7

THE REPORT

OF THE

PRESIDENT

OF

QUEEN'S COLLEGE, CORK,

FOR

THE ACADEMIC YEAR OF 1857–58.

WITH APPENDICES.

Presented to both Houses of Parliament by Command of Her Majesty.

DUBLIN:
PRINTED BY ALEX. THOM & SONS, 87 & 88, ABBEY-STREET,
FOR HER MAJESTY'S STATIONERY OFFICE.

1859.

CONTENTS.

	Page
REPORT, ...	3
APPENDIX:	
A. General Regulations of College; List of Officers; Programme of Courses for Matriculation and Scholarship; Arrangements of Hours of Lecture; Fees, &c., ...	8
B. Special Prospectus of Courses for Competitive Examinations, ...	18
C. Selection of Examination Papers for Scholarship Examinations, ...	20
,, Selection of Examination Papers for Sessional Examinations, ...	28
D. List of Sessional Honors for the Session 1857–58, ...	40
E. Lists of successful Candidates from Queen's College, Cork, for University Degrees and Honors at the commencements, October, 1858, ...	41
F. Form of Circular from President, and Official Reports of Professors, furnished in compliance therewith,	ib.
G. Official Report of Librarian, ...	47
H. Official Report of Curator of Museum, ...	48
I. Copies of the several Accounts furnished by the Bursar, showing the Financial State of the College,	ib.
K. Documents regarding Discipline and Conduct of Students, ...	49
1. Copy of Letter from President, and Special Report of Vice-President on Discipline, with explanation of Vice-President, and Minute of President referred to in Vice-President's explanation, ...	ib.
2. Return of Cases of Breach of Discipline brought before the College Council, . .	50
3. Reports of Deans of Residences, ...	ib.
L. Report of Proceedings of Visitation, ...	ib.

THE REPORT

OF

THE PRESIDENT OF THE QUEEN'S COLLEGE, CORK,

FOR

THE ACADEMIC YEAR, 1857-58.

TO THE QUEEN'S MOST EXCELLENT MAJESTY.

MAY IT PLEASE YOUR MAJESTY,

I have the honour, respectfully, to submit the following Report of the Proceedings of the Queen's College, Cork, for the Academic Year, 1857-58, and of the condition of the several departments of the College.

MATRICULATION EXAMINATIONS AND NUMBER OF STUDENTS.

The Matriculation Examinations were held, as usual, at the commencement of the Session, on the several days fixed by the College Council, as described in the Prospectus for the Session, of which a copy is annexed, Appendix A.

After those Examinations thirty-one new Students were admitted for the First Year's class, to which were also admitted twenty-four Students, who had been Matriculated in the previous Session, but who not having been promoted at the Sessional Examination, were thereby disqualified from joining a higher class, and were therefore obliged to re-enter the class of the first year, and proceed again with the more elementary studies. The number of Matriculated Students in the class of the First Year, for the Session 1857-58, was consequently fifty-five.

Besides the above there presented themselves, to resume their studies of the Senior Years, seventy Students, who had been promoted at the Sessional Examinations of the preceding Session. The total number of Matriculated Students in the College for the Session 1857-58 was therefore 125.

In addition to the 125 Matriculated Students as above described, there also entered, as Non-matriculated Students to attend the Lectures of individual Professors, thirty-two Students.

The total number of Students attending the College in the Session 1857-58, was consequently 157.

In regard to the Classification of those Students, according to their Collegiate standing, and as compared with the numbers for the preceding year furnished in the last Report, the following table is given :—

COURSES OF STUDY.	SESSIONS. 1857-58.	SESSIONS. 1856-57.
Number of Matriculated Students—First Year,	55	71
,, ,, Second Year,	31	37
,, ,, Third Year,	22	20
,, ,, Fourth Year,	17	11
Total number of Matriculated Students,	125	139
Number of Non-Matriculated Students,	32	25
Total number,	157	164

Of the 125 Students who attended the College during the Session 1857–58, the classification as to Faculties and Courses of Study for Degrees and Diplomas, was as follows :—

	Matriculated.	Non-Matriculated.	Total.
In the Faculty of Arts,	47	5	52
" Faculty of Medicine,	44	14	58
" Faculty of Law,	7	–	7
" Course of Engineering,	32	8	40
" Course of Agriculture,	5	5	10
Total,	135	32	167

The above number, 135, exceeds that previously given as the total number of Matriculated Students, viz., 125, by ten; which excess arises from the circumstance that some Students pursue, simultaneously, more than one Course of Study for Degrees. The numbers and distribution of those thus circumstanced was as follows :—

Attending Arts and Medicine,	3
" Arts and Law,	3
" Arts and Engineering,	3
" Agriculture and Engineering,	1
Total,	10

In regard to the ages of Students, the following summary will suffice :—

Under 16 years of age,	4
From 16 to 17 years of age,	13
From 17 to 18 "	23
From 18 to 19 "	28
From 19 to 20 "	10
From 20 to 21 "	15
Above 21 years,	32
Total,	125

In the several departments of study the average ages of Matriculated Students were—

In the Faculty of Arts,	18·3
" Faculty of Law,	19·5
" Faculty of Medicine,	19·8
" Course of Engineering,	17·6
" Course of Agriculture,	18·0

The average ages of all Matriculated Students at entrance was found to be 16·9 years.

COLLEGE EXAMINATIONS FOR SCHOLARSHIPS AND SESSIONAL PROMOTION OF MATRICULATED STUDENTS.

The Examinations for Scholarships and for Sessional Promotion were carried on as directed by the College Council, and the number and nature of the Scholarships awarded in the Session 1857–58, was as follows :—

Of the Thirty Junior Scholarships in the Faculty of Arts, twenty-six were awarded.

Of the Seven Senior Scholarships in the Faculty of Arts, all were awarded.

Of the Six Junior, and two Senior Scholarships in the Faculty of Medicine, all were awarded.

Of the Four Scholarships in the Faculty of Law, three were awarded.

Of the Two Scholarships in the Course of Engineering, both were awarded.

Of the Four Scholarships in the Course of Agriculture, one was awarded.

The Examinations for these Scholarships were conducted principally by printed papers, but in certain portions *vivâ voce*. The subjects of each Course is given in the Prospectus annexed, Appendix A, and the Principal Papers of Questions will be found annexed, forming Appendix C.

The Examinations for Sessional Promotion were conducted at the close of the Session in the usual manner, and with the following results :—

In the Faculty of Arts—of seventeen Students of the first year, nine were promoted to second year's rank.

Of thirteen Students of the second year, eleven were promoted to third year's rank.

Of eight Students of the third year, seven were promoted to fourth year's rank, and recommended to be examined for the Degree of A.B.

Of nine Students of fourth year's rank, all were recommended to be examined for the Degree of A.M.

In the department of Engineering and Agriculture—of twenty-five Students of the first year, fourteen were promoted to second year's rank.

Of twelve Students of the second year, ten were recommended for examination for the Diploma of Civil Engineer.

In the Faculty of Law—of seven Students, four were promoted.

In the Faculty of Medicine, Collegiate promotion is not necessary for the Queen's University or the Medical Colleges; and consequently such Students only present themselves for Sessional Examinations, as are Candidates for Medical Scholarships or Prizes in the College. With them, therefore, nothing similar to the class promotion in the other Faculties takes place.

The general result of the Sessional Examinations may, therefore, be stated as follows:—

	Promoted.	Not Promoted.	Total.
In the Faculty of Arts,	36	11	47
" Faculty of Law,	4	3	7
" Course of Engineering,	22	10	32
" Course of Agriculture,	2	3	5
Total,	64	27	91
Faculty of Medicine where there is no Collegiate promotion,			44
Total Matriculated Students,			135

A satisfactory increase is here observable in the proportion of Students promoted, to those not promoted, as compared with those of the preceding Session, given in last Report, when the numbers were forty-eight promoted to fifty-two not promoted. The Reports of the Professors, also, on the answering at the Sessional Examination were very satisfactory, and Prizes were awarded by the College Council to those Students who had most distinguished themselves in their several branches of study. The Examinations were conducted principally by printed Papers of Questions, as for the Scholarship Examinations; a selection of which papers, together, with the names of the Students on whom Prizes were conferred is given in Appendices C and D.

The Students in the several Faculties and Courses, who had completed their Studies for Degrees, were recommended to the Senate of the Queen's University in the usual manner, to be admitted to Examination. Lists of those Students of Queen's College, Cork, who presented themselves for University Examination, and obtained Degrees, and also of the University honors obtained by those Students, at the Degree Examination, are given in Appendix E.

COURSES OF INSTRUCTION.

I have the honour to report that the several Courses of Instruction, in the Special Departments of Science and Literature, have been carried on by the Professors with their accustomed ability and zeal; and I have found the arrangements necessary for securing the proper efficiency of the Institution to be carried out, upon the whole, in a very satisfactory manner.

The distribution and special occupation of the Professors in the Courses of Instruction for University Diplomas and Degrees was the same as described in Report of previous Session.

The total number of Classes and the number of Lectures delivered in the Session by each Professor, together with the number of Students attending in each Branch, will be seen from the following table:—

Branches of Instruction.	Number of Lectures Weekly.	Number of Lectures delivered.	Number of Students attending.	Branches of Instruction.	Number of Lectures Weekly.	Number of Lectures delivered.	Number of Students attending.
Greek Language,	8	237	33	Civil Engineering,	6	140	40
Latin Language,	9	197	33	Agriculture,	3	64	8
English Language,	3	31	17	Anatomy and Physiology,	5	110	32
History and English Literature,*	3	57	8	Practical Anatomy,	5	100	37
French Language,	6	151	27	Surgery,	3	60	30
Celtic Languages,	No Lectures delivered.			Practice of Medicine,	3	53	28
Mathematics,	8	200	66	Materia Medica,	3	66	15
Natural Philosophy,	12	173	37	Medical Jurisprudence,	3	36	12
Chemistry,	3	67	51	Midwifery,	3	55	14
Practical Chemistry,	4	45	15	English Law,	4	72	7
Zoology and Botany,*	3	51	30	Civil Law,	4	54	7
Geology and Mineralogy,	3	70	21	Political Economy,	4	24	7
Logic,	3	31	12	Physical Geography,	3	14	8
Metaphysics,	3	85	4	Medical Jurisprudence in Faculty of Law,	4	24	1

* In regard to the department of History and English Literature, Mr. Rushton not having been appointed to succeed Rev. Mr. Darley in that Professorship until after the First Term, the Lectures of the First Term were

The efficiency of many of the branches of Instruction was much augmented by special means of illustration, as by Excursions and Herborizations, conducted by the Professors of Geology and Natural History, by Field Instructions in the use of Instruments and Surveying operations, given to the Engineering Class by their Professor, who also superintended the work of that Class in the Drawing School. The Students of Agriculture were also practically instructed by their Professor by means of inspection of the Model Farm of the National Board, and other suitable Farm Establishments in the vicinity. Additional details as to the means and methods of Instruction will be found in the Reports of the several Professors, given in Appendix F.

The attendance of the Students upon the Lectures of the Professors was, on the whole, very satisfactory. In the Professors' Reports some remarks on special cases will be found.

LIBRARIES, GENERAL AND MEDICAL MUSEUMS, AND BOTANIC GARDENS.

Since last Report further additions have been made to the Library and Museums, and greater efficiency given to them as means of instruction, by improvements and progress in arrangement. In regard to the actual condition of those departments, I beg to refer to the special Reports of the Curator of the Museum, Professor Harkness, and of the Librarian, Mr. O'Keefe, which are annexed, forming Appendices G and H.

It is my duty again to refer to the urgent necessity for additional accommodation being afforded to the Medical Faculty. The evils arising from the absence of any proper Anatomical Theatre, and of a suitable room for the collections of the Physiological and Pathological Museums, are becoming every year more seriously felt, and threaten to exercise a most injurious influence on the prosperity of the Medical Classes, and thereby on the general success of the College. It is my duty also to repeat my representation of the necessity for a Conservatory or Hot-house for the Botanic Garden, in order to supply the Lecturer on Botany with such forms of vegetation as are required for proper illustration of his Lectures, but which cannot bear the winter of this climate without protection. I should hope that your Majesty's Government, which has manifested so much and such laudable anxiety for the Botanical Instruction of the Agricultural Pupils at the Model Farm of the National Board at Glasnevin, as to erect the excellent Conservatory which so much ornaments that Institution, even where the close proximity of the Botanic Gardens of the Royal Dublin Society might appear to render such further appliances less necessary, will not consider it unworthy of consideration, whether such a Conservatory as might be constructed at a much more moderate expense, may not reasonably be afforded to the class of Students for whom the Queen's Colleges and University were founded.

FINANCIAL CIRCUMSTANCES OF THE COLLEGE.

I have the honour to annex copies of the several College Accounts, as furnished by the Bursar, and also of the distribution of the Parliamentary grant of £1,600 among the several departments of the College for the year 1857–58, forming Appendix I, Nos. 1, 2, and 3.

No. 1. Account of Receipt and Expenditure of Endowment under Queen's College Act of Parliament.

No. 2. Account of Receipt and Expenditure of Funds derivable from College, and Matriculation Fees, Fines, rent of Robe Boxes, &c.

No. 3. Account of Expenditure of Parliamentary Grant for Fitments, Books, Apparatus, Laboratories, Botanic Garden and Grounds, Heating and Lighting, Advertising, Printing, &c.

CONDUCT AND DISCIPLINE OF STUDENTS.

I have to report that during the past Session the Students of Queen's College, Cork, have been characterized by similarly general good conduct to what it had been my duty to describe on the last occasion. Some trifling breaches of the Rules of Discipline were met by advice or reprimand from the Vice-President, as the Officer specially charged by the Statutes with the Supervision of Discipline; and three graver cases, which were reported by that Officer to the College Council, were awarded suitable punishments. The nature of those offences, and the punishments awarded, are given in Appendix K 2.

given, at the request of the College Council, by Professor De Vericour, to whom the College is much indebted for his valuable assistance during that Term and in the preceding Session. In the class of Natural History, owing to the death of Professor Smith, the instructions could not commence until the Second Term, when Professor Green had been appointed to that Chair, and hence the number of Lectures delivered in that department were necessarily somewhat below the proper proportion of the full course.

The Special Report of the Vice-President on the state of Discipline in the College is annexed, forming Appendix K 1.

The religious and moral conduct of the Students has been, so far as I could learn, during the past year, exceedingly satisfactory. The list of Licensed Boarding-houses, and the Rules to which they are subjected, remain as they were given fully in last year's Report, to which it is sufficient to refer. In regard to the Reports of the several Deans of Residences, I have the honour to annex those from the Rev. Mr. Webster, Dean of the Established Church, that from the Rev. Dr. Magill, Presbyterian Dean, and that from the Rev. Dr. Macafee, Wesleyan Dean, forming Appendix K 3.

In regard to the relative proportions of the several religious denominations among the Students, I beg leave to report, that of the 125 Matriculated, and thirty-two Non-Matriculated Students who were on the books of the College in last Session, 1857–58, there were—

	Matriculated.	Non-Matriculated.	Total.	
Roman Catholics,	56	15	71, or	45·3 per cent.
Established Church,	54	15	69, or	44·0 ,,
Presbyterians,	6	1	7, or	4·4 ,,
Wesleyans,	6	—	6, or	3·7 ,,
Independents,	1	—	1, or	·7 ,,
Other Dissenters,	2	1	3, or	1·9 ,,
	125	32	157	15·7

Proportions practically the same as in last Session. The slight increase in the proportion of Roman Catholics being within the limits of those casual fluctuations which always occur in such cases.

TRIENNIAL VISITATION OF THE COLLEGE.

