manum suam*, with an account of the method and materials for writing in use among the Romans.

d. Give the geographical position of the following places:—Carthago, Etruria, Massilia, Picens Ager, Præneste, Numantia, Pons Mulvius.

10. Translate, Virgil, Bk. I:—a. vss. 142—156; b. 561—578.

11. Scan vss. 150—156:—Name the metre used and give the scale of it.

12. a. Write down the genitive singular of;—*caro*, *senex*, *nix*, *ōs*, *ōs*; and decline the following nouns:—*Æneas*, *anima*, *deus*, *vis*, *securis*, *opus*, *lacus*. b. Write down the comparatives and superlatives of the following adjectives:—*brevis*, *multus*, *dives*, *externus*, *pulcher*, *similis*. c. Write down the perfects and supines of the following verbs:—*juvo*, *do*, *pendeo*, *mordeo*, *figo*, *quæro*, *strepo*, *haurio*, *saucio*, *figo*.

13. Distinguish between "*vereor ne*," and "*vereor ut*." Write down the interrogative particles and give their strict meaning. How are *may*, *might*; *can*, *could*; *ought*, &c. to be translated into Latin?

14. Translate into Latin:—

The Gauls gave Cæsar much information about their own affairs, and denied that they had undertaken to do the Roman state any harm. The consuls published a proclamation that no citizen should leave the city of Rome. The accused came and threw themselves at the feet of the dictator and entreated that he would not suffer them to be condemned to die. Pericles was so generous that he gave all his lands as a free gift to the state. It is the duty of a good citizen to give up his life even for his country. I fear he will come, but I warned him not to come. Of what importance is it to you whether he come or not? Ought a good man to be the slave of ambition?

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FRIDAY, JUNE 13TH, 9 TO 12 A.M.

FIFTH FORM.

GREEK.—XENOPHON.—ANABASIS.—BOOK I.

Examiner,.....REV. GEORGE CORNISH, B.A.

1. Translate Chap. I., §§ 9-10.
2. Give a sketch of the life of Xenophon. How did he distinguish himself in the Greek army after the death of Cyrus?
3. Name the date of the Anabasis:—give the situation of the principal towns on the line of march from Sardis to Cunaxa. What were the Ἴωνικαὶ πόλεις mentioned in § 6?
4. *a.* Construe the clause, “Τοῦτο δ’αὖ οὕτω τρεφόμενον ἐλάνθανεν αὐτῷ τὸ στράτευμα.” Express the difference in meaning between the expressions *τρεφόμενον ἐλάνθανεν* and *ἐτρέφετο λανθάνον*. *b.* Construe the clause “*πάντας οὕτω διατίθεις * * * ἢ Βασιλεῖ,*” § 5. *c.* State the meaning of the prepositions in the following expressions:—*ἀπὸ τούτων τῶν χρημάτων; διαβάλλει τ. κ. πρὸς τὸν ἀδελφόν; ἀποπέμπει ἐπὶ τὴν ἀρχήν; ἔσται ἐπὶ τῷ ἀδελφῷ; ἀφικνεῖτο τ. παρὰ βασιλέως πρὸς αὐτόν; παρ’ ἐαυτῷ; ἐκ βασιλέως δεδομένα.*
5. Translate Chap. II., §§ 8-9.
6. Write short descriptive notes on the *δπλιται*, *πελτασταί*, and the *ψιλοί*.
7. Translate, *a.* Chap. III., §§ 1-2: *b.* Chap. V., §§ 1-3.
8. *a.* Parse the following verbs;—*ταχθῆναι, στήναι, συντάξει, ἔγνω, ἔστώς, ἀφεστήκεσαν, ἐκπεπτωκότας, ἦσθάνετο, κατεθέμην, ἐπηνεσαν.* *b.* Explain

the forms *πλείους* and *μείζους*. How do you account for the genitive in the expression *ἔναι τοῦ πρόσω*? What is the force of *κατὰ* in the compounds *κατεθέμην* and *καθηδυνάθησα*, respectively?

9. Translate Chap, VI., §§ 6-8. What is the force of the affix *ί* in *τουτούί*, and how is it to be expressed in Latin? Give the government, and difference in meaning, of the Active and Middle of the verb *παύω*, and also the difference between *οὐ* and *οὐδ* in meaning.

10. *a.* Name the cases governed respectively by the following prepositions:—*ἀντί*, *ἀπό*, *ἐξ*, *σύν*, *διά*, *κατά*, *εἰς*, *ἀνά*, *παρά* and *πρός*. *b.* In what number does the verb of a neuter plural subject commonly stand? *c.* What case does the Comparative degree govern? *d.* Explain what is meant by *temporal* and *syllabic* augment, and *reduplication*:—what tenses of the verb take these respectively?

11. *a.* Decline the following nouns:—*ποιητής*, *φιλία*, *λόγος*, *δῶρον*, *παῖς*, *πατήρ*, and *πόλις*. *b.* Give the Comparative and Superlative of:—*σοφός*, *μέγας*, *ἐχθρός*. *c.* Conjugate the Present and Imperfect Indicative Active; the Optative and Subjunctive, Aorist Active; and likewise the Aorist and Future, Passive and Middle, of *βουλέω*

12. Translate into Greek:—

- a.* The general has the best horses.
- b.* The boy is better than his brother.
- c.* The poet's son has my (*poss. pron.*) swift horses, but I have not his.
- d.* Cyrus will be slandered by his enemies.
- e.* I am come to see the battle.

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THURSDAY, JUNE 12TH.—9 TO 12 A.M.

FOURTH FORM.

LATIN. { VIRGIL.—ÆNEID, BK. I.
 { SALLUST.—CATILINE, CHAPS. I—XX.

Examiner,REV. GEORGE CORNISH, B.A.

1. Translate, Æneid I., vss. 12—33]

2. *a.* Parse the following words and give their uncontracted forms : *tenuère, repòstum, Danaùm, Achillì.* *b.* Explain the grammatical construction of vss. 13 and 14, and 19—22. *c.* Narrate briefly the legends alluded to in vss. 27 and 28.

3. Translate, Æneid I., vss. *a.* 418—429 : *b.* 579—593.

4. *a.* How do you explain the use of the Infinitive in vss. 423—425 ? In vs. 419 why is “*urbi*” in the Dative ? State the cases, and the reason why they are used, of “*manibus*,” “*tecto*,” and “*sulco*,” in vss. 424—25. *b.* Explain the use of the Accusative with the adjective “*similis*” in vs. 589. What is the difference in meaning of *similis* with the Genitive and with the Dative ?