The Triennial Visitation of the College was held on March 18, 1857. No business of special importance occurred, and in Appendix L will be found the Official Report of the proceedings which took place.

(Signed)

ROBERT KANE,

President.

Queen's College, *Cork*,
December 15, 1858.

APPENDIX.

APPENDIX A.

APPENDIX A.

General Regulations of College, &c.

GENERAL REGULATIONS of COLLEGE.—LIST of OFFICERS.—PROGRAMME of COURSES for MATRICULATION and SCHOLARSHIPS in the several FACULTIES.—ARRANGEMENTS of HOURS of LECTURE.—FEES, &c.

QUEEN'S UNIVERSITY IN IRELAND—QUEEN'S COLLEGE, CORK.

Faculties of Arts, Medicine, and Law.—Session 1857–58.

President—Sir Robert Kane, F.R.S., M.R.I.A.

Vice-President—John Ryall, LL.D.

Professors.

The Greek Language,	John Ryall, LL.D.
The Latin Language,	Bunnell Lewis, A.M.
History & Eng. Literature,	Rev. Chas. F. Darley, A.M.*
Modern Languages,	Raymd. de Vericour, D. ès. L.
Celtic Languages,	Owen Connellan, esq.
Logic and Metaphysics,	George Sidney Read, A.M.
Mathematics,	George Boole, LL.D.
Natural Philosophy,	J. England, A.M.
Chemistry,	John Blyth, M.D.
Natural History,	W. Smith, F.L.S.†
Geology and Mineralogy,	Robt. Harkness, F.R.S.L. and E., F.G.S.
Engineering,	Alexander Jack, A.M.
Agriculture,	Edmund Murphy, A.B.
Anatomy and Physiology,	J. H. Corbett, M.D., L.R.C.S.I.
Practice of Medicine,	Denis C. O'Connor, A.B., M.D.
Practice of Surgery,	Denis B. Bullen, M.D.
Materia Medica,	Alexander Fleming, M.D.
Midwifery,	Joshua A. Harvey, A.B., M.B.
English Law,	Michael Barry, M.R.I.A.
Jurisp. & Political Economy,	Richard Horner Mills, A.M.

Officers.

Curator of the Museum,	R. Harkness, F.G.S., F.R.S.E.&L.
Registrar,	Robert John Kenny, esq.
Bursar,	Edward M. Fitzgerald, esq.
Librarian,	Matthias O'Keeffe, A.M.

The College Session, 1857–58.

The *First Term* will commence on the 20th of October, 1857, and end on the 19th of December.

The *Second Term* will commence on the 4th of January, 1858, and end on the 27th of March.

The *Third Term* will commence on the 12th of April, 1858, and end with the Session, on the 12th of June.

SUBJECTS OF THE MATRICULATION EXAMINATIONS.

For the Faculties of Arts, Medicine, and Law.

English:

Grammar.

Greek:

Xenophon—First Book of the Anabasis; Grammar.

Latin:

Virgil—First Book of the Æneid.

Latin Prose—Re-translation from English into Latin of short sentences from Cæsar, Gallic War, Book I.

Mathematics:

Arithmetic—Principles of Notation. Vulgar and Decimal Fractions, with the reasons of the different rules. The Rule of Proportion, with its commercial applications, including Simple Interest.

Euclid—Book I.

For the Department of Civil Engineering.

The outlines of Modern Geography; Grammar.

Mathematics—Arithmetic, Principles of Notation, Vulgar and Decimal Fractions, with the reasons of the different rules. Rule of Proportion, with its commercial applications; Extraction of the Square Root, both of whole numbers and decimals.

Algebra—Explanation of the signs and meaning of an Index, calculation of the value of Algebraic expressions, when particular values are given to the letters which they involve.

Euclid—Books I., II., III., IV., and VI., with the definitions of Book V.

For the Department of Agriculture.

The English Language:

Grammar and Composition.

Mathematics:

First Four Rules of Arithmetic. Proportion. Vulgar and Decimal Fractions. Extraction of the Square Root.

Modern Geography.

MATRICULATED STUDENTS.

Persons intending to become *Matriculated* Students of the College, in any of the Faculties or Departments of Faculty, are required to pass the Matriculation Examination, whereby they are declared competent to pursue the course of study prescribed to Students in that Faculty or Department of Faculty, and, on completing this course, are entitled to become Candidates for the Degrees or Diplomas granted by the Queen's University in Ireland.

The Examinations for the MATRICULATION *of Students in the several Faculties and Departments of Faculties will commence at Ten o'clock, on Tuesday, the 20th of October,* 1857.

Candidates for Matriculation are required to forward their names to the Registrar of the College, and to state the Faculty or Department of Faculty for which they propose to Matriculate, at least *three days* before the commencement of the Matriculation Examinations.

Each Candidate, before being admitted to the Matriculation Examination, is required to pay to the Bursar of the College, the *Matriculation and College Fees* for the year, amounting together to 10*s.* for each Faculty or Department of Faculty. These fees will be returned to such Candidates as may fail in passing the Matriculation Examination.

After passing the Matriculation Examination, and before joining the several classes, each Student of the Literary and Science Divisions of the Faculty of Arts is required to pay to the Bursar of the College the sum of £4 15*s.*, being a *moiety* of the *Class Fees* for the Session. The remaining moiety will be required on or before the 20th of December, 1857.

Students of the Faculties of Medicine and Law, and of the Departments of Engineering and Agriculture in the Faculty of Arts, are required to pay on Matriculation the *whole* of the Fees of the Classes for which they enter. See Table of Class Fees, page 15.

Junior Scholars are exempt from the payment of more than *one* moiety of the *Class Fees* for the Session.

Matriculated Students are required to wear an academic dress.

* Since resigned from ill-health, and succeeded by William Rushton, A.M.

† Since dead, and succeeded by Joseph Reay Green, Esq.

In May and June are held General Examinations in the subjects lectured upon during the Session; and a sum of One Hundred Pounds is awarded in Prizes to the most distinguished Students.

Students who have pursued part of their studies in any one of the Queen's Colleges, or in any University capable of granting Degrees in the several Faculties of Arts, Law, and Medicine, are permitted, on passing the prescribed Examinations, to take corresponding rank in this College, and also to compete for Scholarships of the corresponding year; provided they shall not hold at the same time a Scholarship or other office of emolument in any University, or College of a University.

Non-Matriculated Students.

Gentlemen who do not propose, or are not prepared to Matriculate, but who wish to avail themselves in other respects of the advantages offered by the College, are permitted to attend the Professors' Lectures, without passing any of the Examinations, on paying to the Bursar the regulated College and Class Fees, amounting generally to £2 5*s.* for each course; but they cannot become Candidates for Scholarships or Prizes, or enjoy the other privileges of Matriculated Students. They are, however, entitled to the use of the Library, on subscribing the Library Regulations, and paying a fee of 15*s.* for each Session; and the Professors are authorized to recommend to the Council to grant Certificates of Honor to the most distinguished of them in their respective Classes.

East India Civil Service.

The attention of parents and guardians is directed to the new arrangements for the East India Civil Service, according to which Writerships are open to competition at Examinations prescribed by the Board of Control. The courses of Lectures in the Queen's College Cork, are well adapted to prepare Candidates for this Examination, which includes the following branches of knowledge, their relative importance being indicated by the annexed scale of marks.

English Language and Literature:

Composition,	500
English Literature and History, including that of the Laws and Constitution,	1,000
	1,500
Language, Literature, and History of Greece,	750
,, ,, ,, Rome,	750
,, ,, ,, France,	375
,, ,, ,, Germany,	375
,, ,, ,, Italy,	375
Mathematics, pure and mixed,	1,250
Natural Science—that is, Chemistry, Electricity, and Magnetism, Natural History, Geology, and Mineralogy,	500
Moral Sciences—that is, Logic, Mental, Moral, and Political Philosophy,	500
Sanscrit Language and Literature,	375
Arabic Language and Literature,	375
	6,875

Library and Museum.

The Library and Museum are open, under certain regulations, to all the Students.

Faculty of Arts.

Lectures.

The Lectures of the several Professors in this Faculty will commence on Monday, the 26th of October, 1857, except those on the "English Language" and on "Logic," which will not be delivered till the commencement of the Second Term.

Degrees of Arts.

Students intending to take the degree of A.B. in the Queen's University, must, on entering the College, pass a Matriculation Examination, for which see page 8.

The Undergraduate Course for the degree of A.B. occupies three Sessions, at the end of which Students are admitted to Examination for the degree of A.B. from the Queen's University in Ireland, provided they have attended the College lectures for at least two full terms in each Session, have passed the prescribed College examinations, and are recommended by the President of the College for promotion to the degree.

Course of Study for the Degree of A.B.

			Page
FIRST YEAR.			
The Greek Language,	Three Terms,	See Appendix,	16
The Latin Language,	Three Terms,	,,	16
The English Language,	One Term,	,,	16
The Modern Languages,	Three Terms,	,,	16
Mathematics,	Three Terms,	,,	16
SECOND YEAR.			
Logic,	One Term,	,,	17
Chemistry,	Three Terms,	,,	16
Principles of Zoology and Botany,	Three Terms,	,,	17
The Higher Mathematics; Or—The Greek and Latin Languages,	Three Terms,	,,	16 / 17
THIRD YEAR.			
Natural Philosophy,	Three Terms,	,,	17
History & Eng. Literature,	Two Terms,	,,	16
Physical Geography,	One Term,	,,	18
Metaphysics,	Two Terms,	,,	17
Or—Jurisprudence and Political Economy,	each One Term,	,,	17

Course of Study for the Degree of A.M.

A Candidate may proceed to obtain his Master's Degree by examination in any one of the four following courses of study, viz.:—

1.—Classics, which shall be considered as including—

The Greek and Latin Classic Authors; Prose Composition in Greek, Latin, and English; a Modern Foreign Language.

2.—English Philology and Criticism: Logic: Metaphysics, or (in place of Metaphysics at the election of the Candidate) Political Economy and Jurisprudence.

3.—Mathematical and Physical Science, which shall be considered as including the following subjects:—

Algebra, including the Theory of Equations.
Analytical Geometry. Trigonometry, Plane and Spherical.
The Differential and Integral Calculus. Differential Equations. Theory of Probabilities.
Statics and Dynamics. Hydrostatics. Hydraulics and Pneumatics. Optics. Heat. Electricity and Magnetism. Plane and Physical Astronomy.

4.—Experimental and Natural Sciences, which shall be considered as including the following subjects:—

Experimental Physics.
Laws of Chemical Constitution and Combination.
General Properties and Preparation of Organic and Inorganic Bodies.
Structure, Functions, and Classification of Animals and Vegetables.
Zoological and Botanical Geography.
Elements of General Geology and Palæontology, of Physical Geography and of Crystallography, and Mineralogy.

Every Candidate must be a Bachelor of Arts of the Queen's University, and must have attended in one of the Queen's Colleges, for at least Two Terms, subsequent to his having received the Bachelor's Degree, a course of lectures on some one of the subjects of the course of study which he may have selected to proceed in for his degree.

Diploma in Engineering.

Engineering Students are required to pass a Matriculation Examination, (for which see page 8), and pursue the following courses of study, during at least two years:

Appendix A.

General Regulations of College, &c.

FIRST COURSE.

Mathematics,	Three Terms.
Chemistry,	Do.
Mineralogy, Geology, & Physical Geography,	Do.
Drawing,	Do.
Descrip. Geometry, Surveying, & Mapping,*	Do.

SECOND COURSE.

Mathematics,	Three Terms.
Natural Philosophy,	Do.
Motive Powers, Construction, and Theory of Machines,	Do.
Drawing,	Do.
Civil Engineering, including the Principles of Architecture, and Engineering Finance,	Do.

Students who shall have completed the above course of study, and been engaged during at least two years (of which not more than one shall be contemporaneous with their College Course) in acquiring a practical knowledge of Engineering in all its branches, and of the Construction of Buildings used for public and domestic purposes, under the direction of an engineer recognised by the College Council, will be admitted to examination for the diploma of Civil Engineering.

Bachelors of Arts of the Queen's University are allowed to take rank as Second Year's Students of Engineering, and to proceed for the diploma as such, provided they shall, in the subsequent period of their engineering studies, have attended the full courses of instruction in Drawing, Mapping, Surveying, and all other subjects, collegiate and practical, now required by the Ordinances, but not previously attended or included in their A.B. Course.

Diploma in Agriculture.

Candidates for this Diploma are required to pass a Matriculation Examination (for which see page 8), and afterwards pursue the following

Course of Study for the Diploma in Agriculture.

FIRST YEAR.

Natural Philosophy,	Three Terms.
Chemistry,	Do.
Principles of Zoology and Botany,	Do.
Theory of Agriculture,	Do.

SECOND YEAR.

Mineralogy, Geology, and Physical Geography,	Do.
Surveying and Mapping,* and Farm Architecture,	Do.
History and Diseases of Farm Animals,	Do.
Practice of Agriculture, including Farm Finance and Accounts,	Do.

Students who shall have passed through the above course, and also attended, during twelve months, the practical working of a farm, under the direction of an agriculturist approved by the College Council, will be admitted to examination for the Diploma in Agriculture.

Students intending to qualify themselves for the management of Estates, or of extensive Farms, are recommended to attend also Sessional Courses of Instruction in:

1st. The Law of Landlord and Tenant, and the Elements of Conveyancing.
2nd. Elements of Political Economy and Statistics, as applied to Agriculture and Farm Finance.

Faculty of Medicine.

Dean—Joshua R. Harvey, A.B., M.D.

Lectures, &c.

The Medical Session will be opened on Friday, 30th October, 1857, at Two o'clock, by an address from the Dean, and the Courses of Lectures will commence as under.

* Note I.—The instructions in Mapping and Surveying required in the courses for diplomas in Engineering and Agriculture, include regular Practical Exercises and Observations in the Field, with the use of instruments, continued throughout the Session.

II.—The drawing required by the above curriculum is understood to include free-hand drawing, as well as special mechanical drawing.

Anatomy and Physiology—Monday, 2nd November, at One o'clock, to be continued daily, except on Saturdays, at the same hour.

Practice of Medicine—Tuesday, 3rd November, at Three o'clock, to be continued on Tuesdays, Thursdays, and Saturdays, at the same hour.

Practice of Surgery—Monday, 2nd November, at Three o'clock, to be continued on Mondays, Wednesdays, and Fridays, at the same hour.

Materia Medica—Tuesday, 3rd November, at Two o'clock, to be continued on Tuesdays, Thursdays, and Fridays, at the same hour.

Midwifery—Monday, 2nd November, at Four o'clock, to be continued on Mondays, Wednesdays, and Fridays, at the same hour.

The Course of Practical Anatomy will be conducted by the Professor of Anatomy and Physiology, assisted by Dr. Shinkwin, Demonstrator.

The Department will be opened for Dissections on the 15th October.

The Anatomical Demonstrations will commence on 4th November, and be continued daily at Twelve o'clock, except Saturdays.

Chemistry—Monday, Wednesday, and Friday.

Practical Chemistry—Monday, Tuesday, Wednesday, and Thursday.

Natural History and Botany—Monday, Wednesday, and Friday.

Natural Philosophy—Tuesdays, Thursdays, and Saturdays.

Medical Jurisprudence—Tuesday, Thursday, and Friday.

Modern Languages—Monday, Wednesday, and Friday.

Degrees in Medicine.

Ordinance of the Senate of the Queen's University in Ireland, regarding the Qualification and Examination for the Degree of M.D.

1st.—Every Candidate for the Degree of M.D. shall produce a Certificate from the Council of one of the Queen's Colleges, that he has passed a full examination in the subjects of study prescribed in the Course of Matriculation for Arts, and has been admitted a Matriculated Student of the College in the Faculty of Medicine.