5. Translate :—“*Urbem Romam, sicuti ego accepi, condidere atque habuere initio Trojani, qui, Aenea duce, profugi sedibus incertis vagabantur; cumque his Aborigines, genus hominum agreste, sine legibus, sine imperio, liberum atque solutum. Hi, postquam in una moenia convenere, dispari genere, dissimili lingua, alii alio more viventes, incredibile memoratu, quam facile coaluerint. Sed postquam res eorum civibus, moribus, agris aucta, satis prospera satisque pollens videbatur; sicuti pleraque mortalium habentur, invidia ex opulentia orta est. Igitur reges populi que finitimi bello tentare. Pauci ex amicis auxilio esse: nam caeteri, metu percussi, longe a periculis aberant.*”

“Postea Piso in citiorem Hispaniam quaestor pro praetore missus est, adnitente Crasso; quod eum infestum inimicum Cn. Pompejo cognoverat; neque tamen senatus provinciam invitus dederat: quippe foedum hominem a Republica procul abesse volebat: simul, quia boni complures praesidium in eo putabant: et jam tum potentia Cn. Pompeji formidolosa erat. Sed is Piso in provinciam, ab equitibus Hispanis quos in exercitu ductabat, iter faciens, occisus est. Sunt qui ita dicant, imperia ejus injusta, superba, crudelia, barbaros nequivisse pati: alii autem, equites illos, Cn. Pompeji veteres fidosque clientes, voluntate ejus Pisonem adgressos: numquam Hispanos praeterea tale facinus fecisse, sed imperia saeva multa antea perpessos. Nos eam rem in medio relinquemus. De superiori conjuratione satis dictum.”

6. Give the geographical situation of the following places mentioned by Virgil in Book I: Carthago, Samos, Troja, Argos, Paphos, Alba Longa.

7. Name the *person, tense, mood, and voice*, and give the Present Infinitive of the following verbs:—*memora, impulerit, infixit, abdidit, imposuit, extulit, cecidit, conspexere, bibissent, avexerat, peteret, pendit, poposcit.*

8. Decline the following nouns:—*vita, filius, dominus, puer, nubes, turris, opus, poema, domus, facies.*

9. Decline the Comparative and Superlative of the following Adjectives:—*bonus, felix, pulcher, similis, and dives.*

10. Write down, in both the Active and Passive Voice, the Present Infin., the Perf. Ind., the Fut. Ind., and the Imperfect Subjunctive of the verbs: *do, moneo, lego, and audio.*

11. *a.* What case do you use in Latin to express the *means* or *instrument* by which a thing is done? *b.* What class of verbs govern two Accusatives? Give four instances. *c.* What case do *partitive* adjectives take after them? *d.* By what case is (1) *duration*, (2) a *definite point* of time, (3) the *price* or *value* of a thing to be expressed?

12. Translate into Latin:—

a. The soldier praises his arms.

b. Rest is pleasant to those who are wearied with toil.

c. The boy will hide nothing from his father.

d. The tired horse slept all day.

e. In one hour he wrote the letter.

f. He promised to come, and there is no doubt he will come.

HIGH SCHOOL
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SESSIONAL EXAMINATIONS, 1862.

FRIDAY, JUNE 13TH,—9 TO 12 NOON.

FOURTH FORM.

GREEK.—GRAMMAR AND EXERCISES.

Examiner,.....REV. GEORGE CORNISH, B.A.

1. Translate into English :—

A. Ταῦτά ἐστιν ἀγαθά.—Ἡ ἀρετὴ ἐστὶν ἐπαινετόν. Οἱ ποταμοὶ διαβατοὶ γίνονται. Παρὰ ταύτην τὴν χώραν ἐστὶν ὁ ποταμός. Τὰ δώρα τῆς τύχης ἐστὶ σφαλερά. Οἱ ἄλλοι στρατιῶται ἦσαν ἐν τῷ αὐτῷ τόπῳ. Ἡ βασιλεία ἢ ἐμὴ οὐκ ἐστὶν ἐκ τοῦ κόσμου τούτου. Ὁ θυμὸς ἀλόγιστος (ἐστίν). Ὁ πλοῦτος θνητός, ἢ δόξα ἀθάνατος.

B. Κέρδος αἰσχρὸν βαρὺν κειμήλιον. Ἡ Λερναία ὕδρα εἶχεν ὑπερμέγεθες σῶμα. Ἡ γῆ σφαιροειδὴς ἐστίν. Ὁ Παρνασσὸς μέγα καὶ σύσκιον ὄρος ἐστίν. Τῆς παιδείας αἱ μὲν ρίζαι πικραὶ εἰσιν, οἱ δὲ καρποὶ γλυκῆες. Οἱ λόγοι σου ἀληθῆες εἰσὶ καὶ βέβαιοι καὶ ὀρθοί. Θνητὸς μὲν οὐδεὶς ἐστὶν εὐδαίμων ἀνὴρ. Ἡ Σικελία πασῶν τῶν νήσων κρατίστη ἐστίν. Ἡ χώρα τῶν Ἰνδῶν ποταμοὺς ἔχει πολλοὺς καὶ μεγάλους καὶ πλωτούς. Ὁ δίκαιος μόνος ἐστὶ μακάριος.

2 *a.* Why is ἐστίν, the singular, used in the first sentence of extract *A*? Parse the first five sentences of the same extract. *b.* State the gender, number, and case, and give the Nom. Sing. Mas. of the following Adjectives that occur in extract *B*:—βαρὺν, ὑπερμέγεθες, πικραὶ, ὀρθοί, γλυκῆες, πασῶν, πολλοὺς, μεγάλους, κρατίστη.

3. Translate into English :—

Πύρρος ἐν Ἰταλίᾳ ἐπολέμησεν. Οὕτως ἐβοήθουν ἀλλήλους, Διογένης ἄσωτον ἦτει μὲν. Τοῦ σώματος οὐκ ἠμέλει ὁ Σωκράτης. Κατηγορεῖ μωρίαν τῶν ἄλλων. Οἱ ἄνεμοι οὐχ ὄρῶνται. Ὁ ῥῥῶδεϊ ὁ ἐλέφας χοίρου βοήν. Μᾶλλον τοῦτο φοβοῦμαι ἢ τὸν θάνατον αὐτόν. Ἐξελάσω σε ἐκ τῆς οἰκίας. Τοῦ ἀνθρώπου πίνου βίον τελευτήσω. Βαθὴν ὕπνον ἐκοιμήθης, ὦ τέκνον. Ταῦτά με ἠρώτηκεν οὐδεὶς.

4. *a.* Name the *gender* and *case*, and give the *nom. sing.* and *plural* of each Noun in the above extract. *b.* Parse the verbs *επολέμησεν, έβοήθουν, ήπει, κατηγορεϊ, ήρώτηκεν.*

5. Translate into English :—

Θησεύς τήν 'Αριάδνην έν Ναξω κατέλιπε και έξέπλευσεν. 'Αταλάντη έπεθύκει ώκίστη τούς πόδας. 'Επί τής κολακείας, ώς έπί μνήματος, αυτό μόνον τò όνομα τής φίλιας έπιγέγραπται. 'Υπό τοϋ πλήθους τών παρόντων έν τή έκκλησία διατετάραγμαί τήν γνώμην. Κλεάνθης διεβοήθη έπί φιλοπονία. 'Εωράκαμεν άνθρώπους οϊ και κινών θανάτω και ίππων άισχρώς ύπό λύπης διετέθεισαν. Θορύβου ήκουσα. Αυτόϋ άγγελου έπεμψεν. 'Επεμψά σοι κήρυκας πέντε και τριάκοντα.

6. *a.* Name the *principal* and the *historical* Tenses. *b.* What is meant by *pure, mute, and liquid* Verbs in Greek? *c.* Explain the use of the *Augment* and of *Reduplication*. Of the former, what is the *temporal*, and what the *syllabic* augment? Illustrate your answers by the analysis of the verbs of the first six sentences of the above extract.

7. *a.* Point out in what respects Greek Nouns differ from those of the Latin, in respect to *declensions, numbers, and cases*. *b.* Decline the Nouns :—*δόξα, ίππος, ζών, κήρυξ.*

8. Given the root *πλεκ-*, form the following tenses :—*a.* The 1st Sing. Present, Future, and Aorist, Active. *b.* The 1st Plural Present, Perfect, and Future, Middle, and the First Aorist Passive. *c.* The Present, Perfect, and Aorist Inf. Active, and the Future Inf. Middle.

9. Translate into Greek :—

- a.* In the beginning of the battle.
- b.* The master beats his slaves.
- c.* All men are not good and just.
- d.* The soldier fights with his arms.
- e.* He was sending his horse to the city.
- f.* Honour those who do well.

MOGILL COLLEGE

MONTREAL

PROVISIONAL EXAMINATIONS

Monday, June 21st, 9 A.M. to 12 noon

IN MATHEMATICS

SIXTH YEAR

1. a. If in two triangles, two sides of the one be respectively equal to two sides of the other, and the remaining sides also be equal, the triangles are equal in every respect.

2. a. If squares be described on the hypotenuse and sides of a right-angled triangle, the square on the hypotenuse is equal to the sum of the squares on the sides.

3. Construct a square equal to a given rectilinear figure.

4. a. If a right line drawn through the center of a circle bisect a right line, which does not pass through the center, it is perpendicular to it; conversely, if it cut it at right angles, it bisects it.

5. If any line be drawn across two concentric circles, the parts intercepted between them are equal.

6. On a given right line describe a segment of a circle that shall contain an angle equal to a given angle.

HIGH SCHOOL
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SESSIONAL EXAMINATIONS, 1862.

MONDAY, JUNE 9TH, 9 A.M. TO 12 NOON.

EUCLID—ARITHMETIC.

SIXTH FORM.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. *a.* If, in two triangles, two sides of the one be respectively equal to two sides of the other, and the remaining sides also be equal, the triangles are equal in every respect.

b. If, on the same base, two different isosceles triangles be constructed, the line which joins the vertices will bisect the common base.

2. *a.* If squares be described on the hypotenuse and sides of a right-angled triangle, the square on the hypotenuse is equal to the sum of the squares on the sides.

b. If two right-angled triangles have the hypotenuse and one side in each respectively equal, the triangles are equal in every respect.

3. Construct a square equal to a given rectilinear figure.

4. *a.* If a right line, drawn through the centre of a circle, bisect a right line, which does not pass through the centre, it is perpendicular to it; conversely, if it cut it at right angles, it bisects it.

b. If any line be drawn across two concentric circles, the parts intercepted between them are equal.

5. On a given right line describe a segment of a circle that shall contain an angle equal to a given angle.

6. Triangles of the same altitude are to one another as their bases.
N.B.—In the proof, show *clearly* and *fully* the application of Euclid's est for the identity of two ratios.
7. Find a mean proportional between two given lines.
8. Construct a rectilinear figure equal to a given one and similar to another.
9. Define a *fraction*. What is the difference between *vulgar* and *decimal* fractions? How are the former reduced to the latter? Give the reason for the rule. (E.g., Reduce $\frac{2}{3}$ to a decimal.)
10. Add together $\frac{1}{2}$ and $2\frac{1}{2}$; from the sum subtract $\frac{1}{3}$, and divide the difference by $\frac{2}{3}$ of 4.
11. Calculate the ratio of the English mile to the French kilomètre, the kilomètre containing 1000 mètres, and the mètre being equal to 39·371 inches.
12. Reduce £2356 4s. 8d. sterling to dollars and cents, £1 sterling being equal to \$4·86; find the interest on the result, at 6 per cent., for 2 years and 7 months, and convert this interest into pounds, shillings, and pence, currency.
13. Extract the square root of 2·1564.
14. For what sum ought a cargo worth \$10,000 be insured, so that, in case of its loss, the value of the cargo itself, 12 per cent. profit on it, and also the amount of the premium, $2\frac{1}{2}$ per cent., may be recovered.

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SESSIONAL EXAMINATIONS, 1862.

TUESDAY, JUNE 10TH,—9 A.M. TO 12 NOON.

TRIGONOMETRY — ALGEBRA.

SIXTH FORM.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. Define the *unit of circular measure*, and calculate the number of seconds in it.
2. Define the *sine*, *cosine*, and *tangent* of an angle; and distinguish between them and the same trigonometrical functions of the arc. Construct geometrically the angle whose tangent is $\frac{3}{4}$.
3. If $\tan A = 2$, calculate the sine and secant.
4. Calculate the sine and secant of 60° .
5. Prove $\sin A + \sin B = 2 \sin \frac{1}{2}(A + B) \cos \frac{1}{2}(A - B)$
 $\sin 2A = 2 \sin A \cos A$
6. Prove $\tan(A + B) = \frac{\tan A + \tan B}{1 - \tan A \tan B}$
7. The sides of a right-angled triangle are 278 and 354: calculate the angles.
8. Prove $\sin \frac{1}{2} A = \sqrt{\frac{(s-b)(s-c)}{bc}}$

9. Solve the equations—

$$\frac{x+8}{5x} - \frac{2x-4}{3x-6} = 2$$

$$x^2 - 4x = 32$$

$$\frac{x+4}{3x+5} + 1\frac{1}{6} = \frac{3x+8}{2x+3}$$

10. Solve the equations—

$$\begin{cases} 3x + 4y + 5z = 38 \\ 4x + 5y + 6z = 47 \\ 5x + 6y + 7z = 56 \end{cases}$$

$$\left\{ \begin{array}{l} \frac{x}{a} + \frac{y}{b} = 1 \\ \frac{x}{b} - \frac{y}{a} = 1 \end{array} \right\}$$

$$\frac{2x+3}{4} - \frac{5x-6}{8} = 9$$

11. Find at what time between four and five the hour and minute hands of a clock are together.

12. Simplify $\{\sqrt{a^2 b} \sqrt[3]{a^{-4} b^{-6}}\}^6$

13. Add together $\frac{a+x}{a-x} + \frac{a^2+x}{a^2-x^2} - \frac{a}{a+x}$ and multiply the result

by $\frac{2}{3} \cdot \frac{a-x}{a+x}$

14. Find the greatest common measure of $3x^2 + x - 2$ and $3x^2 + 4x - 4$

15. Divide $x^6 - y^6$ by $x - y$

HIGH SCHOOL
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SESSIONAL EXAMINATIONS, 1862.