2nd.—The Curriculum shall extend over a period of at least four years, and shall be divided into two periods of at least two years each.

3rd.—The first period shall comprise attendance on the following Courses of Medical Lectures:—

Chemistry—Six Months, at least Three Lectures each Week.
Botany and Zoology—Six Months, Three Lectures each Week, with Herborizations for practical study.
Anatomy and Physiology—Six Months, Five Lectures each Week.
Practical Anatomy—Six Months.
Materia Medica and Pharmacy—Six Months, Three Lectures each Week.

4th.—The second period shall comprise attendance on the following Courses of Medical Lectures.

Anatomy and Physiology—Six Months, Five Lectures each Week.
Practical Anatomy—Six Months.
Theory and Practice of Surgery—Six Months, Three Lectures each Week.
Midwifery and Diseases of Women and Children—Six Months, Three Lectures each Week.
Theory and Practice of Medicine—Six Months, Three Lectures each Week.
Medical Jurisprudence—Three Months, Three Lectures each Week.*

* Note.—The 25th November in each year, is the last day of entering for the Six Months' Courses of Lectures in the above Curriculum. All the Lectures are recognised by the Queen's University in Ireland, by the Universities of London, Glasgow, Aberdeen, and St. Andrew's, the Colleges of Surgeons of Dublin, Edinburgh, and London, by the Apothecaries' Companies, by the Army, Navy, and East India Medical Boards, &c., &c.

5th.—In addition to the above Courses of Lectures, Candidates shall have attended during the first period of the above Curriculum—

Practical Chemistry, in a recognised Laboratory—Three Months.
Medico-Chirurgical Hospital, recognised by the Senate, containing at least sixty beds, together with the Clinical Lectures therein delivered, at least Two each Week—Six Months.

6th.—And during the second period—

Practical Midwifery, at a recognised Midwifery Hospital, with the Clinical Lectures therein delivered for a period of Three Months, in an Hospital containing not less than fifteen beds.
Practical Pharmacy—Three Months.
Medico-Chirurgical Hospital, recognised by the Senate, containing at least sixty beds, together with the Clinical Lectures therein delivered—Eighteen Months.

7th.—Candidates before being admitted to the Degree of M.D. shall pass two Examinations, the first Examination comprising the subjects of the first period of the Curriculum; the second comprehending subjects of the second period of study. It shall be competent for Students to present themselves for their first Examination at the termination of the first period of the Curriculum, or at any after period to be fixed by the Senate, previous to their undergoing the second Examination.

8th.—By the Charter of the Queen's University, *Candidates are required to have attended at least* ONE-THIRD *of the Courses of Medical Lectures in some one of the Queen's Colleges.* For the remainder of the Courses of Medical Lectures, authenticated Certificates will be received from the Professors or Lecturers in Universities, Colleges, or Schools recognised by the Senate of the Queen's University in Ireland.

9th.—Candidates will also be required to have attended *in some one of the Queen's Colleges,* Lectures on one Modern Language for Six Months, and Lectures on Natural Philosophy for Six Months.

10th.—The Examinations will be conducted principally by printed papers, to which written answers shall be given, but the Examiners shall also be at liberty to add such *vivâ voce* Examination on the subjects of the written paper, and to call for such demonstrations and experiments as they may deem necessary.

11th.—The above regulations will be binding on all Students commencing their Medical Studies on or after the 1st October, 1852; but Students already engaged in their Medical Studies, are at liberty either to complete their Courses according to the Ordinance of 30th June, 1850, or according to the present Ordinance.

Faculty of Law.

Lectures.

The complete Course for each class consists of Twenty-four Lectures, by the Professor of English Law, in each Collegiate Session, which Lectures are delivered in the interval between the close of the Michaelmas Law Term and the Christmas recess, in the Second Collegiate Term, commencing in the month of February, and in the interval between Easter and Trinity Law Terms. And of Twenty-four Lectures in each Course of the first two years, and Twelve in that of the Fourth year, by the Professor of Jurisprudence, which are delivered in the months of December, February, and March.

Degrees in Law.

Candidates for the Diploma of Elementary Law must have passed a Matriculation Examination* (see page 8), and pursued the following

Course of Study for the Diploma of Elementary Law.

First Session—Law of Property and Principles of Conveyancing, Jurisprudence.
Second Session—Equity and Bankruptcy, Civil Law.
Third Session—Common and Criminal Law.

Candidates for the Degree of LL.B. will be admitted to Examination for that Degree from the Queen's University in Ireland provided they shall have proceeded to the Degree of A.B., and shall have attended the Lectures and passed the Examinations prescribed for the Elementary Course, and shall also have pursued the following

APPENDIX A. General Regulations of College, &c.

Additional Course of Study for the Degree of LL.B.

Fourth Session—A more extended Course of Study in the subjects appointed for the Diploma—The Law of Evidence and Pleading in the Courts of Common Law and Equity—Medical Jurisprudence—Constitutional, Colonial, and International Law.

Students who have obtained the Degree of LL.B. will, at the expiration of three years after they have obtained the Degree, be admitted to the Examination for the Degree of LL.D.

Scholarships.

The Examinations for Scholarships will commence on Tuesday, the 20th of October.† The College Council are empowered to confer at these Examinations, Ten Senior Scholarships of the value of £40 each, and Forty-five Junior Scholarships, viz. :—Fifteen in Literature, and Fifteen in Science, of the value of £24 each; Six in Medicine, Three in Law, and Two in Civil Engineering, of the value of £20 each; and Four in Agriculture, of the value of £15 each—and if competent Candidates present themselves, these Scholarships will be awarded to the most deserving. The Scholarships are tenable for one year only; but the Scholars of each year are, at its expiration, eligible to become Candidates for the Scholarships of the succeeding year. A Scholarship, however, of the same year in the same Faculty, cannot be held twice by the same Student.

The Scholarships of the first year are open to all Students of the respective Faculties who have passed the Matriculation Examination. Those of the second, third, and fourth years are open to all Students who have passed the Examinations and attended the Lectures prescribed in the preceding part of their Course of Study.

If any Student be placed, at the Examination for Junior Literary and Science Scholarships, first on both the lists of Candidates, he will be entitled to a Scholarship of each Division; but in no other case will the same Student be permitted to hold two Scholarships.

No Student is entitled to become a Candidate for a Scholarship, until he shall have paid the COLLEGE AND CLASS *Fees for the current Session.*

The Scholarship endowment is paid by Quarterly Instalments, and its tenure is dependent on the Scholar's performance (so far as required by the Council) of the duties prescribed by the Statutes. These duties are to take charge of the Class-Rolls, to register the attendance of the Students, to assist the Professor, &c.

If the Scholar be not obedient to the orders of the Council, be removed from the College, or, by non-attendance on Lectures, fail to keep the terms required for promotion, he forfeits his Scholarship.

The Scholar in the Faculty of Medicine must attend during the year of his appointment the classes recom-

* NOTE.—It will be sufficient for such Candidates to have passed this Examination at *any* time previous to applying for the Diploma. By the Act of Parliament, 14 and 15 Vic. cap. 88, it is provided, that every person who, as a Matriculated or Non-Matriculated Student, shall have attended the prescribed Lectures, and passed the prescribed Examinations of the Professors of the Faculty of Law for two Collegiate years, and who shall have duly served as an apprentice or clerk by contract in writing, duly stamped at or before the signing thereof, or within six months after, for the term of four years, shall, at any time after the expiration of five years from the commencement of such attendance on Lectures, or of such a period of service, which ever shall first happen, be qualified to be admitted as an Attorney or Solicitor as fully and effectually as any person having been bound, and having served five years is now qualified to be admitted. See also the same Act for the privileges extending to Graduates of the Queen's University, respecting admission to the profession of Attorney or Solicitor.

† See Programme of Scholarship Examinations, page 15.

APPENDIX A.

General Regulations of College, &c.

mended for his year of study in the order of the following Curriculum:—

FIRST YEAR.

Anatomy and Physiology.
Chemistry.
French or German.
Natural Philosophy.
Zoology and Botany.

SECOND YEAR.

Anatomy and Physiology.
Materia Medica.
Practical Anatomy.
Practical Chemistry.

THIRD YEAR.

Surgery.
Midwifery.
Practical Anatomy.
Clinical Surgery.

FOURTH YEAR.

Practice of Medicine.
Medical Jurisprudence.
Clinical Medicine.

JUNIOR SCHOLARSHIPS.

Subjects of Examination for Literary Scholarships of the First Year.

The Greek Language:

Homer—The Iliad, Books I., II., III., IV., V., VI.
Euripides—The Medea.
Herodotus—The Second Book.
Xenophon—The Anabasis, Books I., II., III.
Lucian—Walker's Selections.
Greek Prose—Re-translation of short sentences from English into Greek.

The Latin Language:

Virgil—First Six Books of the Æneid, the Georgics.
Horace—First Two Books of the Odes, the Satires, and the Epistles, Books I., II.
Cicero—De Senectute and De Amicitiâ.
Sallust—Conspiracy of Catiline and Jugurthine War.
Cæsar—The Gallic War, Books V., VI.
Latin Prose—Re-translation from English into Latin, of portions of Cicero.
N.B.—The Examination in Greek and Latin will be conducted partly *vivâ voce*, and partly by printed questions.

The English Language:

Original Essays on subjects proposed by the Examiner.

History and Geography:

Grecian History to the Death of Alexander the Great.
Roman History to the Accession of Augustus.
Outlines of Ancient and Modern Geography.

Subjects of Examination for Literary Scholarships of the Second Year.

The Greek Language:

Homer—Iliad, Books XX. to XXIV. inclusive.
Æschylus—Prometheus Vinctus.
Herodotus—Book I.
Composition in prose and verse.

The Latin Language:

Virgil—Eclogues and Æneid.
Horace—Odes, Satires & Epistles
Terence—Phormio.
Cicero—Tusculan Disputations. De Oratore.
Juvenal—Satires, I. III. VIII. XIII., XIV.
Sallust—Jugurthine War.
Livy—Book IV.
Tacitus—Histories, Book I.
Composition in prose and verse.

The English Language:

Spalding's History of English Literature. Part I. and II.

The French Language:

Bossuet—Oraisons Funèbres.
Lafontaine—Fables.
Mignet—Histoire de la Revolution Française.
Barthe—Histoire de la Littérature Française.

Subjects of Examination for Literary Scholarships of the Third Year.

The Greek Language:

Homer—Iliad, Books XX. to XXIV.
Odyssey, Books XII. to XVIII. inclusive.
Æschylus—Prometheus Vinctus.
Sophocles—Œdipus Coloneus.
Euripides—Medea, Alcestis, Orestes.
Plato—Apology and Crito.
Thucydides—Book I.
Herodotus—Book I.
Composition in prose and verse.

The Latin Language:

Virgil—Eclogues, Georgics, and Æneid.
Horace—Odes, Satires, and Epistles.
Cicero—Tusculan Disputations.
Actiones Verrinæ.
De Oratore.
Terence—Adelphi and Phormio.
Juvenal—Satires, I., III., VIII., XIII., XIV.
Livy—Book IV.
Tacitus—Annals, Book I.
Histories, Book I.
Composition in prose and verse.

The English Language:

Spalding's History of English Literature. Part Third.
Hallam's Middle Ages. Chapter I. and II.

The French Language:

Montesquieu—Considérations sur la grandeur et la décadence des Romains.

Subjects of Examination for Science Scholarships of the First Year.

Arithmetic:
Mensuration of rectilineal figures and of the circle.
Algebra:

The Solution of Simple and Quadratic Equations with one or more unknown qualities. Easy questions in the application of Algebra to Geometry. Arithmetical and Geometrical Progressions. The nature of Logarithms.

Euclid:

Books I., II., III., and IV., with deductions.

Trigonometry:

Definitions of the Sine, Tangent, &c., of an angle. The easier analytical formulæ. The Solution of Plane Triangles, with demonstrations. Nature and Use of the Tables.

Subjects of Examination for Science Scholarships of the Second Year.

The Higher Arithmetic:
Mensuration, with Formulæ.
Algebra:

The Solution of Equations with one or more unknown quantities. Elimination. Theory and use of Logarithms. Theory of Equations. Binomial and Exponential Theorems. Compound Interest and Annuities.

Geometry:

Euclid. Books I., II., III., IV., VI., with deductions. Application of Algebra to Geometry. Conic Sections.

Trigonometry:

The Solution of Plane Triangles, with demonstrations of the formulæ. Theorems relating to single arcs. Theorems relating to the sums and differences of arcs. Application to heights and distances. Elements of Spherical Trigonometry.

Subjects of Examination for Science Scholarships of the Third Year.

Logic:

Aldrich's Logic. The Theory of Hypothetical Syllogisms and of Induction, and the New Analytic of Logical Forms, as contained in the works of Mill, Whately, Thompson, and Baynes.

Mathematics:

Algebra—Theory of Equations and Methods of Approximation. Elimination. Summation of series. Binomial and Exponential Theorems. Scales of Notation, &c.
Trigonometry—Plane and Spherical, with Astronomical applications.
Analytical Geometry.
Differential Calculus, involving demonstrations of the rules for differentiating Algebraic, Circular, and Exponential Functions, founded upon a clear statement of the nature of Limits and Definition of a Differential co-efficient. Taylor's and Maclaurin's Theorems. Maxima and Minima. Criteria of the same, with proofs. Equations of Tangent, Normal, Evolute, &c.
Integral Calculus, including more particularly Rational Fractions, Binomial Differentials, Areas of Curves, Rectification of Curves, Cubature of Solids of Revolution.

Chemistry:

Laws of Combination and Affinity. Constitution and Properties of Inorganic and Organic Bodies treated during the course. Organic Analysis. Principal Theories of Organic Chemistry.

Zoology and Botany:

Animal and Vegetable Physiology and Organography.

Subjects of Examination for Engineering Scholarships of the First Year.

Arithmetic:
Mensuration:
Algebra:
Euclid:
Trigonometry:
} As for Science Scholarships of the First Year.

APPENDIX A.

General Regulations of College, &c.

Subjects of Examination for Engineering Scholarships of the Second Year.

Mathematics:

The same as for Science Scholarships of the Second Year.

Mineralogy, Geology, and Physical Geography.

Form, structure, physical and chemical characters of Minerals. Description of the more important simple Minerals. General structure of the Earth; its form, density, and internal temperature. Causes of geological phenomena. Classification of Rocks; Veins, Volcanos, Earthquakes, Elevation of Land and Mountain Chains. Application of Mineralogy and Geology to Engineering —as Mines, Building Materials, &c.

Application of Physics, Geology, and Natural History, to the general condition of the Globe.

Chemistry:

Laws of Combination and Affinity—Preparation and Properties of the Chief Inorganic Substances—Metallurgic Operations—Mortars and Cements.

Surveying and Engineering:

Descriptive Geometry and Projection—Surveying, Levelling, Plotting Plans and Sections—Uses of Instruments in Engineering Field Work.

N.B.—Quickness and accuracy in drawing, readiness and facility in practical operations, will be required from the Candidates.

Subjects of Examination for Agricultural Scholarships of the First Year.

The English Language:

Grammar and Composition.

Mathematics:

Vulgar and Decimal Fractions, Involution and Evolution, Proportion and Interest, Mensuration.

Geography:

Outlines of Modern Geography.

Book-keeping.

Subjects of Examination for Agricultural Scholarships of the Second Year.

Chemistry:

Laws of Combination and Affinity—Chemical History of the Constituents of Soils, Plants and Manures, Chemical Problems of the Nutrition of Plants and Animals.

Natural Philosophy:

Principles of Statics and Dynamics—Hydraulics and Pneumatics—Applications to the Theory of Farm Operations, Buildings and Instruments.

Zoology and Botany:

Principles of Animal and Vegetable Physiology.

Theory of Agriculture:

Principles of Nutrition, and Growth of Cultivated Plants—Classification and Properties of Soils and Manures—Principles of the Rotation of Crops—Principles of the Rearing and General Management of Farm Stock.

Subjects of Examination for Medical Scholarships of the First Year.

The Scholarships of the First year in the Faculty of Medicine will be awarded thus:—One to the Candidate who shall have most distinguished himself at the Examination in the course prescribed for Science Scholarships of the First year in Arts, and one to the Candidate who shall have most distinguished himself at the Examination in the course prescribed for Literary Scholarships of the First year in Arts. Candidates for these Scholarships shall have previously declared themselves, and have Matriculated as Medical Students. It is left to their option for which of them they will compete.

Subjects of Examination for Medical Scholarships of the Second Year.

Anatomy and Physiology.	General Physics.
Chemistry.	Zoology and Botany.

The French Language.

Subjects of Examination for Medical Scholarships of the Third Year.

Anatomy and Physiology.	Materia Medica.
Practical Anatomy.	Practical Chemistry.

LAW SCHOLARSHIPS.

Examination by the Professor of Jurisprudence.

First Year:

Reddie's Inquiries into the Science of Law.
Lord Bacon's Tract on Universal Justice. by D. C. Heron.
Adam Smith's Wealth of Nations—Book III.

Second Year:

Gardiner's Survey of the Roman Law, with the Lectures of the Professor, and subjects prescribed for examination in the first year.

Third Year:

The Institutes of Justinian—Bowyer's Commentaries on Modern Civil Law, with the Lectures of the Professor, and subjects prescribed for examination in the first and second year.

Fourth Year:

Hallam's Constitution—History.

Examination by the Professor of English Law.

First Year:

Williams—Principles of the Law of Real Property.

Second Year:

The Lectures of the Professor for the preceding year.
Smith—Manual of Equity Jurisprudence.
Williams—Principles of the Law of Personal Property.
Smith—Compendium of Mercantile Law.

Third Year:

The Lectures of the Professor for the preceding years.
Smith—Leading cases on branches of the Law.
Storey—Equity Jurisprudence.

The Lectures to the Law Students are delivered in the months of December, February, and March; Twenty-four lectures in each course of the first two years, and twelve in that of the fourth year, by the Professor of Jurisprudence.

SENIOR SCHOLARSHIPS.

The Seven Senior Scholarships appropriated to the Faculty of Arts, will be conferred, by examination, on the most distinguished students who shall have proceeded to the Degree of A.B. in the Queen's University, for proficiency in special departments of study, viz.:—One Scholarship in the Greek and Latin Languages, and Ancient History; one in Modern Languages, and Modern History; one in Mathematics; one in Natural Philosophy; one in Metaphysics and Economical Science; one in Chemistry; and one in Natural History.

The Two Senior Scholarships, appropriated to the Faculty of Medicine, will be awarded by examination to the most distinguished students who shall have completed in some one of the Queen's Colleges, the course of Study of the first, second, and third years prescribed to candidates for the Degree of M.D., in the Queen's University for proficiency in special departments of study, viz.:—one Scholarship in Anatomy and Physiology, and one in Therapeutics and Pathology.

The Senior Law Scholarship will be awarded to the most distinguished student, who shall have proceeded in the course of Arts to the degree of A.B., and who shall have completed the course of legal study prescribed to Candidates for the Degree of LL.B.

Subjects of Examination for the Senior Scholarships in the Greek and Latin Languages, and Ancient History.

The Greek Language:

Plato—Apologia and Crito.
Thucydides—Book I.
Herodotus—Book I.
Aristotle—Selections from the Ethics.
Plato—Gorgias.
Aristophanes—The Frogs.
Sophocles—Œdipus Coloneus.
Homer—Iliad, Books XX. to XXIV. inclusive.
Odyssey, Books XII. to XVIII. inclusive.
Euripides—Medea, Alcestis, and Orestes.
Composition in Attic Prose and Iambic Verse.

APPENDIX A.

General Regulations of College, &c.

The Latin Language:

Virgil. Horace.
Lucretius—Books V. VI.
Juvenal—Satires, I., III., X., XIV.
Persius—
Plautus—Captivei and Trinummus.
Terence—Phormio and Andria.
Cicero—De Oratore.
Tusculan Disputations.
Ad Atticum, Books III. and IV.
Actiones Verrinæ.
Livy—Books XXI. & XXIII.
Tacitus—The Histories.

Composition in Prose and Verse.

For Senior Scholarship in Modern Languages and History.

The French Language:

Corneille—Le Cid; Cinna.
Mignet—Histoire de la Revolution Française.
Histoire de la Littérature Française par Barthe ou Nisard.

The German Language:

National Literature Von A. F. Vilmar.
Schiller's Maria Stuart.
Göethe's Ephigenie.
History—Hallam's Middle Ages.

The Italian Language:

Tasso—Gerusalemme Liberata—First Five Cantos.
Dante's Inferno—Italian Literature, published by Messrs. Chambers.

For the Senior Scholarships in Mathematics.

The subjects of previous Examinations (for which see page 12), with the following additions, viz.:—

Analytical Geometry of Three Dimensions.
Linear Differential Equations with constant co-efficients.
The easier forms of Non-Linear Equations.
Definite Integrals dependent upon the function Γ
Newton's Principia—First three sections.
Analytical investigation of the Problem of two Bodies.

For the Senior Scholarship in Natural Philosophy.

Duhamel—Mécanique, Volume I.
Brinkley—Elements of Astronomy, including the appendix.
Lloyd—Treatise on Light and Vision.

For the Senior Scholarship in Metaphysics and Economical Science.

The subjects discussed in the Lectures of the Professors, with the following additions:—

Metaphysics:

Herschel—Discourse on the Study of Natural Philosophy. Part II., chap. 6 and 7.
Mill—System of Logic, Book III. to the end of Volume I.

Jurisprudence and Political Economy:

Principles of Political Economy, by John Stuart Mill.

For the Senior Scholarship in Chemistry.

Stœchiometry, and the general doctrines of Theoretical Chemistry:

The Laws of Combination—Atomic Theory—Relation between the Atomic Weight and Volume of Bodies.
Relation between the external form and Chemical constitution of Bodies—Isomorphism, Dimorphism, Amorphism, Allotropy, Isomerism, Polymerism, Metamerism.
Atomic constitution of Compounds—Theories of Acids and Salts.
Determination of the equivalents of Bodies—Stœchiometrical calculations.

Inorganic Chemistry:

Preparation and Properties of the Chief Metallic and Non-Metallic Substances and their Compounds.
Metallurgy of Iron, Zinc, Lead, Copper, Tin, Mercury, Gold, Silver.

Organic Chemistry:

Principles of Organic Analysis—Determination of the formulæ of Organic Compounds—Theories of Compound Radicals and Types—Doctrine of Substitution, Homologous Series, Conjugated Compounds.
Preparation and Properties of the Compounds of the Radicals, Cyanogen, Ferrocyanogen, Methyle, Formyle, Acetyle, Amyle.

For Senior Scholarship in Natural History.

Zoology:

Carpenter's Principles of Comparative Physiology, 4th edition, chap. 1. Owen on the Structure of the Skeleton, in Orr's Circle of the Sciences. Edwards' Manual of Zoology.

Botany:

Physiology, Organography, and Classification, as contained in Balfour's Outlines of Botany.

Physical Geography:

Hughes's Outlines of Physical Geography—Ethnology—Distribution and Characteristics of the various Races of Men.

For the Senior Scholarship in Anatomy and Physiology.

All branches of Anatomy and Physiology.
N.B.—Students will be expected to make Dissections, and give explanations of the parts dissected.

For the Senior Scholarship in Therapeutics and Pathology.

The general Actions of Drugs in health and disease, with their special applications and mode of administration.
Pathology, general and special.
Morbid Anatomy.

For the Senior Scholarship in Law.

The Lectures of the Professors for the preceding years.
Sugden—Law of Vendors and Purchasers.
Furlong—Law of Landlord and Tenant.
Taylor—Treatise on the Law of Evidence.
Stephen—Treatise on the Principles of Pleading.

TABLE OF HOURS OF LECTURE.

NAME OF THE CLASS.	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.
Senior Greek,	9	.	10	.	9	.
Junior Greek,	10	.	9	.	10	.
Extra Greek,	.	10	.	10	.	.
Senior Latin,	10	.	9	.	10	.
Junior Latin,	9	10	10	10	.	.
Extra Latin,	.	11	.	11	.	.
English Language,	.	11	.	11	.	11
English Literature and History,	.	12	.	12	.	11
French (Faculty of Arts),	1	.	1	.	1	.
French (Faculty of Medicine),	12	.	12	.	12	.
French (Extra),	.	2	.	2	.	.
German,	2	.	2	.	2	.
Italian,	.	12	.	12	.	.
Celtic Languages,	12	.	12	.	12	.
Logic,	.	2	.	2	.	9
Metaphysics,	.	1	.	1	.	10
Political Economy and Jurisprudence,	.	11	11	11	11	.
Senior Mathematics,	1	.	1	.	1	.
Junior Mathematics,	3	.	3	3	.	.
Extra Mathematics,	.	1	.	1	.	.
Mathematical Physics,	.	1	.	1	.	1
Experimental Physics,	10	11	10	11	10	.
Engineering Physics,	12	.	12	.	12	.
Senior Mathematical Physics,	9	.	9	.	9	.
Chemistry,	11	.	11	.	11	.
Practical Chemistry,	2	3	2	3	.	.
Zoology and Botany,	3	.	3	.	3	.
History and Diseases of Farm Animals,	.	9	.	9	.	9
Physical Geography (Faculty of Arts),	10	.	.	.	10	.
Geology and Mineralogy,	1	.	1	.	1	.
Senior Engineering,	.	10	.	10	.	10
Junior Engineering,	10	.	10	.	10	.
Drawing, (10 till 2)	.	10	.	10	.	10
Senior Agriculture,	.	10	.	10	.	10
Junior Agriculture	.	1	.	1	.	1
Anatomy and Physiology,	1	1	1	1	1	.
Practical Anatomy,	12	12	12	12	12	.
Practice of Medicine,	3	.	3	.	3	.
Practice of Surgery,	.	3	.	3	.	3
Materia Medica,	.	2	.	2	2	.
Midwifery,	4	.	4	.	4	.
Medical Jurisprudence,	.	2	.	2	2	.
English Law (1st year),	.	11	11	11	11	.
English Law (2nd year),	.	3	3	3	3	.
English Law (3rd year),	.	9	9	9	9	.
English Law (4th year),	.	12	12	12	12	.
Jurisprudence,	.	1	1	1	1	.
Civil Law,	.	4	4	4	4	.
Constitutional, Colonial, and International Law,	.	10	10	10	10	.

Table of Class Fees.

	£	s.	d.
The Greek Language (Junior Class),	2	0	0
The Greek Language (Senior Class),	0	10	0
The Latin Language (Junior Class),	2	0	0
The Latin Language (Senior Class),	0	10	0
The English Language,	1	10	0
English Literature and History,	1	0	0
The Modern Languages,	2	0	0
The Celtic Languages,	2	0	0
Logic,	1	0	0
Metaphysics,	1	10	0
Political Economy and Jurisprudence (Faculty of Arts),	1	10	0
Mathematics (Junior Class),	2	0	0
Mathematics (Senior Class),	0	10	0
Natural Philosophy (Faculty of Arts),	2	10	0
Natural Philosophy (Faculty of Medicine, and Department of Agriculture),	1	10	0
Natural Philosophy (Department of Engineering),	3	0	0
Zoology and Botany, and Physical Geography (Faculty of Arts),	2	0	0
Zoology and Botany (Department of Agriculture),	1	10	0
Botany (Faculty of Medicine),	1	10	0
History and Diseases of Farm Animals,	1	10	0
Chemistry (Faculty of Arts and *Medicine),	2	0	0
Chemistry (Department of Agriculture),	1	10	0
Practical Chemistry,	3	0	0
Geology and Mineralogy (Department of Engineering),	2	0	0
Geology and Mineralogy (Department of Agriculture),	1	10	0
Surveying and Mapping (Department of Engineering),	2	0	0
Surveying and Mapping (Department of Agriculture),	1	10	0
Civil Engineering,	2	0	0
Drawing,	1	10	0
Theory of Agriculture,	1	10	0
Practice of Agriculture,	1	10	0
Anatomy and Physiology (First Course),	3	0	0
Anatomy and Physiology (Each subsequent Course),	2	0	0
Practical Anatomy,	3	0	0
*Practice of Medicine,	2	0	0
*Practice of Surgery,	2	0	0
*Materia Medica,	2	0	0
*Medical Jurisprudence,	2	0	0
*Midwifery,	2	0	0
The Law of Property, &c.,	2	0	0
Jurisprudence (Faculty of Law),	2	0	0
Equity and Bankruptcy,	2	0	0
Civil Law,	2	0	0
Common and Criminal Law,	2	0	0
Law of Evidence and Pleading,	2	0	0
Constitutional, Colonial, and International Law,	2	0	0

Table of Fees Payable by Matriculated Students.

	First Year. £ s. d.	Second Year. £ s. d.	Third Year. £ s. d.	Fourth Year. £ s. d.
Faculty of Arts.				
College Fees,	0 10 0	0 5 0	0 5 0	0 5 0
Class Fees, 1st instalment,	4 15 0	3 5 0	2 10 0	1 0 0
Class Fees, 2nd instalment,	4 15 0	3 5 0	2 10 0	1 0 0
Total,	10 0 0	6 15 0	5 5 0	2 5 0
Department of Civil Engineering.				
College Fees,	0 10 0	0 5 0	.	.
Class Fees,	9 10 0	7 0 0	.	.
Total,	10 0 0	7 5 0	.	.
Department of Agriculture.				
College Fees,	0 10 0	0 5 0	.	.
Class Fees,	6 0 0	6 0 0	.	.
Total,	6 10 0	6 5 0	.	.
Faculty of Medicine.				
College Fees,	0 10 0	0 5 0	0 5 0	0 5 0
Class Fees,	10 0 0	10 0 0	†7 0 0	†4 0 0
Total,	10 10 0	10 5 0	7 5 0	4 5 0
Faculty of Law.				
College Fees,	0 10 0	0 5 0	0 5 0	0 5 0
Class Fees,	4 0 0	4 0 0	2 0 0	4 0 0
Total,	4 10 0	4 5 0	2 5 0	4 5 0

* Each subsequent Course, £1. † The Clinical Course not included.

Fees Payable by Non-Matriculated Students.

Appendix A. General Regulations of College, &c.

For each of the Sessional Courses, except *Logic, Metaphysics, Political Economy and Jurisprudence, Anatomy and Physiology, Practical Anatomy* and *Practical Chemistry*, Non-Matriculated Students pay a College Fee of Five Shillings, and a Class Fee of Two Pounds; for each of the excepted courses, and, in the Faculty of Medicine, for each second and subsequent course, they pay, along with the College Fee of Five Shillings, the same *Class Fee* as Matriculated Students.*

Analytical Chemistry.

The Chemical Laboratory is open daily, except on Saturdays, from 10 to 4 o'clock, under the superintendence of the Professor, for Students desirous of prosecuting an extended course of Qualitative and Quantitative Analysis, and for the purpose of original investigation in connexion with the Arts, or in the higher departments of Scientific Chemistry. The fees, exclusive of the expenses of materials and apparatus, is—

	£	s.	d.
For a period of two months and a-half, five days a-week,	5	0	0
For the same period, four days a-week,	4	4	0
For the same period, three days a-week,	3	10	0
For one month, daily,	3	3	0

Programme of the Times and Subjects of the Scholarship Examinations for the Session 1857–58.