MONDAY, JUNE 9TH.—9 A. M., TO 12 NOON.

EUCLID.

FIFTH FORM.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. On the same right line, and on the same side of it, there cannot be constructed two triangles which shall have their conterminous sides equal.
2. The three angles of every triangle are, together, equal to two right angles.
Prove that the sum of the external angles is equal to four right angles.
3. On a given right line construct a parallelogram equal to a given triangle, and having an angle equal to a given one.
4. The rectangle under the sum and difference of two lines, is equal to the difference of their squares.
5. If a right line be divided into two parts, the sum of the squares of the whole line and one part is equal to twice the rectangle under the whole line and that part together with the square of the other.
Enunciate this proposition, regarding the line and one part, as two distinct lines.
6. Divide a given right line into two parts, such that the rectangle under the whole and one part shall be equal to the square of the other. Prove that the latter segment is the greater.
7. Draw a tangent to a circle from a point given without it. How many tangents can be drawn from the point? Where should the point be placed so that only one tangent could be drawn.
8. The opposite angles of a quadrilateral inscribed in a circle, are, together, equal to two right angles.
9. If two right lines intersect within a circle the rectangle under the segments of the one, is equal to the rectangle under the segments of the other.

HIGH SCHOOL
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SESSIONAL EXAMINATIONS, 1883.

Monday, June 24th—9 A. M. to 12 noon.

MATHS.

FIRST FORM.

Examiner.....ALEXANDER JOHNSON, B.A., D.D.

1. On the same right line, and on the same side of it, there cannot be constructed two triangles which shall have their corresponding sides equal.
2. The three angles of every triangle are, together, equal to two right angles.
3. Prove that the sum of the external angles is equal to four right angles.
3. On a given right line construct a parallelogram equal to a given triangle, and having an angle equal to a given one.
4. The rectangles under the sum and difference of two lines is equal to the difference of their squares.
5. If a right line be divided into two parts, the sum of the squares of the whole line and one part is equal to twice the rectangle under the whole line and that part together with the square of the other.
6. Enunciate this proposition regarding the line and one part as two distinct lines.
6. Divide a given right line into two parts, such that the rectangle under the whole and one part shall be equal to the square of the other. Prove that the latter segment is the greater.
7. Draw a tangent to a circle from a point given without it. How many tangents can be drawn from the point? Where should the point be placed so that only one tangent could be drawn.
8. The opposite angles of a quadrilateral inscribed in a circle are, together, equal to two right angles.
9. If two right lines intersect within a circle the rectangle under the segments of the one, is equal to the rectangle under the segments of the other.

PROBLEM 1

Let $f(x) = x^3 + 2x^2 - 3x + 4$ and $g(x) = x^2 - 5x + 6$. Find the remainder when $f(x)$ is divided by $g(x)$.

Using polynomial long division, we divide $f(x)$ by $g(x)$.

$x^3 + 2x^2 - 3x + 4$ divided by $x^2 - 5x + 6$.

Step 1: $x^3 + 2x^2 - 3x + 4$ divided by $x^2 - 5x + 6$ gives $x + 7$ with a remainder of $17x - 10$.

$$\begin{array}{r} x + 7 \\ x^2 - 5x + 6 \overline{) x^3 + 2x^2 - 3x + 4} \\ \underline{x^2 - 5x + 6} \\ 7x - 10 \end{array}$$

Step 2: $7x - 10$ divided by $x^2 - 5x + 6$ gives 0 with a remainder of $7x - 10$.

$$\begin{array}{r} 0 \\ x^2 - 5x + 6 \overline{) 7x - 10} \\ - 5x + 6 \\ \hline 12x - 16 \end{array}$$

Step 3: $12x - 16$ divided by $x^2 - 5x + 6$ gives 0 with a remainder of $12x - 16$.

$$\begin{array}{r} 0 \\ x^2 - 5x + 6 \overline{) 12x - 16} \\ - 5x + 6 \\ \hline 17x - 10 \end{array}$$

Therefore, the remainder is $17x - 10$.

$$\frac{17x - 10}{x^2 - 5x + 6}$$

Find the greatest common divisor of $12x^2 + 18x + 6$ and $15x^2 + 20x + 10$.

Factor out the common factors from each polynomial.

$$12x^2 + 18x + 6 = 3(4x^2 + 6x + 2)$$

$$15x^2 + 20x + 10 = 5(3x^2 + 4x + 2)$$

$$\frac{3(4x^2 + 6x + 2)}{5(3x^2 + 4x + 2)}$$

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SESSIONAL EXAMINATIONS, 1862.

TUESDAY, JUNE 10TH,—9 A.M. TO 12 NOON.

ALGEBRA—ARITHMETIC.

FIFTH FORM.

Examiner..... ALEXANDER JOHNSON, LL.D.

1. If $a = 0$, $b = 2$, $c = 4$, $d = 6$; find the value of $2\sqrt{d-b} + 3\sqrt{3d+2c-1} + 4\sqrt{a+b+2c+d}$.

2. Reduce to its simplest form

$$(a^3 - 2a^2c + 3ac^2) - (a^2c - 2a^3 + 2ac^2) + (a^3 - ac^2 - a^2c)$$

3. Divide $x^6 - 2x^3 + 1$ by $x^2 - 2x + 1$.

4. Divide $4a^2 + 4ab + 8ac - 8b^2 + 28bc - 12c^2$ by $2a - 2b + 6c$, and multiply the quotient by $a + b - c$.

5. Reduce $\frac{9x^2y^3 - 15xy^4}{12x^2y^2 - 21xy}$ to its lowest terms.

6. Simplify as much as possible the fraction

$$\frac{x - 3\frac{1}{3}}{3\frac{3}{4} - \frac{5}{6}x}$$

7. Find the greatest common measure of

$$6x^2 + 7x - 3, \text{ and } 12x^2 + 16x - 3$$

8. Solve the equations

$$(2 + x)(a - 3) = -4 - 2ax$$

$$\frac{2}{5}x + \frac{1}{3}(x - 2) = 2x - 7$$

$$\frac{2x}{3} - \frac{x}{3} + \frac{4}{5} = x - 6.$$

9. In a mixture of copper, lead, and tin, the copper was 5 lbs. less than half the whole quantity, and the lead and tin each 5 lbs. more than a third of the remainder; find the respective quantities.