Examination Days.	From 9 to 12 o'clock, Noon.	From 2 to 5 o'clock, P.M.
20th Oct. 1857.	Zoology and Botany, Physical Geography, Pathology.	Natural Philosophy, Mineralogy & Geology, Materia Medica, Therapeutics.
21st Oct. ,,	Modern Languages, Logic, Metaphysics, Theory of Agriculture.	English Language, English Literature, History, Chemistry.
22nd Oct. ,,	Greek, Surveying, &c., Anatomy & Physiology, Political Economy, Jurisprudence, Civil Law.	Latin, Surveying, &c., Practical Anatomy, English Law.
23rd Oct. ,,	Latin.	Greek, Practical Chemistry.
24th Oct. ,,	Mathematics.	Mathematics.

APPENDIX.

Outlines of the Courses of Lectures delivered by the Professors of the Faculty of Arts.

Literary Division of the Faculty of Arts.

Dean—Bunnell Lewis, A.M.

In Greek and Latin the Classification of the Students is irrespective of their Collegiate standing; those of the First and Second years being distributed between two classes according to their proficiency. There is also in each of these Departments an Extra Class, the attendance of which is voluntary, and which consists generally of those Students who propose to become Candidates for Degree of A.M. or Classical Honors in the Queen's University, or for appointments in the Civil Service of the East India Company.

**Hospital Attendance.*—Clinical Lectures on Medicine and Surgery, are delivered at the North and South Infirmaries, by the Physicians and Surgeons of those Institutions.

Fee for twelve months, . . . £8 8 0
Fee for six months, . . . 5 0 0

Practical Pharmacy at the same Infirmaries.

Fee for three months, . . . 3 0 0

Clinical Midwifery at the Lying-in Hospital, with Practical Attendance upon Thirty Midwifery cases.

Fee for six months, . . . £3 3 0

Further information may be had from the Medical Officers at the Infirmaries.

APPENDIX A.

General Regulations of College, &c.

Both the Extra and Ordinary Classes are open to Non-Matriculated Students, *i.e.*, to gentlemen who have not yet commenced their Undergraduate course, or who do not intend to take *Degrees in Arts*.

THE GREEK LANGUAGE.

Professor—JOHN RYALL, LL.D.

Junior Class, Monday, Friday, 10–11; Wednesday, Thursday, 9–10 A.M.
Senior Class, Monday, Friday, 9–10; Wednesday, 10–11 A.M.
Extra Class, Tuesday, Thursday, 10–11 A.M.
Junior Class, Herodotus, Book II.—Euripides, Medea.
Senior Class, Thucydides, Book I.—Sophocles, Œdipus Coloneus.
Extra Class, Plato, Gorgias.—Pindar, Pythia.—Æschylus, Agamemnon.
Exercises in Prose and Verse, according to the proficiency of the Students. The books employed are, Arnold's Introduction to Greek Prose Composition, Parts 1 and 2; Beatson's Progressive Exercises on the Composition of Greek Iambic Verse; and Humphreys' Exercitationes Iambicæ.

Fee payable by Matriculated Students for the Undergraduate Course, £2 10s.

Fee payable by Non-Matriculated Students for each Sessional Course, £2.

THE LATIN LANGUAGE.

Professor—BUNNELL LEWIS, M.A.

Senior Class, Monday, 10 A.M., Wednesday, 9 A.M., Friday 10 A.M.
Virgil, Georgics, Book II.
Tacitus, Histories, Book I.
Junior Class, Monday, 9 A.M., Tuesday, 10 A.M., Wednesday, 10 A.M., Thursday, 10 A.M.
Virgil, Æneid, Book V.
Sallust, Conspiracy of Catiline
Exercises in both Classes chiefly from Arnold's Introductions to Latin Composition.

Fee for the whole Undergraduate Course, £2 10s.

Fee payable by Non-Matriculated Students for each Sessional Course, £2.

Extra Class, Tuesday and Thursday, 11 A.M.
Tacitus, Annals, Book I.
Plautus, Trinummus.

In this Class special attention is paid to original Latin Composition, and to translation from English Authors into Latin. Fee £2.

MODERN HISTORY, ENGLISH LITERATURE, AND THE HISTORY OF THE ENGLISH LANGUAGE.

Professor—WILLIAM RUSHTON, A.M.

1st Term.—Modern History, Tuesday, Thursday, at 12 o'clock, and Saturday, at 11, A.M.
2nd Term.—English Literature, Tuesday, Thursday, at 12 o'clock, and Saturday, at 11, A.M.
The History of the English Language, Tuesday, Thursday, Saturday, at 11, A.M.

Modern History:

The Course will include General History from the 5th to the 15th Century, inclusive.

English Literature:

The Course will include the History of English Literature, along with a Critical Examination of its Standard Works from the earliest period up to the present day.

The History of the English Language:

The Lectures in this Course will treat of the History of the English Language, and its relationship to the Anglo-Saxon, along with its kindred tongues and dialects. In subservience to this arrangement the more remarkable stages through which the Anglo-Saxon passed into Semi-Saxon, the Semi-Saxon into Old English, and the Old English into Modern English, will be analyzed and explained Historically and Philologically.

Composition:

English Composition will, at stated periods, be required from the Students.

Fee payable by Matriculated Students for the Undergraduate Course, £2 10s.

Fee payable by Non-Matriculated Students for each Sessional Course, £2.

MODERN LANGUAGES.

Professor—R. DE VERICOUR, D. ès. L.

Senior French Class (Medical) Mondays, Wednesdays, Fridays, 12–1 P.M.
Junior French Class (Arts) Mondays, Wednesdays, Fridays, 1–2 P.M.
Italian Class, Mondays, Wednesdays, Fridays, 2–3 P.M.
German Language, Tuesdays and Fridays, 2–3 P.M.
Senior French—Eloges des membres de l'Académie de Médicine, par Pariset. Extracts from Bichat, Andral, Lallemand. Weekly Lectures on the Grammar and Idioms.
Junior French—Bossuet's Oraisons Funèbres. Fables de Lafontaine, Racine's Athalie, Esther. Histoire de la Revolution Française, par Mignet. Barthe's Histoire de la Littérature Française. Extract from Villemain, Chateaubriand, and Lamartine. Weekly Lectures on the Grammar and Idioms.
Italian—Silvio Pellico. Tasso. Extracts from Macchiavelli, Guicciardini, Davila, Manzoni. Weekly Lectures.
German—Göethe's Ballads and Egmont. Schiller's Wilhelm Tell. National Literatur, Von A. F. Vilmar. Weekly Lectures.

SPECIAL COURSE NOT REQUIRED FOR A DEGREE.
CELTIC LANGUAGES.

Professor—OWEN CONNELLAN, Esq.

Monday, Wednesday, Friday, 12–1 P.M.

Subject—I. The Celtic Family of Languages, and its existing derivations, the Erse or Gaelic, Manx, Welch, Armorican, and Hiberno-Celtic. The Ogham Alphabet. The Ancient Literature of Ireland, viz.:—The earlier Bardic Compositions, the Ossianic Poems and Fenian Legends; View of the Contemporaneous state of Society in Ireland.*

,, II. The Irish Language as now extant, its Grammar, Vocabulary, and Dialects. In this part of the course, the Student will be taught to speak and write the language grammatically.

Fee for each Sessional Course, £2.

SCIENCE DIVISION OF THE FACULTY OF ARTS.

Dean—JOHN BLYTH, M.D.

MATHEMATICS.

Professor—G. BOOLE, LL.D.

Students in Mathematics will be divided into Two Classes, viz.: the Junior Class, consisting chiefly of Students of the First Year, and the Senior Class, consisting of Students of the Second Year. Each or both of these Classes will, if necessary, be subdivided for the purpose of instruction according as may be deemed convenient.

Junior Mathematics, . Monday, Wednesday, and Friday, . . 12–1, P.M.
Senior Mathematics, . Monday, Wednesday, and Friday, . . 2–3, P.M.

Subject—I. Fractional and Decimal Arithmetic, the Elements of Euclid, with deductions from the propositions; Algebra, including the Theory and Solution of the Higher Equations; the Binomial and Exponential Theorems, &c. Plane and Spherical Trigonometry, with their principal applications to Mensuration, Geodesy, Astronomy, &c. The Elements of Solid Geometry, and the Conic Sections.

,, II. Analytical Geometry and the Conic Sections, the Differential and Integral Calculus, together with the subjects named in the previous Course, as far as recapitulations may be needed. The special object designed in these Lectures will be to prepare the Students for the pursuit of Mathematical Physics and Astronomy.

*** To the Students of the Senior Class, and to the more advanced Students of the Junior Class, weekly questions will be set, to which written answers will be expected.

N.B.—The above Classes are open to Students before as well as after Matriculation.

Fee payable by Matriculated Students for the Undergraduate Course, £2 10s.

Fee payable by Non-Matriculated Students for each Sessional Course, £2.

* The Lectures will be illustrated by reference to Irish MSS., and such publications on Irish Historical and General Literature as are at present accessible.

Logic and Metaphysics.

Professor, George S. Read, A.M.

2nd Term. Logic, Tuesday, Thursday, 2, P.M., and Saturday, 9 o'clock, A.M.
1st & 2nd Terms. Metaphysics, Tuesday, Thursday, 1–2, P.M., and Saturday, 10 o'clock, A.M.

Logic.—This Course consists of :—

I.—Lectures, Examinations, and Exercises in Aldrich's Compendium of Logic, occupying the early part of the Term, &c.

II.—A full discussion of Classification, the Theory of Hypothetical Syllogisms and of Induction, and the new Analytic of Logical Forms, as contained in the works of Mill, Whately, Thompson, and Baynes.

Throughout the Course the Students will be expected to familiarize themselves with the reduction of arguments to their strict Logical Form by written exercises which will be examined by the Professor.

N.B.—Students who are proceeding to the Degree of A.B. may attend at their option in the Third Year the Course of Lectures of the Professor of Metaphysics, or the Lectures of the Professor of Jurisprudence and Political Economy.

Metaphysics.—This Course will embrace :—

I.—The Philosophy of the Inductive Sciences, illustrated by reference to Lord Bacon, Sir J. Herschell, Whewell, and Mill; and—

II.—The History of Mental Philosophy, comprising—

1st.—The origin, progress, and development of Modern Philosophy, anterior to the rise of the Scottish Schools.

2nd.—A critical examination of the works of the more celebrated writers of that School.

3rd.—A brief review of the present state of Philosophy in the British Islands and on the Continent.

Jurisprudence and Political Economy.

Professor, Richard Horner Mills, A.M.

Jurisprudence.—Nature of the subject and some of its Elementary Principles; with a sketch of the leading changes in the law from the Conquest to the present period, and notice of the measures for law reform which are now proposed.

Political Economy.—The nature and distribution of wealth, the principles which regulate Rents, Profits, and Wages; the Principles of Commerce, of Taxation, of the Funding System, and of Currency and Banking.

Text Books recommended :—

Adam Smith—Wealth of Nations.
Senior—Political Economy.
Longfield—Political Economy.
Longfield—Lectures on Commerce.
Huskisson—"Question Stated."
Reddie—Inquiries on Science of Law.
Lord Bacon—Tract on Universal Justice, by D. C. Heron.
John Stuart Mill—Political Economy.

The Course consists of Twenty-four Lectures, delivered in the months of December, February, and March; the Students are required in the intervals to prepare the subjects which will be pointed out by the Professor.

Chemistry.

Professor, John Blyth, M.D.

Monday, Wednesday, and Friday, 11–12, A.M.

The Course is divided into Inorganic and Organic Chemistry.

In the first part are discussed the Laws of Combination and Affinity, Molecular Chemistry and Crystallography, and the History of the Non-Metallic and Metallic substances.

In the Organic portion of the Course, will be considered the subjects of Organic Analysis, Organic Series, Compound Radicals and Types, Metamorphoses of Organic Bodies, History of special Animal and Vegetable Bodies.

In treating of the Laws of Chemistry, and the History of Inorganic and Organic Bodies, those points will be chiefly dwelt upon which have a practical bearing in the Arts, Medicine, Engineering, and Agriculture. Thence, during the Course, attention will be directed to the application of Chemistry to Medicine and Physiology, to Metallurgic Operations, Chemical Manufacture, Building Materials, Soils, Manures.

Fee, for each Sessional Course, £2. Each subsequent Course in Medicine, £1.

Analytical Chemistry :

The Chemical Laboratory is open daily, except on Saturdays, from 10 to 4 o'clock, under the superintendence of the Professor, for students desirous of prosecuting an extended course of qualitative and quantitative analysis, and for the purpose of original investigation in connexion with the arts, or in the higher departments of Scientific Chemistry.

Fee, exclusive of the expense of materials and apparatus :

	£	s.	d.
For a period of two months and a half, five days a week.	£5	0	0
For the same period, four days a-week,	4	4	0
For the same period, three days a-week,	3	10	0
For one month daily,	3	3	0

Natural Philosophy.

Professor, John England, A.M.

Experimental Physics (Senior) :

Attended by Arts Students of the 3rd year, and Engineering Students of the 2nd year.
Hours of Lecture, 10 to 11, on Mondays, Wednesdays, and Fridays.
Text Books, Galbraith and Haughton's Manuals of Mechanics, Hydrostatics, &c. Pouillet, Traite de Physique.

Experimental Physics (Junior) :

Attended by Medical and Agricultural Students of the first year.
Days of Lecture—Tuesdays and Thursdays, 11 to 12.
Text Books—Dr. Golding Bird's Natural Philosophy. Ganot, Traite de Physique.

Mathematical Physics :

Optional Course for Arts Students of the 3rd year, Tuesdays, Thursdays, and Saturdays, from 1 to 2.
Text Books—Duhamel's Mecanique, Vol. I., omitting Attractions, and Vol. II., Central Forces. Lloyd's Light and Vision, Part I., omitting Chapters IV. and VII. Part II., Chapters I. and II. Brinkley's Astronomy.

Engineering Physics :

Special Course for Engineering Students of the 2nd year, Mondays, Wednesdays, and Fridays, from 12 to 1, P.M.
Text Books—Tate's Exercises in Mechanics, selections from the works of Moseley, De Pambour, Weisbach, &c.

Senior Mathematical Class (for Candidate Masters) :

Monday, Wednesday, Friday, from 9 to 10.
Text Books—Duhamel's Mecanique, complete. Pratt's Mechanical Philosophy, Chapters IV. and V. Brinkley's Astronomy. Lloyd's Light and Vision.

Natural History.

Professor, Joseph Reay Greene, A.B.

Zoology :

Preliminary Explanation of the Nature of the Science and its Sub-divisions. Animal Morphology and Histology. Physiology. General Review of the leading Animal Functions, and the Physico-chemical changes connected with their performance. Psychical endowments of Animal beings. Comparative view of the structure and modes of action of the Nervous System and Organs of Sense in the various groups of Animals. Development of Animal Forms.

Systematic Zoology. Principles of Zoological Classification. Characteristics of the five types of Animal structure. Summary of the several Classes and Orders of the Animal Kingdom. Distribution of Animal Life.

This Course to be illustrated by the specimens contained in the College Museum, being Animals selected from the Fauna of the district, and microscopic preparations.

Text Books—Carpenter's Principles of Comparative Physiology. Patterson's Zoology for Schools.

Botany :

General Morphology of the Plant. Structure of the Organs of Vegetation and Reproduction. Systematic Botany. The Linnean System; method of studying Plants thereby. The natural system. Botanical demonstrations, including the examination and identification of Native Plants. Physiological Botany. Life History of Plants. Vegetable Histology. Distribution of Vegetable forms.
Text Books—Gray's First Lessons in Botany. Lindley's School Botany. Henfrey's Elementary Course of Botany.

N.B.—A separate Certificate of Attendance on the Botanical Course may be obtained.

Physical Geography :

General View of the Physical Phenomena of the Globe. Geographical distribution of Plants and Animals. Mutual relations of the different varities of Mankind.
Text Books—Somerville's Physical Geography. Selections from Humboldt's Cosmos (Sabine's translation).

C

APPENDIX A.

General Regulations of College, &c.

GEOLOGY AND MINERALOGY.

Professor, ROBERT HARKNESS, F.R.S.L.&E., F.G.S.

Monday, Wednesday, and Friday, 1, P.M.

General structure of the Earth; the causes at present in operation which modify its surface; Nature of Rocks which enter into composition with the crust of the globe; description and classification of Sedimentary Deposits; Organic remains; Physical Geography of the Earth, during the several geological epochs; characters and nature of Igneous, Plutonic and Metamorphic Rocks; Mineral Veins—their contents and mode of occurrence; application of Geology to Engineering, Mining. Agriculture and Land Improvement.

Forms, Structure, Physical and Chemical characters of Minerals; descriptions of the most important simple materials—circumstances and conditions under which they are found.

CIVIL ENGINEERING.

Professor, ALEXANDER JACK, A.M.

Junior Class.—Monday, Wednesday, and Friday, 9-10, A.M.
Subjects—Surveying, Levelling, general Theory and application of various constructions of Levels, Theodolites, Sextants, and the Instruments required for Engineering Field-Work.
Drawing—Descriptive Geometry, Projection, Orthographic and Isomeric Plottings of Plans and Sections, Bridge Drawing.

Senior Class.—Tuesday, Thursday, and Saturday, 9-10 A.M.
Subjects—Engineering Field-Work, setting out of Centre Lines, Curves, Half-widths, &c. Nature and Mode of application of Materials in construction, Practice of Road Making, Cutting, Embanking, Bridge Building, Tunnelling, Preparation of Mortars and Cements, Hydraulic Engineering, Preparation of Specifications, Estimates, &c.
Drawing—A more extended course—application to details of Construction and Machinery, Measurement of Work from Drawings.

The Drawing Office is open to students daily.

Practical Instruction in the Field in the uses of Surveying Instruments will be given during the Session.

Fee for each Sessional Course in Surveying and Engineering, &c.,	£2 0 0
Drawing,	1 10 0

AGRICULTURE.

Professor, EDMUND MURPHY, A.B.

Subjects of Examination for the Agricultural Scholarship of the Second Year.

Theory of Agriculture—The Organs, Nutritions, Growth, and Products of Agricultural Plants. Constituents of Plants, of Soils, and Manures. Formation and Classification of Soils. Meteorology in relation to Agriculture.

Subjects of the Sessional Examination in Agriculture at the end of Second Session.

Practice of Agriculture.—Agricultural Implements and Machines. On Sheltering, Fencing, Draining and Deepening Land. Culture of Farm Crops. Rearing and General Management of Farm Stock. Construction of Farm Buildings. Reclamation and Irrigation of Land, Valuation of Land and Farm Finance.

Text Books in the Theory of Agriculture—Henfry's Structural and Physiological Botany. Johnston's Lectures on Agricultural Chemistry and Geology.

In the Practice of Agriculture—Stephen's Book of the Farm, and Morton's Encyclopœdia.

Subjects of Examination in the History and Diseases of Farm Animals.

Animal Physiology in reference to Farm Animals. The Natural History of Farm Animals, their diseases, with their remedies.

APPENDIX B.

Special Prospectus of Courses for Competitive Examinations

APPENDIX B.

SPECIAL PROSPECTUS of COURSES useful in qualifying for COMPETITIVE EXAMINATIONS.

I.—SPECIAL PROSPECTUS of COURSES of INSTRUCTION given in the COLLEGE which are applicable to the EXAMINATION for the CIVIL SERVICE of the EAST INDIA COMPANY.

Subjects of Examination for the Civil Service of the East India Company.	*Lectures on these Subjects in Queen's College, Cork.*
1. ENGLISH LANGUAGE and LITERATURE: a. Composition, . . . Marks, 500 b. English Literature, including that of the Laws, and Constitution, ... Marks, 1,000 1,500	HISTORY and ENGLISH LANGUAGE—*Professor*, Rev. C. F. Darley, A.M. *First Term.*—Modern History; Monday, Wednesday, Friday, 3 to 4, P.M. *Second Term.*—English Literature; Monday, Wednesday, Friday, 3 to 4, P.M. History of the English Language, Tuesday, Thursday, Saturday, 1 to 2, P.M. English Composition will, at the stated periods, be required from the students.
2. LANGUAGE, LITERATURE, and HISTORY of GREECE: Marks, 750	GREEK—*Professor*, John Ryall, LL.D. Senior Class: Monday, Friday, 9 to 10; Wednesday, 10 to 11. Junior Class: Monday, Friday, 10 to 11; Wednesday, Thursday, 9 to 10. Extra Class: Tuesday, Thursday, 10 to 11.
3. LANGUAGE, LITERATURE, and HISTORY of ROME: Marks, 750	LATIN—*Professor*, Bunnell Lewis, A.M. Senior Class: Monday, Friday, 10 to 11; Wednesday, 9 to 10. Junior Class: Monday, 9 to 10; Tuesday, Wednesday, Thursday, 10 to 11. Extra Class: Tuesday and Thursday, 11 to 12. The Extra Class, both in Latin and Greek, the attendance on which is voluntary, consists generally of those students who propose to become Candidates for the Degree of M.A., or Classical Honors, in the Queen's University, or for appointments in the Civil Service in the East India Company.
4. LANGUAGE, LITERATURE, and HISTORY of France: Marks, 375	FRENCH—*Professor*, R. De Vericour, D. es. L. Senior Class: Monday, Wednesday, Friday, 12 to 1. Junior Class: Monday, Wednesday, Friday, 1 to 2.
5. LANGUAGE, LITERATURE, and HISTORY of GERMANY: Marks, 375	GERMAN. Tuesday, Thursday, 2 to 3.
6. LANGUAGE, LITERATURE, and HISTORY of ITALY: Marks, 375	ITALIAN. Monday, Wednesday, Friday, 2 to 3.

APPENDIX B.

Special Prospectus of Courses for Competitive Examinations

7. MATHEMATICS, Pure and Mixed:

Marks, 1,000

MATHEMATICS—*Professor*, George Boole, F.R.S.

Junior Class: Monday, Wednesday, Friday, 12 to 1.
Senior Class: Monday, Wednesday, Friday, 2 to 3.
Extra Classes: Monday, Wednesday, Friday, 3 to 4.

MATHEMATICAL PHYSICS—*Professor*, John England, A.M.
Tuesday, Thursday, Saturday, 1 to 2.

8. NATURAL SCIENCE: that is, Chemistry, Electricity, and Magnetism, Natural History, Geology, and Mineralogy:

Marks, 500

CHEMISTRY—*Professor*, John Blyth, M.D.
Monday, Wednesday, Friday, 11 to 12.

EXPERIMENTAL PHYSICS (Electricity and Magnetism)—*Professor*, John England, A.M.
Monday, Wednesday, Friday, 10 to 11.

NATURAL HISTORY—*Professor*, Joseph Reay Greene, A.B.
Monday, Wednesday, Friday, and Saturday, 10 to 4.

GEOLOGY and MINERALOGY—*Professor*, Robert Harkness, F.R.S.L. & E., F.G.S.
Monday, Wednesday, Friday, 1 to 2.

9. MORAL SCIENCES: that is, Logic, Mental, Moral, and Political Philosophy:

Marks, 500

LOGIC and METAPHYSICS—*Professor*, G. S. Reade, A.M.
Logic: Tuesday, Thursday, Saturday, 12 to 1.
Metaphysics: Tuesday, Thursday, 1 to 2.

JURISPRUDENCE and POLITICAL ECONOMY—*Professor*, Richard Horner Mills, A.M.

II.—COURSES of INSTRUCTION given in the COLLEGE which are applicable to the EXAMINATION for DIRECT APPOINTMENT to the Advanced or Practical Class of the ROYAL MILITARY ACADEMY at WOOLWICH.

Subjects of Examination for the direct appointments to the Practical Class at Woolwich.	Marks	*Lectures on these Subjects in Queen's College, Cork.*
MATHEMATICS (Pure):	Marks, 2,000	*Professor*, George Boole, LL.D. Junior Class: Monday, Friday, 2 to 3 o'clock; Tuesday 12 to 1; Saturday, 10 to 12. Senior Class: Monday, Friday, 12 to 1; Tuesday, Thursday, 2 to 3; and Saturday, 12 to 2.
MATHEMATICS (Mixed):— Statics, Dynamics, Hydrostatics:	Marks, 1,500	*Professor*, J. England, A.M. Tuesday, Thursday, Saturday, 1 to 2 o'clock.
LANGUAGE, LITERATURE, GEOGRAPHY, and HISTORY of ANCIENT ROME:	Marks, 1,000	*Professor*, Bunnell Lewis, A.M. Junior Class: Monday, 9 to 10; Tuesday, Wednesday, Thursday, 10 to 11.
LANGUAGE, LITERATURE, GEOGRAPHY, and HISTORY of ANCIENT GREECE:	Marks, 750	*Professor*, John Ryall, LL.D. Junior Class: Monday and Friday, 10 to 11; Wednesday and Thursday, 9 to 10.
LANGUAGE, LITERATURE, and HISTORY of FRANCE:	Marks, 1,000	*Professor*, Raymond De Vericour, D. es. L. Monday, Wednesday, Friday, 12 to 3.
And GERMANY:	Marks, 750	
ENGLISH LANGUAGE, LITERATURE, COMPOSITION, HISTORY, and GEOGRAPHY:	Marks, 1,250	*Professor*, The Rev. Charles F. Darley, A.M. *First Term.*—Modern History: Monday, Wednesday, Friday, 3 to 4.
EXPERIMENTAL SCIENCE:— Chemistry:	Marks, 1,000	*Professor*, John Blyth, M.D. Monday, Wednesday, and Friday, 11 to 12.
HEAT, ELECTRICITY, including MAGNETISM:		*Professor*, John England, A.M. Monday, Wednesday, Friday, 10 to 11.
NATURAL SCIENCES:— Mineralogy and Geology:	Marks, 750	*Professor*, Robert Harkness, F.R.S.L.&E., F.G.S.
MORAL SCIENCES:	Marks, 1,000	*Professor*, George Sidney Read, A.M. Tuesday, Thursday, Saturday, 12 to 2.
POLITICAL SCIENCES:		*Professor*, R. H. Mills, A.M.
DRAWING, *i.e.*, Elementary Geometrical Drawing, including the use of Drawing Instruments, and either Machinery, Architectural, Engineering, or Landscape Drawing:	Marks, 750	*Professor*, Alexander Jack, A.M. Monday, Wednesday, and Friday, 9 to 10.

APPENDIX B.

Residences.

RESIDENCES.

There is no accommodation for the residence of students within the College, but it is provided by the Statutes that every Matriculated Student, being under the age of Twenty-one Years, shall reside, during the College Terms, with his parent or guardian, or with some relation or friend, to whose care he shall have been committed by his parent or guardian, or in one of the undernamed Boarding houses, licensed by the President of the College, and arranged for the reception of students, who are then placed under the moral care and spiritual charge of the Deans of Residence of their respective creeds.

The Terms for Board and Lodging are generally at the rate of from £30 to £40 a-year.

DEANS of RESIDENCES.

Established Church,	Rev. Louis Perrin.
Presbyterian Church,	Rev. William Magill.
Wesleyan Communion,	Rev. Daniel MacAfee.

LICENSED BOARDING HOUSES.

Mr. Jeremiah Morony's,	9, King-street.
Mrs. Jane Heron's,	14, Hardwick-street.
Mrs. John Martin's,	12, North Mall.
Mr. John O'Sullivan's,	52, South Mall.
Mr. Edward Duke's,	54, Duncan-street.
Mrs. O'Regan's,	Sunday's Well.

For terms, &c., application to be made to the different proprietors.

N.B.—Letters from persons desiring further information to be addressed to the Registrar.

Signed,

By Order of the President,

ROBERT JOHN KENNY, *Registrar*.

APPENDIX C.

Examination Papers for Scholarship Examinations

APPENDIX C.

SELECTION of EXAMINATION PAPERS for SCHOLARSHIP EXAMINATIONS.

LITERARY SCHOLARSHIPS.

First Year.

Translate—

HOMER—ILIAD, Book V., vv. 229–238.

Τὸν δ' αὖτε προσέειπε Λυκάονος ἀγλαὸς υἱός·
Αἰνεία, σὺ μὲν αὐτὸς ἔχ' ἡνία καὶ τεὼ ἵππω·
μᾶλλον ὑφ' ἡνιόχῳ εἰωθότι καμπύλον ἅρμα
οἴσετον, εἴπερ ἂν αὖτε φεβώμεθα Τυδέος υἱόν·
μὴ τὼ μὲν δείσαντε ματήσετον, οὐδ' ἐθέλητον
ἐκφερέμεν πολέμοιο, τεὸν φθόγγον ποθέοντε·
νῶϊ δ' ἐπαΐξας μεγαθύμου Τυδέος υἱὸς
αὐτώ τε κτείνῃ, καὶ ἐλάσσῃ μώνυχας ἵππους.
ἀλλὰ σύγ' αὐτὸς ἔλαυνε τέ' ἅρματα καὶ τεὼ ἵππω,
τόνδε δ' ἐγὼν ἐπιόντα δεδέξομαι ὀξέϊ δουρί.

HERODOTUS, Book II., c. 167.

Εἰ μέν νυν καὶ τοῦτο παρ' Αἰγυπτίων μεμαθήκασι οἱ Ἕλληνες, οὐκ ἔχω ἀτρεκέως κρῖναι· ὁρέων καὶ Θρήϊκας καὶ Σκύθας καὶ Πέρσας καὶ Λυδοὺς, καὶ σχεδὸν πάντας τοὺς βαρβάρους, ἀποτιμοτέρους τῶν ἄλλων ἡγημένους πολιητέων τοὺς τὰς τέχνας μανθάνοντας καὶ τοὺς ἐκγόνους τούτων· τοὺς δ' ἀπαλλαγμένους τῶν χειρωναξιέων γενναίους νομίζοντας εἶναι, καὶ μάλιστα τοὺς ἐς τὸν πόλεμον ἀνειμένους. μεμαθήκασι δ' ὦν τοῦτο πάντες οἱ Ἕλληνες, καὶ μάλιστα Λακεδαιμόνιοι, ἥκιστα δὲ Κορίνθιοι ὄνονται τοὺς χειροτέχνας.

EURIPIDES—MEDEA, vv. 869–888.

Ἰᾶσον, αἰτοῦμαί σε τῶν εἰρημένων
συγγνώμον' εἶναι· τὰς δ' ἐμὰς ὀργὰς φέρειν
εἰκός σ', ἐπεὶ νῷν πόλλ' ὑπείργασται φίλα.
ἐγὼ δ' ἐμαυτῇ διὰ λόγων ἀφικόμην,
κἀλοιδόρησα· σχετλία, τί μαίνομαι
καὶ δυσμεναίνω τοῖσι βουλεύουσιν εὖ,
ἐχθρὰ δὲ γαίας κοιράνοις καθίσταμαι
πόσει θ', ὃς ἡμῖν δρᾷ τὰ συμφορώτατα,
γήμας τύραννον καὶ κασιγνήτους τέκνοις
ἐμοῖς φυτεύων; οὐκ ἀπαλλαχθήσομαι
θυμοῦ; τί πάσχω, θεῶν πορίζόντων καλῶς;
οὐκ εἰσὶ μέν μοι παῖδες, οἶδα δὲ χθόνα
φεύγοντας ἡμᾶς καὶ σπανίζοντας φίλων;
ταῦτ' ἐννοήσασ' ᾐσθόμην ἀβουλίαν
πολλὴν ἔχουσα καὶ μάτην θυμουμένη.
νῦν οὖν ἐπαινῶ σωφρονεῖν τέ μοι δοκεῖς
κῆδος τόδ' ἡμῖν προσλαβών, ἐγὼ δ' ἄφρων,
ᾗ χρῆν μετεῖναι τῶνδε τῶν βουλευμάτων
καὶ ξυμπεραίνειν καὶ παρεστάναι λέχει
νύμφην τε κηδεύουσαν ἥδεσθαι σέθεν.