10. Calculate the commission on sales to the amount of £2356 2s 6d at $2\frac{1}{2}$ per cent.

11. Find the price of 180 acres, 2 roods, and 23 perches at \$4.35 an acre.

12. If 13 men can reap 70 acres in 11 days, how many will be required to reap 140 acres 3 roods and 16 perches in 6 days?

13. Calculate the price of $5\frac{3}{4}$ loads of squared timber, the load containing 50 cubic feet, at the rate of 1s $1\frac{1}{2}$ d per foot.

14. Find the interest on \$2530 for 3 years and 5 months at $4\frac{1}{2}$ per cent.

15. Reduce the circulating decimal $\cdot 35656$ to a vulgar fraction; from the result subtract $\frac{1}{3}$, and multiply the remainder by $2\frac{1}{2}$.

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SESSIONAL EXAMINATIONS, 1862.

MONDAY, JUNE 9TH,—9 A.M. TO 12 NOON.

EUCLID.

FOURTH FORM.

Examiner..... ALEXANDER JOHNSON, LL.D.

1. *a.* Explain the terms *definition, postulate, axiom, problem, and theorem.*
b. Define a *right angle, a circle, and a quadrilateral.*
2. On a given right line, construct an equilateral triangle. How many can be constructed on it?
3. From a given point in a given right line erect a perpendicular to it.
4. Prove that if any side of a triangle be produced, the external angle is greater than the internal and opposite angle *of which the produced side is a leg.*
5. In any triangle, if one side be greater than another, the angle which is opposite the greater side, is greater than the angle which is opposite the less.
6. Through a given point draw a right line which shall be parallel to a given right line.
7. Triangles which stand on the same base and between the same parallels are equal.
8. On a given right line, describe a square.
9. If the square of one side of a triangle be equal to the sum of the squares of the other two sides, these sides include a right angle.

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SESSIONAL EXAMINATIONS, 1862.

TUESDAY, JUNE 10,—9 A. M. TO 12 NOON.

ARITHMETIC.

FOURTH FORM.

Examiner,.....ALEXANDER JOHNSON, LL.D.

1. The total expense of constructing the Britannia tube over the Menai Straits was £621,865 stg.; five years were consumed in the work. Calculate the average daily expense for each working day, allowing 365 days to the year, and 52 Sundays in each year.
2. Reduce the result to dollars and cents; £1 stg. being equal to \$4.86.
3. The proportion of the diameter of a circle to its circumference is nearly as 113 : 355. Find the circumference of a circle whose diameter is 120 feet.
4. Find the interest on \$805.65 for 3 years and 5 months at 6 per cent.
5. Find the amount of insurance to be paid on \$2256, at the rate of 7s. 0d. per £100 currency.
6. Find the least common multiple of 3, 4, 5, 6, 7, 8, 9, 10. $\frac{42}{72}$
H
7. Find the greatest common measure of 276 and 356.
8. Find the half of $2\frac{3}{4}$, treble it, and multiply the result by the difference between $6\frac{1}{2}$ and $4\frac{1}{2}$.
9. Reduce $\frac{3}{4}$ to a decimal, and prove result correct.
10. Find the value of .01657 of \$322.
11. Reduce 2s. 6d. to the decimal of £1.
12. Add $\frac{1}{2} + \frac{2}{3} + 2\frac{5}{8}$.

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SESSIONAL EXAMINATIONS, 1862.

TUESDAY, JUNE 17TH, 9 TO 12 A.M.

SIXTH FORM.

Examiner,.....REV. DR. LEACH.

1. What year is assigned as the epoch of the commencement of the change from Anglo-Saxon into English, and what is said of the Saxon Chronicle of that year?
2. In what century did the learned adopt their vernacular language instead of the Latin?
3. About what year was the character called Old English or Black Letter first used?
4. When were the pleadings before the tribunals *restored* to the vernacular tongue? Also, the Parliamentary proceedings? and give the date when the Statutes were recorded in English.
5. What age is assigned as the true starting point of the English literature properly so-called, and during what period was the influence of Italian manners and literature very great in England?
6. State the great causes which are said to have modified and directed the genius of Chaucer.
7. In what particular mode of composition are the first efforts of a revival of letters always made?
8. Who were the great Italian poets that lived in or near the time of Chaucer, and who was the great English writer that was his contemporary?

9. What may be regarded as the period of the highest literary glory in England, and mention the conditions upon which that superiority is stated to have depended?

10. Enumerate the chief literary names of the time of Queen Elizabeth, and give the titles of their principal productions.

11. Whence are the religious dramas of the middle ages supposed to have originated? What was the subject matter of them, and what their designation?

12. Which is considered the earliest comedy in English; what its title; when and by whom written? Also, the earliest tragedy, its title, when and by whom written?

13. Give the names of the principal English dramatic writers before Shakspeare.

14. What is Shaw's decision with respect to the learning of Shakspeare?

15. Mention the chief characteristics of Ben Johnson's style and his plots; the vices that mark the productions of Beaumont and Fletcher; and the names of the principal dramatic writers till the Restoration.

16. Why are words like "man-servant," "maid-servant," not to be regarded as specimens of gender?

17. Why is the relative "what," as compared with "who," to be regarded as a specimen of gender?

18. Over what extent of our language have we numbers?

19. Analyse (etymologically) the word "children."

20. Whence have we in English "s" for the possessive case, and "s" for the plural of nouns?

21. Show the difference, originally between the common article "the" and "th" in such phrases as "all the more."

22. Which are the true personal pronouns, and why is the usual declension of the personal pronouns exceptionable?

23. Show that "you" = "thou" is a plural.

24. State the reasons for treating "he," "she," "it," as demonstrative pronouns.
25. State what is said of the termination "s" in the words "its," "hers," "theirs."
26. What is said respecting the comparative antiquity of the superlative degree?
27. Show that the "m" in such words as "upmost," "foremost" has nothing to do with the word "most"—and analyse the words "former," "next."
28. Explain the origin of the independent form and the prepositional form of English infinitives.

COMPOSITION.

HIGH SCHOOL
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MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

TUESDAY, JUNE 17TH, 9 TO 12 A.M.

FIFTH FORM.

Examiner,REV. DR. LEACH.