XENOPHON—ANABASIS, Book III., c. v., 7, 8.

Ἐπεὶ δὲ ἐπὶ τὰς σκηνὰς ἀπῆλθον, οἱ μὲν ἄλλοι περὶ τὰ ἐπιτήδεια ἦσαν, στρατηγοὶ δὲ καὶ λοχαγοὶ συνῆλθον. καὶ ἐνταῦθα πολλὴ ἀπορία ἦν. ἔνθεν μὲν γὰρ ὄρη ἦν ὑπερύψηλα, ἔνθεν δὲ ὁ ποταμὸς τοσοῦτος τὸ βάθος ὡς μηδὲ τὰ δόρατα ὑπερέχειν πειρωμένοις τοῦ βάθους. ἀπορουμένοις δὲ αὐτοῖς προσελθών τις ἀνὴρ Ῥόδιος εἶπεν· Ἐγὼ θέλω, ὦ ἄνδρες, διαβιβάσαι ὑμᾶς κατὰ τετρακισχιλίους ὁπλίτας, ἤν μοι ὧν δέομαι ὑπηρετήσητε καὶ τάλαντον μισθὸν πορίσητε.

1. Distinguish between Mythology and History; and state at what period the history of Greece begins to be authentic.
2. State the distinction between Epic and Dramatic poetry. What was the origin of the latter in Greece?
3. Parse the following words:—εἰωθότι, κτείνῃ, δεδέξομαι, ἀπηλλαγμένους, ὑπείργασται, ἀφικόμην, γῆμας.
4. State the laws of the Heroic Hexameter, and Senarian Iambic metres.

Third Year.

Translate—

(A).—HOMER, ILIAD, Book XXIII., vv. 161–178.

Αὐτὰρ ἐπεὶ τόγ' ἄκουσεν ἄναξ ἀνδρῶν Ἀγαμέμνων,
αὐτίκα λαὸν μὲν σκέδασεν κατὰ νῆας ἐΐσας.
κηδεμόνες δὲ παρ' αὖθι μένον καὶ νήεον ὕλην·
ποίησαν δὲ πυρὴν ἑκατόμπεδον ἔνθα καὶ ἔνθα,
ἐν δὲ πυρῇ ὑπάτῃ νεκρὸν θέσαν ἀχνύμενοι κῆρ.
πολλὰ δὲ ἴφια μῆλα καὶ εἰλίποδας ἕλικας βοῦς
πρόσθε πυρῆς ἔδερόν τε καὶ ἄμφεπον· ἐκ δ' ἄρα πάντων
δημὸν ἑλὼν ἐκάλυψε νέκυν μεγάθυμος Ἀχιλλεὺς
ἐς πόδας ἐκ κεφαλῆς, περὶ δὲ δρατὰ σώματα νήει·
ἐν δ' ἐτίθει μέλιτος καὶ ἀλείφατος ἀμφιφορῆας,
πρὸς λέχεα κλίνων· πίσυρας δ' ἐριαύχενας ἵππους
ἐσσυμένως ἐνέβαλλε πυρῇ, μεγάλα στεναχίζων.
ἐννέα τῷγε ἄνακτι τραπεζῆες κύνες ἦσαν·
καὶ μὲν τῶν ἐνέβαλλε πυρῇ δύο δειροτομήσας,
δώδεκα δὲ Τρώων μεγαθύμων υἱέας ἐσθλοὺς
χαλκῷ δηϊόων· κακὰ δὲ φρεσὶ μήδετο ἔργα·
ἐν δὲ πυρὸς μένος ἧκε σιδήρεον, ὄφρα νέμοιτο·
ᾤμωξέν τ' ἄρ' ἔπειτα, φίλον δ' ὀνόμηνεν ἑταῖρον.

(B).—HOMER—ODYSSEY, Book XVIII., vv. 88–104.

Ὣς φάτο, τῷ δ' ἔτι μᾶλλον ὑπὸ τρόμος ἔλλαβε γυῖα,
ἐς μέσσον δ' ἄναγον· τὼ δ' ἄμφω χεῖρας ἀνέσχον.
δὴ τότε μερμήριξε πολύτλας δῖος Ὀδυσσεύς
ἢ ἐλάσει', ὥς μιν ψυχὴ λίποι αὖθι πεσόντα,
ἦέ μιν ἦκ' ἐλάσειε, τανύσσειέν τ' ἐπὶ γαίῃ.

ὧδε δέ οἱ φρονέοντι δοάσσατο κέρδιον εἶναι,
ἦκ' ἐλάσαι, ἵνα μή μιν ἐπιφρασσαίατ' Ἀχαιοί.
δὴ τότ' ἀνασχομένω, ὁ μὲν ἤλασε δεξιὸν ὦμον
Ἶρος, ὁ δ' αὐχέν' ἔλασσεν ὑπ' οὔατος, ὀστέα δ' εἴσω
ἔθλασεν· αὐτίκα δ' ἦλθε κατὰ στόμα φοίνιον αἷμα,
κὰδ δ' ἔπεσ' ἐν κονίῃσι μακών, σὺν δ' ἤλασ' ὀδόντας,
λακτίζων ποσὶ γαῖαν. ἀτὰρ μνηστῆρες ἀγαυοὶ
χεῖρας ἀνασχόμενοι γέλῳ ἔκθανον. αὐτὰρ Ὀδυσσεὺς
ἕλκε δι' ἐκ προθύροιο, λαβὼν ποδός, ὄφρ' ἵκετ' αὐλήν,
αἰθούσης τε θύρας· καί μιν ποτὶ ἑρκίον αὐλῆς
εἷσεν ἀνακλίνας, σκῆπτρον δέ οἱ ἔμβαλε χειρί,
καί μιν φωνήσας ἔπεα πτερόεντα προσηύδα·

(C).—ÆSCHYLUS—PROMETHEUS VINCTUS, vv. 1090-1106.

ΕΡ· τοιάδε μέντοι τῶν φρενοπλήκτων
βουλεύματ' ἔπη τ' ἐστὶν ἀκοῦσαι.
τί γὰρ ἐλλείπει μὴ παραπαίειν,
εἰ μηδ' ἀτυχῶν τι χαλᾷ μανιῶν;
ἀλλ' οὖν ὑμεῖς γ' αἱ πημοσύναις
ξυγκάμνουσαι ταῖς τοῦδε, τόπων
μετά ποι χωρεῖτ' ἐκ τῶνδε θοῶς·
μὴ φρένας ὑμῶν ἠλιθιώσῃ
βροντῆς μύκημ' ἀτέραμνον.
ΧΟ. ἄλλο τι φώνει καὶ παραμυθοῦ μ',
ὅ τι καὶ πείσεις· οὐ γὰρ δή που
τοῦτό γε τλητὸν παρέσυρας ἔπος·
πῶς με κελεύεις κακότητ' ἀσκεῖν;
μετὰ τοῦδ' ὅ τι χρὴ πάσχειν ἐθέλω·
τοὺς γὰρ προδότας μισεῖν ἔμαθον·
κοὐκ ἔστι νόσος.
τῆσδ' ἥντιν' ἀπέπτυσα μᾶλλον.

(D).—SOPHOCLES—ŒDIPUS COLONEUS, vv. 1466–1477.

ΧΟ. ἔα ἔα, ἰδοὺ μάλ' αὖθις ἀμφίσταται διαπρύσιος ὄτοβος
ἵλαος, ὦ δαίμων, ἵλαος, εἴ τι γᾷ
ματέρι τυγχάνεις ἀφεγγὲς φέρων·
ἐναισίου δὲ συντύχοιμι, μηδ' ἄλαστον ἄνδρ' ἰδὼν
ἀκερδῆ χάριν μετάσχοιμί πως· Ζεῦ ἄνα, σοὶ φωνῶ.
ΟΙ. ἆρ' ἐγγὺς ἁνήρ; ἆρ' ἔτ' ἐμψύχου, τέκνα,
κιχήσεταί μου καὶ κατορθοῦντος φρένα;
ΑΝ. τί δ' ἂν θέλοις τὸ πιστὸν ἐμφῦσαι φρενί;
ΟΙ. ἀνθ' ὧν ἔπασχον εὖ, τελεσφόρον χάριν
δοῦναί σφιν, ἥνπερ τυγχάνων ὑπεσχόμην.

(E).—EURIPIDES—ALCESTIS, vv. 773–786.

οὗτος, τί σεμνὸν καὶ πεφροντικὸς βλέπεις;
οὐ χρὴ σκυθρωπὸν τοῖς ξένοις τὸν πρόσπολον
εἶναι, δέχεσθαι δ' εὐπροσηγόρῳ φρενί.
σὺ δ' ἄνδρ' ἑταῖρον δεσπότου παρόνθ' ὁρῶν,
στυγνῷ προσώπῳ καὶ συνωφρυωμένῳ
δέχει, θυραίου πήματος σπουδὴν ἔχων·
δεῦρ' ἔλθ', ὅπως ἂν καὶ σοφώτερος γένῃ.
τὰ θνητὰ πράγματ' οἶδας, ἣν ἔχει φύσιν;
οἶμαι μὲν οὔ· πόθεν γάρ; ἀλλ' ἄκουέ μου.
βροτοῖς ἅπασι κατθανεῖν ὀφείλεται,
κοὐκ ἔστι θνητῶν ὅστις ἐξεπίσταται
τὴν αὔριον μέλλουσαν εἰ βιώσεται·
τὸ τῆς τύχης γὰρ ἀφανὲς οἷ προβήσεται,
κἄστ' οὐ διδακτόν, οὐδ' ἁλίσκεται τέχνῃ.

(F).—PLATO—CRITO, chapter xvii.

Ταῦτα, ὦ φίλε ἑταῖρε Κρίτων, εὖ ἴσθι ὅτι ἐγὼ δοκῶ ἀκούειν, ὥσπερ οἱ κορυβαντιῶντες τῶν αὐλῶν δοκοῦσιν ἀκούειν· καὶ ἐν ἐμοὶ αὕτη ἡ ἠχὴ τούτων τῶν λόγων βομβεῖ καὶ ποιεῖ μὴ δύνασθαι τῶν ἄλλων ἀκούειν. ἀλλὰ ἴσθι, ὅσα γε τὰ νῦν ἐμοὶ δοκοῦντα, ἐάν τι λέγῃς παρὰ ταῦτα, μάτην ἐρεῖς. ὅμως μέντοι εἴ τι οἴει πλέον ποιήσειν, λέγε. ΚΡ. Ἀλλ', ὦ Σώκρατες, οὐκ ἔχω λέγειν. ΣΩ. Ἔα τοίνυν, ὦ Κρίτων, καὶ πράττωμεν ταύτῃ, ἐπειδὴ ταύτῃ ὁ θεὸς ὑφηγεῖται.

(G).—THUCYDIDES, Book I., chapter 144.

Πολλὰ δὲ καὶ ἄλλα ἔχω ἐς ἐλπίδα τοῦ περιέσεσθαι, ἢν ἐθέλητε ἀρχήν τε μὴ ἐπικτᾶσθαι ἅμα πολεμοῦντες, καὶ κινδύνους αὐθαιρέτους μὴ προστίθεσθαι· μᾶλλον γὰρ πεφόβημαι τὰς οἰκείας ἡμῶν ἁμαρτίας ἢ τὰς τῶν ἐναντίων διανοίας. ἀλλ' ἐκεῖνα μὲν καὶ ἐν ἄλλῳ λόγῳ ἅμα τοῖς ἔργοις δηλωθήσεται· νῦν δὲ τούτοις ἀποκρινάμενοι ἀποπέμψωμεν, Μεγαρέας μὲν ὅτι ἐάσομεν ἀγορᾷ καὶ λιμέσι χρῆσθαι, ἢν καὶ Λακεδαιμόνιοι ξενηλασίας μὴ ποιῶσι μήτε ἡμῶν μήτε τῶν ἡμετέρων ξυμμάχων (οὔτε γὰρ ἐκεῖνο κωλύει ἐν ταῖς σπονδαῖς οὔτε τόδε,) τάς τε πόλεις ὅτι αὐτονόμους ἀφήσομεν, εἰ καὶ αὐτονόμους ἔχοντες ἐσπεισάμεθα, καὶ ὅταν κἀκεῖνοι ταῖς αὑτῶν ἀποδῶσι πόλεσι μὴ σφίσι τοῖς Λακεδαιμονίοις ἐπιτηδείως αὐτονομεῖσθαι, ἀλλὰ αὐτοῖς ἑκάστοις, ὡς βούλονται· δίκας δὲ ὅτι ἐθέλομεν δοῦναι κατὰ τὰς ξυνθήκας, πολέμου δὲ οὐκ ἄρξομεν, ἀρχομένους δὲ ἀμυνούμεθα.

(H).—HERODOTUS, Book I., chapter 121.

Ἀκούσας ταῦτα ὁ Ἀστυάγης, ἐχάρη τε, καὶ καλέσας τὸν Κῦρον ἔλεγέ οἱ τάδε· Ὦ παῖ, σὲ γὰρ ἐγὼ δι' ὄψιν ὀνείρου οὐ τελέην ἠδίκεον, τῇ σεωϋτοῦ δὲ μοίρῃ περιεῖς· νῦν ὦν ἴθι χαίρων ἐς Πέρσας, πομποὺς δ' ἐγὼ ἅμα πέμψω. ἐλθὼν δὲ ἐκεῖ, πατέρα τε καὶ μητέρα εὑρήσεις, οὐ κατὰ Μιτραδάτεά τε τὸν βουκόλον καὶ τὴν γυναῖκα αὐτοῦ.

JOHN RYALL, *Professor.*

FIRST YEAR'S SCHOLARSHIPS.

Latin.

1. Give an account of the civil wars between Cæsar and the Pompeian party.
2. How did the Romans reckon the days of the month?
3. Describe the functions of the Censors.
4. Explain the terms, *hastati, principes, triarii, rorarii,* and *accensi.*

Re-translate into Latin—

I have the more willingly, therefore, entered into the discussion you recommended, as it affords me an opportunity of rendering a general service, at the same time that I am complying with your particular request. In the treatise I lately inscribed to you on old age, I represented the elder Cato as the principal speaker; being persuaded that no person could, with more weight and propriety, be introduced as delivering his ideas in relation to that advanced state, than one who had so long flourished in it with unequalled spirit and vigour. In pursuance of the same principle, the memorable amity which we are told subsisted between Lælius and Scipio, rendered the former, I thought, a very suitable character to support a conversation on the subject of friendship; and the reasoning I have ascribed to him is agreeable to those sentiments which Mucius informed us he expressed.

SECOND YEAR'S SCHOLARSHIPS.

Latin.

1. Distinguish between *viciens bis* and *bis viciens.*
2. Why is the penultimate syllable of *tibicen* long?
3. From what circumstance did the Rostra in the Roman Forum derive their name?
4. Explain the Latin use of the tenses in epistolary writing.
5. Describe the situation of the following places:—Sinope, Chalcedon, Carræ, Pelusium, Cyrene, Thapsus, Aquileia, Falerii.
6. What was the immediate cause of the first Punic War? How long did it last? By what battle was it terminated?