1. Who were the most ancient inhabitants of the British islands? Mention some of the circumstances that indicate the oriental origin of the race.
2. In what parts of Britain are still the remnants of the same race, and what were the causes that led to their retirement from the southern and central parts of the country?
3. Had the language spoken by the original inhabitants much influence upon the present English?
4. Had the language spoken by the Romans, during their possession of Britain, much influence upon the language now spoken in England?
5. From the language of what race had the English its real origin?
6. State the different processes by which, according to Hallam, the original language was converted into English.
7. In what manner, chiefly, was the Latin element introduced into the English language?
8. What English Sovereign is said to have fostered and protected the language of his country?
9. In what year was Chaucer born, and which are his principal works; in what year was Wickliff born, and what did he accomplish in reference to our language.

10. Who was the author of the *Arcadia*, and in what estimation was this work formerly held ?

11. When and where was Spenser born, what is his chief work, and state the general idea of its plan, as given in the text-book.

12. When was Lord Bacon born, and what are here stated to be the objects of his different works on scientific subjects ?

13. Give the names of the principal Divines here mentioned, and the titles of their respective works.

14. When and where was Milton born ? To what political party did he belong ? What state office did he hold ? What is here stated of the influence of Italian literature upon his mind ? Which are his principal productions in poetry and prose ?

14. What are proper nouns, common nouns, abstract nouns ?

15. Write the plurals of the following nouns "valley, duty, leaf, staff, life, die, penny, genius, genus, index, basis, antithesis, criterion, beau, phenomenon."

16. Give some nouns that have no plural.

17. How do plural nouns not ending in *s*, form the possessive case plural ?

18. In what cases are the compound personal pronouns found ?

19. Which are the four principal parts of a regular verb, and which tense is that from which all the rest are formed ?

20. What are meant by the moods potential and subjunctive ?

21. Give the different classes of adverbs. Can they be compared like adjectives ?

22. What kind of verbs take the same case after them as before them ?

23. What verbs usually take the infinitive after them without the preposition "to" ?

24. How do you determine when a collective noun should have a verb in the singular or in the plural ?

25. When two or more nouns are connected by the word "with," in what is the verb following?

26. What are sentences? What do they consist of in their simplest form? When the parts of which they consist, in the simplest form, are enlarged, what may those parts then be? What is meant by a complex sentence?

Analyze the following sentence:—"At the first alarm of war the fighting men retreated, with no incumbrances but their arms, ammunition, and a few days' provisions, into the four towns of Suli proper which all lay within that ring-fence of impregnable position from which no armies could ever dislodge them."

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SESSIONAL EXAMINATIONS, 1862.

TUESDAY, JUNE 17TH, 9 TO 12 A.M.

FOURTH FORM.

Examiner,REV. DR. LEACH.

1. What is meant by the "powers" of the letters of the English alphabet?
2. What are the first, second, and seventh rules for using capital letters?
3. What are primitive and derivative words?
4. What are simple and compound words?
5. How is the art of spelling to be best acquired?
6. Enumerate the different parts of speech, and define them.
7. Enumerate the different classes of adjectives, and define them.
8. What is comparison?
9. How are degrees of diminution in adjectives expressed?
10. What are nouns and pronouns?
11. What is the declension of pronouns?
12. What are the different *forms* of verbs?
13. How are verbs divided with respect to their signification?
14. What is the difference between an active transitive and a neuter verb?

15. Of what mood has the present tense no reference to time ?
16. Give a few examples.
17. What difference is there between a passive verb and the compound form of the active voice ?
18. What are redundant and defective verbs ?
19. Write a few examples of each.
20. To what parts of speech do prepositions and adverbs naturally belong ?
21. What are the three most important of the rules of agreement in syntax ?

22. Correct the following sentences :—

Much does human pride and folly require correction.

Not her beauty, but her talents attracts attention.

The time will come when no oppressor, no unjust man will be able to screen themselves from punishment.

Town or country are equally agreeable to me.

Either he has been imprudent or his associates vindictive.

I and Jane are invited.

23. What is meant by Analysis ?
24. What has the sense to do with syntax, or with parsing ?
25. Parse the following sentence :—

My friends, this enterprise, alas ! which once seemed likely to be very beneficial, will never compensate us for the trouble and expense with which it has been attended.

[Examples of spelling (dictation) may be found on the 37th and following pages of Brown's Grammar.]

HIGH SCHOOL

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SESSIONAL EXAMINATIONS JUNE, 1862.

SIXTH FORM.

FRENCH.

Examiner,..... P. J. DAREY, M.A.

Traduisez en anglais :

1. Louis XIV. (1) est un des (2) rois qu'on (3) a vus (4) mettre le plus de grâce et de noblesse dans toutes (5) ses actions, et de ceux (6) qu'on a entendus (7) s'exprimer avec la plus majestueuse (8) précision, s'étudiant en public (9) à parler comme à agir en souverain. Lorsque le duc d'Anjou partit pour aller régner en Espagne, Louis XIV. lui dit, pour marquer l'union qu'il avait espéré (10) devoir désormais joindre ces deux nations : " Il n'y a (11) plus de Pyrénées." Dans la conquête de la Franche-Comté, ceux que (12) ses armes avaient commencé (12) à soumettre lui donnèrent bientôt leurs cœurs, que sa présence et son affabilité ont (13) achevé de gagner. Un paysan qui le vit, ne put s'empêcher de dire, dans cette (14) surprise qu'a toujours donnée (15) un objet qu'on admire : " Je ne m'en étonne plus."

1. Quelle différence remarquez-vous entre le français de *Louis XIV* ; et sa traduction en anglais ?

2. Pourquoi employons nous l'article ? ne dit-on pas *il n'y a pas de rois* ?

3. Comment traduisez-vous *on* ? Quand traduisez-vous vos pronoms qui y correspondent par le pronom indéfini *on*, et quand par les pronoms personnels *ils*, *elles*, &c.

4. Pourquoi *vous* est-il variable ?

5. Quelles sont les quatre différentes manières d'écrire le mot *toute* ; Quand le faites vous varier.

6. A quelle partie du discours *ceux* appartient-il.
7. Pourquoi entendus est-il variable ?
8. De quel genre est *majestueuse* ? Pourquoi est-il de ce genre-là ? Quelle règle suivez-vous pour former à ce genre-là ?
9. Quel est le féminin de *public* ?
10. Pourquoi espéré est-il invariable ?
11. Quelle sorte de verbe est *il y a* ? Quel en est le pluriel ?
12. A quelle partie du discours *que* appartient-il ? C'est le complément direct de quel verbe ? Pourquoi donc est ce que *commencé* est invariable ?
13. Pourquoi le verbe *avoir* est-il au pluriel.
14. De quel genre est le mot *cette* ? Quelles sont les deux manières de l'écrire au masculin ?
15. Pourquoi *donnée* est-il variable.

II. Nommez trois verbes réguliers pris dans ce morceau et cinq irréguliers, en donnant au moins trois exemples de l'irrégularité de ceux-ci.

III. Quels sont les temps primitifs en français ? L'imparfait du subjonctif est-il primitif au dérivé ? S'il est primitif, quel temps forme-t-il ? S'il est dérivé de quel temps est-il formé, et comment ?

IV. Qu'est-ce que le mode ? Combien y en a-t-il en français. Quand employez-vous le mode impératif ? donnez un exemple. Après quels verbes emploie-t-on le mode subjonctif ? Quelles sont les conjonctions qui demandent ce mode ?

V. Traduisez en anglais :

Un voile.	Une voile.
Un souris.	Une souris.
Un poêle.	Une poêle.
Le mémoire.	La mémoire.
Le tour.	La tour.
Le mode.	La mode.

VI. Traduisez en français par leurs expressions équivalentes les expressions idiomatiques et les proverbes suivants :

Life is at stake.
To run every chance.
To sleep very late.
Practice makes perfect.
It is not the cowl that makes the friar.
Smooth water runs deep.
A bird in the hand is worth two in the bush.
Cat after kind.

Traduisez en français:

A corporal of the life-guards of Frederick the Great, who had a great deal of vanity, but at the same time was a brave fellow, wore a watch-chain, to which he affixed a musket-bullet instead of a watch, which he was unable to buy. The king, being inclined one day to rally him, said, "A propos, corporal, you must have been very frugal to buy a watch: it is six o'clock by mine; tell me what it is by yours?" The soldier, who guessed the king's intention, instantly drew out the bullet from his fob, and said, "My watch neither marks five nor six o'clock; but it tells me every moment, that it is my duty to die for your majesty." Here, my friend, said the king quite affected "take this watch, that you may be able to tell the hours also." And he gave him his watch, which was adorned with brillants.

HIGH SCHOOL
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SESSIONAL EXAMINATIONS, JUNE, 1862.

THURSDAY, JUNE 19TH, 9 TO 12 A.M.

F I F T H F O R M .

FRENCH.

Examiner,..... P. J. DAREY, M.A.

Traduisez en anglais :

I. Deux mois après, dans le temps (1) de ma plus grande faveur, nous eûmes une chaude (2) alarme au palais épiscopal (3) ; l'archevêque tomba en apoplexie. On (4) le secourut (5) si promptement et on lui donna de (6) si bons remèdes que quelques (7) jours après il n'y paraissait plus (8). Mais son esprit en (9) reçut une grande atteinte. Je le (10) remarquai bien dès le premier discours qu'il composa. Je ne trouvai pas toutefois la différence, qu'il y avait de celui-là aux autres, assez sensible pour conclure que l'orateur commençait à baisser. J'attendis (11) encore une homélie pour savoir à quoi m'en tenir (12).

1. Pourquoi *temps* a-t-il une *s* ?
2. Dans quel sens le mot *chaude* est-il employé. Pourquoi est-il au féminin ?
3. Quel est le pluriel d'*épiscopal* ? Donnez la règle.
4. A quelle partie du discours *on* appartient-il ? Quand l'employez-vous ?
5. A quel temps est *secourut* ? quel est le futur ? Est-il régulier ou irrégulier ?
6. Pourquoi ne disons-nous pas *des* si bons remèdes ?
7. Est-ce que quelques prend toujours une *s* ? Quand est-il invariable ? Donnez un exemple.

5. Comment appelez-vous cette expression, *il n'y paraissait plus* ?
9. A quoi *en* se rapporte-t-il ?
10. A quelle partie du discours *le* appartient-il ? Appartient-il quelquefois à une autre partie ? quand ? Donnez un exemple.
11. A quel temps est *attendis*. Donnez le *futur*, le *présent*, du *subjonctif* et l'*impératif*.
12. Comment appelez-vous l'expression *m'en tenir* ? Quelle en est la traduction littérale ? Le verbe *tenir* est-il régulier ou irrégulier ?
- II. Donnez cinq gallicismes formés du verbe *faire*.
- III. Quel auxiliaire les verbes réfléchis prennent-ils en français dans leurs temps composés ? Donnez en trois exemples.
- IV. Quelle différence y a-t-il entre : *faire du mal à quelqu'un* et, *faire mal à quelqu'un*.
- V. Traduisez en anglais : *porter, apporter, emporter, mener, amener, et emmener*.
- VI. Traduisez en français : *Have you taken that book to my brother and, have you taken the horse to the stable*, et dites pourquoi vous ne traduisez pas le verbe *taken* par le même verbe en français. Expliquez quand il faut employer l'un et quand l'autre.
- VII. Dans quel cas les verbes en *er* qui ont la syllable finale de l'infinitif précédée d'un *é* fermé, changent cet *é* en *è* ouvert ? Donnez en deux exemples.
- VIII. Comment se forme le féminin des adjectifs en *el, eil, en, et* et *on*. Donnez un exemple avec chacune de ces terminaisons.
- IX. Ecrivez le féminin de *bénin, franc sec, pêcheur, nègre, gros* et *nul*.
- X. De quel temps l'imparfait de l'indicatif est-il formé ? et comment ? Quand l'employez-vous ?

HIGH SCHOOL
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MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

THURSDAY, JUNE 19TH, 9 A.M. TO 12 M.

FRENCH.

FOURTH FORM.

Examiner.....P. J. DAREY, M.A.

1. Translate into French: *Have you my leather shoe?* and give the rule to express in French an object and the material of which it is made.

2. Translate into French: *Have you the merchant's stick or yours?* and explain how you translate "*the merchant's stick,*" and why you do it so. How do you write the French for "*yours?*" Why?

3. How do nouns ending in *al* and *ail* form their plural? Give two examples of those ending in *al* and two in *ail*.

4. Translate into French: "What day of the month is it?" and "*it is the seventeenth,*" and point out the difference which exists between the French and the English manner of expressing the days of the month.

5. How many conjugations are there in French? How are they distinguished? Give an example of each.

6. To what conjugations belong the verbs: *disant, sachant, je sortis, je vins, je fis, j'aperçus.*

7. Translate into French: "*it is half-past ten,*" and say how you write half in French, and the reason why. How do we express *twelve o'clock* and *midnight?*

8. In interrogative sentences do you put the subject in the same place when it is a pronoun as when it is a noun? Explain your answer by two examples.

9. Where do you place a personal pronoun governed by a verb, either as its direct or indirect object? Is it also the case when the verb is in the imperative mood? Give three examples.

10. When a verb is governed by two personal pronouns, one of which is its *direct* object, the other its *indirect* object, if you use a pronoun of the *first* or *second* person with one of the *third*, which one comes first? If both pronouns are in the third person, which is first? Give an example in each case.

11. How do you know when to translate the verb *to know* by *connaître* or when by *savoir*?

12. Are the verbs *manger*, *juger*, *négliger* regular?

13. What is an irregular verb? Give three irregular verbs, with three examples of their irregularity.

14. What is "*to drink*" in French? Do we always translate it so? Give two examples.

15. What are the two ways to translate *do I speak*, in French? What is the literal meaning of the longer way to express it?

16. When do you translate *better* by *meilleur* and when by *mieux*? Give an example with each.

Translate into English:—

"J'avais une invitation pour dîner chez Sir Alfred Beauchamp à Piccadilly. Je regardai ma montre vingt fois; je n'avais pas envie de montrer mon éducation provinciale en arrivant trop tôt pour importuner mon ami, ni de montrer mon savoir-vivre citadin en arrivant trop tard, et en faisant gâter son dîner. Sir Alfred est un homme de mérite, et de manières élégantes; il jouissait d'une haute estime dans l'opinion de mon père, pour les grâces de son esprit, et la pureté de ses principes. Comme je savais qu'il avait la réputation de réunir à sa table des hommes de sens, de goût et de mérite, je me promettais un plaisir infini."

HIGH SCHOOL

OF

MCGILL COLLEGE,

MONTREAL.

SESSIONAL EXAMINATIONS, 1862.

THURSDAY, JUNE 19TH, 9 A.M. TO 12 NOON.

FRENCH.

THIRD FORM.

Examiner,..... P. J. DAREY, M.A.

1. Give the four different ways to translate *of the* in French, and an example with each.

2. How do you translate, *the king's coat, the queen's friend, the man's dog*? Can you put the words in the same order in French as they are in English? Why?

3. What are the six different ways to translate in French *some* or *any*? Explain when you have to use each of those ways, and give an example.

4. How do the nouns ending in *al* form their plural? Give an example, and name three exceptions.

5. How do the adjectives ending in *f* and in *x* form their feminine? Give an example of each.

6. What is the French of *beautiful*? What are the two forms for the masculine gender. When do you use the one and when the other? What is the plural? What is the feminine singular and plural?

7. Write the feminine singular of the adjectives: *pareil, roux, ingrat, jeune, gris, bon, cher, and ancien*?

8. Translate into English: *un grand homme* and *un homme grand*; *un honnête homme* and *un homme honnête*.

9. Where do you place the adjectives of color and of form in French? Give two examples.

10. What are the only two numeral adjectives which take an *s* to form their plural? And when do they not take any even in the plural? Give two examples.

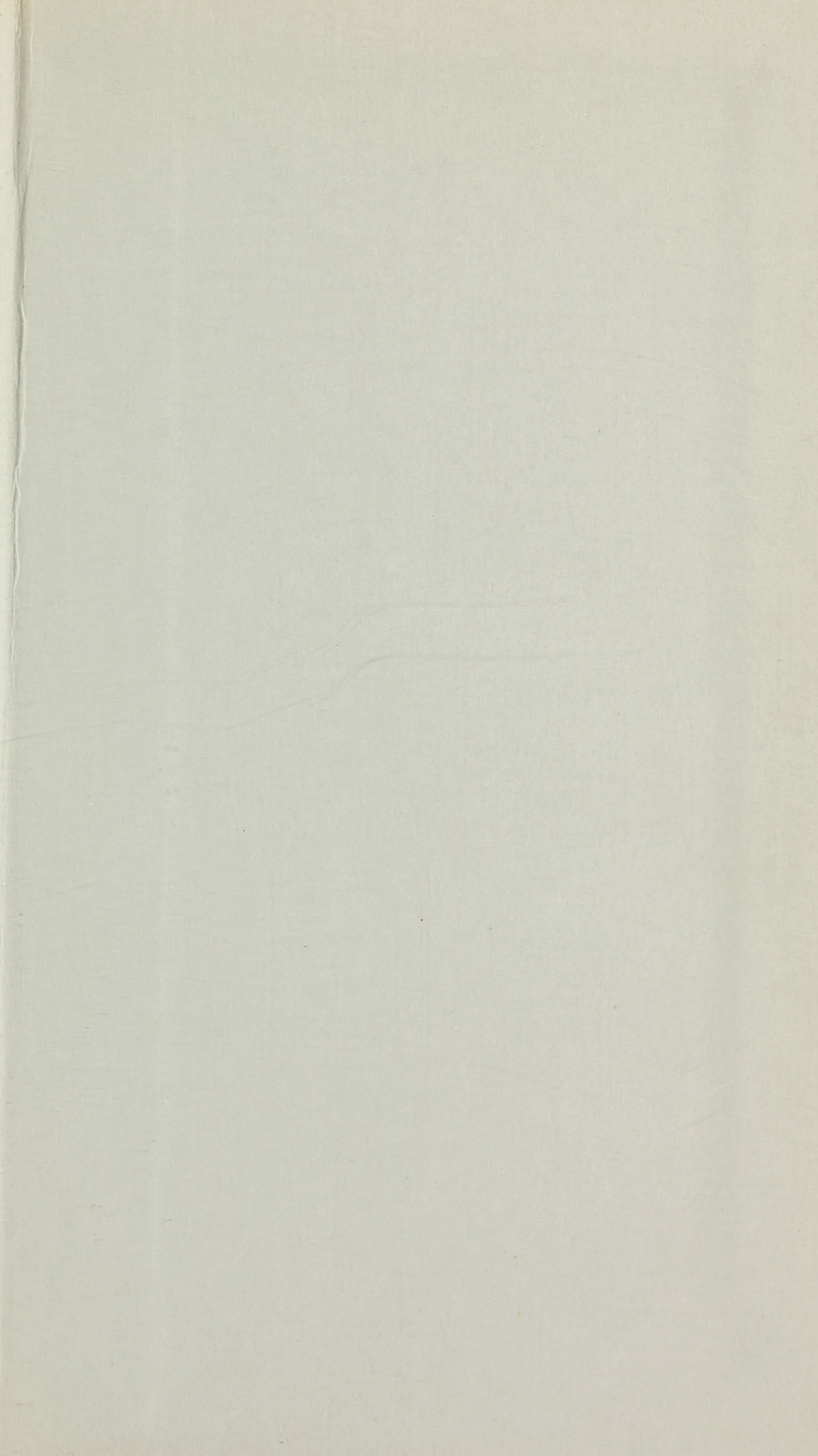
11. Write in French: *The 27th of June eighteen hundred and sixty-two.* George the Fourth, William the Third.

12. Translate in French: Send me four and twenty oranges, six pine-apples, and twelve lemons.

13. Write in French, once, twice, three times, ten times, twenty-two times, and twenty-five times.

Translate into English:—

“Au commencement du siècle dernier, un négociant français qui était aux Indes orientales, où il avait fait une grande fortune, s'embarqua pour revenir en France. Il avait avec lui sa femme et deux enfants, un garçon et une fille; le garçon, âgé de quatre ans, se nommait Jean, et la fille, qui n'en avait que trois, s'appelait Marie.



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