Translate into Latin verse—

Now came still evening on, and twilight grey
Had in her sober livery all things clad:
Silence accompanied; for beast and bird,
They to their grassy couch, these to their nests,
Were slunk, all but the wakeful nightingale;
She, all night long, her amorous descant sung;
Silence was pleased; now glowed the firmament
With living sapphires.

APPENDIX C.

Examination Papers for Scholarship Examinations

Translate into Latin prose :—

Upon withdrawing into my room after dinner, I was secretly touched with compassion towards the honest gentleman that had dined with us; and could not but consider with a great deal of concern, how so good a heart and such busy hands were wholly employed in trifles; that so much humanity should be so little beneficial to others, and so much industry so little advantageous to himself. The same temper of mind and application to affairs might have recommended him to the public esteem, and have raised his fortune in another station of life. What good to his country or himself might not a trader or a merchant have done with such useful, though ordinary qualifications.

THIRD YEAR'S SCHOLARSHIPS.

Latin.

Translate into Latin Lyrics :—

Gay hope is theirs, by fancy fed,
Less pleasing when possessed,
The tear forgot as soon as shed,
The sunshine of the breast :
Theirs buxom health of rosy hue,
Wild wit, invention ever new,
And lively cheer of vigour born ;
The thoughtless day, the easy night,
The spirits pure, the slumbers light,
That fly the approach of morn.

Translate into Latin prose :—

There is a sort of delight which is alternately mixed with terror and sorrow in the contemplation of death. The soul has its curiosity more than ordinarily awakened when it turns its thoughts upon the conduct of such who have behaved themselves with an equal, a resigned, a cheerful, a generous or heroic temper in that extremity. We are affected with these respective manners of behaviour, as we secretly believe the part of the dying person imitable by ourselves or such as we imagine ourselves more particularly capable of. Men of exalted minds march before us like princes, and are to the ordinary race of mankind rather subjects for their admiration than example. However, there are no ideas strike more forcibly upon our imaginations than those which are raised from reflections upon the exits of great and excellent men. Innocent men who have suffered as criminals, though they were benefactors of human society, seem to be persons of the highest distinction, among the vastly greater number of human race, the dead.

SENIOR SCHOLARSHIPS.

Latin.

Translate into appropriate metre :—

O Music, sphere-descended maid,
Friend of pleasure, wisdom's aid ;
Why, goddess, why to us denied,
Lay'st thou thy ancient lyre aside ?
As in that loved Athenian bower,
You learned an all-commanding power,
Thy mimic soul, O nymph endeared,
Can well recall what then it heard.
Where is thy native simple heart,
Devote to virtue, fancy, art ?
Arise, as in that elder time,
Warm, energic, chaste, sublime !

Translate into Latin prose :—

The thirty years' truce, though concluded upon terms seemingly disadvantageous to Athens, afforded an interval of repose highly favourable to her prosperity, only interrupted by one successful effort. It was during this period that Pericles was enabled to carry out his views into action with the amplest means that the state could furnish at his command, and with scarcely a breath of opposition to divert him from his purpose. The history of Athens during the continuance of the thirty years' truce may be properly comprised in a general survey of his administration. Pericles, to describe his policy in a few words, had two objects mainly in view throughout his public life : to extend and strengthen the Athenian empire, and to raise the confidence and self-esteem of the Athenians themselves to a level with the lofty position which they occupied. Almost all his measures may clearly be referred to one or the other of these ends.*

B. LEWIS, *Professor.*

SCHOLARSHIP EXAMINATIONS.

Modern Languages.

Translate into French, or German, or Italian :—

From the acknowledged superiority of standing armies, it follows not only that it is unsafe for a nation to disband its regular troops, whilst neighbouring kingdoms retain theirs, but also that regular troops provide for the public service at the least possible expense. The constant drudgery of low employments is not only incompatible with any great degree of perfection or expertness in the profession of a soldier ; but the profession of a soldier almost always unfits men for the business of regular occupations. Of three inhabitants of a village, it is better that one should addict himself entirely to arms, and the other two stay constantly at home to cultivate the ground, than that all the three should mix the avocations of a camp with the business of husbandry. By the former arrangement, the country gains one complete soldier, and two industrious husbandmen ; from the latter, it receives three raw militiamen, who are at the same time three idle and profligate peasants. It should be considered, also, that the emergencies of war wait not for seasons. Where there is no standing army ready for immediate service, it may be necessary to call the reaper from the fields in harvest, or the ploughman in seed-time; and the provision of a whole year may perish by the interruption of one month's labour. A standing army, therefore, is not only a more effectual, but a cheaper method of providing for the public safety than any other, because it adds more than any other to the common strength, and takes less from that which composes the wealth of a nation—its stock of productive industry.—*Paley's Elements of Political Knowledge.*

1. Give the various modes of translating the English *off* in French, with examples. Translate—*He is well off ; keep off ; off with you.*
2. When is *that* omitted in English and expressed in French ; give examples.
3. Explain the idiom, *I would have you go*, and translate it.
4. Give the rules of French grammar on the object.
5. State what you know of the *Henriade*, and of the reign and character of Henry IV. of France.

R. DE VERICOUR.

JUNIOR SCIENCE SCHOLARSHIPS.

Arithmetic and Algebra.

1. State the chief axioms or principles applicable in fractional arithmetic.
2. What fraction is £6 13*s.* 4*d.* of £15?
3. Divide $\frac{11}{4}$ of $\frac{84}{11}$ of 2 by $\frac{3}{4}$ of $18\frac{2}{3}$.
4. Express one acre as a decimal of a square mile.
5. If $\frac{7}{9}$ of a yard of cloth cost $\frac{4}{5}$ of a guinea, what will 7 pieces, each containing $\frac{14}{27}$ of an English ell of 5 quarters, cost at the same rate ?
6. Extract the square root of 11108889, also of 1110.8889, and justify the different steps of the process by means of the theorem $(a+b)^2=a^2+2ab+b^2$.
7. Calculate the value of the expression—

$$x+y+\frac{x}{y}-\sqrt{\frac{1+x}{1-y}} \text{ when } x=\tfrac{1}{4} \text{ and } y=\tfrac{1}{3}.$$

8 State and prove the formulæ for the summation of geometrical series. Apply them to find the fractional value of $.8\dot{3}5\dot{6}$.

* N.B.—The Candidates also translated passages from the Latin authors prescribed for Scholarships in the College Prospectus.

9. Solve the following simple equations:—

$$x-\frac{x}{4}+\frac{7x}{15}=366-\frac{11x}{6},\ 3+2x+\sqrt{6x+x^2}=4+x,$$

$$\frac{5x}{9}+2-\frac{12x+2}{11x-8}=\frac{5x-4}{9}+\frac{19}{18}.$$

10. Solve the following quadratic equations:—

$$x^2-8x=72.\ (1),\ x-5+3\sqrt{x-5}=10.\ (2).$$

11. The sides of a plane triangle measure 500, 1,200, and 1,300 yards respectively; find its area.

12. Explain the origin and use of logarithms, and prove the following theorems:—

$$\log xy=\log x+\log y$$
$$\log x^n=n\log x.$$

13. Show how the above theorems might be applied to calculate the value of the expression

$$x^2\ y^3\ (x^2-y^2)^{\frac{1}{2}}$$

when the values of x and y are known.

14. In what time will three pipes flowing together fill a cistern, supposing that flowing singly they would fill it in $3\frac{1}{2}$, 5, and 6 hours respectively; the flow being in every case uniform.

Geometry and Trigonometry.

1. On a given straight line describe a segment of a circle, which shall contain an angle equal to a given angle.—(Euclid, Book III., Prop. 33.)

2. Apply the above problem to the geometrical construction (when possible) of a triangle, which shall have a given base and a given vertical angle, and shall have the same area as a given parallelogram, one of whose sides is equal to the given base.

3. Inscribe a circle in a given triangle.—(Euclid, Book IV., Prop. 4.)

4. Circumscribe a circle about a given triangle.—(Euclid, Book IV., Prop. 5.)

5. Supposing the triangle to be equilateral, and to have an area equal to a^2, find an expression for the area of the circumscribed circle.

6. Find the area of a circular ring, whose internal and external radii are 45 feet and 55 feet respectively.

7. Two adjacent sides of a triangle measure 12 and 35.2 feet respectively, and the angle contained between them is 30°; find the area of the triangle.

8. The sides of a plane triangle measure 560, 1,344, and 1,456 feet respectively. Prove that the triangle is right-angled. Calculate, also, the length of the perpendicular let fall from the right angle upon the hypothenuse.

9. Describe briefly the nature and objects of the science of trigonometry.

10. Define the *sine*, *cosine*, *tangent*, and *secant* of an angle, and prove the following theorems:—

$$\cos^2 A=1-\sin^2 A$$

$$\tan A=\frac{\sin A}{\sqrt{1-\sin^2 A}}=\frac{\sqrt{1-\cos^2 A}}{\cos A}$$

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

11. The distance of a station A, on a horizontal plane, from the foot of a tower is 50 feet, and the angle of elevation of the top of the tower from that station is 60°; show how to find the height of the tower by means of the trigonometrical tables.

12. Upon what principle established in the sixth book of Euclid are the rules for the solution of right-angled triangles founded?

Determine the height of the tower in Prob. 11 without the use of the trigonometrical tables.

SCIENCE SCHOLARSHIP OF SECOND YEAR.

Arithmetic, Algebra, and Geometry.

1. Calculate to five places of decimals the value of the expression $\frac{250.5+80\sqrt{2.5}}{60}$.

2. Give a general formula for finding the content of a cylinder, and explain the connexion of this problem with the problem of finding the content of a prism. Find the content of a cylinder whose diameter is 2.25 feet and height 32 feet.

APPENDIX C. — Examination Papers for Scholarship Examinations

3. The area of a polygon, *whether regular or irregular*, circumscribed about a circle, is equal to the rectangle contained by the perimeter of the polygon and half the radius of the circle.

4. A straight line which bisects the vertical angle of a triangle will divide the base into segments proportional to the adjacent sides.—(Euclid, Book VI., Prop 3.)

5. The area of a triangle is 100, the perpendicular from the vertical angle on the base 10, and the ratio of the sides containing the vertical angle 5 to 3; find hence the segments of the base made by the straight line which bisects the vertical angle.

6. Solve the following equations:—

$$x^2+.5x=10.5\ (1)\quad x^4-x^3+x-1=0\quad (2)$$
$$a+x+\sqrt{a^2+x\,(1+x)}\ =1\quad (3)$$

7. Solve the simultaneous equations—

$$\frac{x}{9}+\frac{y}{8}+2\left\{\frac{x}{8}+\frac{y}{9}\right\}=127$$

$$\frac{x-y}{9}+\frac{y-x}{8}=1$$

8. Solve the simultaneous equations—

$$4\,(x+y)\ =3xy$$
$$x^2+y^2\ =25$$

9. Solve the exponential equation—

$$10^x-10^{-x}=99.999.$$

10. Find the number of yards, and the prime cost per yard, of a piece of cloth, supposing that if sold at 12*s.* 6*d.* per yard there will be a gain of £7 10*s.*, and if sold at 9*s.* per yard there will be a loss of £3.

11. What is meant by elimination? What relation must exist between the number of quantities to be eliminated and the number of equations from which the elimination is to be effected?

12. Eliminate x and y from the equations

$$px+qy=r$$
$$qx+py=s$$
$$x^2+y^2=1.$$

13. Construct, as far as you conveniently can, a table of logarithms to the base 64. Find in particular the logarithms of 16, 32, and 256 in that system.

Trigonometry and Conic Sections.

1. Prove the following formulæ of plane trigonometry, viz.:

$$\frac{1-\tan\theta}{1+\tan\theta}=\tan\,(45-\theta)\quad (1).$$

$$\text{Cos } A+\cos B=2\cos\frac{A+B}{2}\cos\frac{A-B}{2}\quad (2).$$

$$\text{Cos } A-\cos B=-2\sin\frac{A+B}{2}\sin\frac{A-B}{2}\quad (3).$$

$$\text{Cos }\frac{A}{2}=\sqrt{\frac{1+\cos A}{2}}\quad (4).$$

$$\text{Sin }\frac{A}{2}=\sqrt{\frac{1-\cos A}{2}}\quad (5).$$

2. Give two or three different proofs of the theorem

$$\frac{\sin A}{a}=\frac{\sin B}{b}=\frac{\sin C}{c},$$

in the solution of plane triangles.

3. Explain the ambiguity which occasionally presents itself in the application of the above theorem.

4. Solve the following problems without the use of trigonometrical tables, viz.:

1st. The base of an isosceles triangle is 1 foot, and the vertical angle is 45°, find each of the equal sides.

2nd. Two angles of a plane triangle are 30° and 45° respectively, and the side opposite to the first of them measures 100 feet? what is the length of the side opposite to the second?

5. Prove the following theorem in the solution of plane triangles, viz.:

$$\tan\frac{A-B}{2}=\frac{a-b}{a+b}\cot\frac{C}{2}$$

and show that if we introduce a subsidiary angle ϕ, determined by the relation $\tan\phi=\frac{b}{a}$, the theorem assumes the more convenient form

$$\tan\frac{A-B}{2}=\tan(45-\phi)\cot\frac{C}{2}.$$

6. Show how to determine the height of a tower, by observing from its top the angles of depression of two objects on a horizontal plane, which are in the same line with the tower, and of which the mutual distance is given.

7. Describe the different sections of a cone, which can be made by planes, and distinguish the species of the sections according to the circumstances under which they are made.

8. Define the ellipse, parabola, and hyperbola, without the introduction of the cone.

9. Prove that in a parabola the latus rectum or parameter is equal to four times the distance of the focus from the vertex.

10. Define a diameter of a plane curve; show that in the parabola the diameters are parallel to the major axis.

11. A luminous point is placed at the centre of the bottom of a cylindrical vessel, which stands upon the floor, and of which the top is open. What will be the form of the boundary of shadow formed on a vertical wall? Again, supposing the depth of the vessel to be 10 inches, and the diameter of its base $\frac{20}{\sqrt{3}}$ inches, what inclination must be given to the vessel in order that the boundary shadow may be a parabola.

12. The axes of an ellipse are 6 and 4 feet respectively: determine its area. Show how, by the known properties of the curve, the rule for the determination of its area may be derived from the known rule for determining the area of a circle.

13. State the chief differences in principle and in performance between the sextant and the theodolite.

SCIENCE SCHOLARSHIPS OF THIRD YEAR.

Differential and Integral Calculus.

1. Explain the origin of the notation of differential co-efficients, and find $\frac{du}{dx}$ in each of the following cases, viz.—

$$u=\frac{x}{\sqrt{1-x^2}}\quad(1)$$

$$u=\frac{b+2cx}{\sqrt{a+bx+cx^2}}\quad(2)$$

$$u=\sin^{-1}\frac{x}{\sqrt{1+x^2}}\quad(3).$$

$$u=\log\left(2x+1+2\sqrt{x^2+x+1}\right)\quad(4).$$

2. Explain the analytical theory of vanishing fractions; apply it to determine the true value of each of the following fractions, viz.—

$$\frac{8x^3-1}{8x^3-8x^2+4x-1}\ \text{when}\ x=\frac{1}{2}$$

$$\frac{(x^2-\sin^2 x)^{\frac{1}{2}}}{x\sin x}\ \text{when}\ x=0$$

3. It is possible, without the aid of the calculus, to deduce the equation of the tangent to an algebraical curve at a given point $(x', y',)$. Apply this method to the parabola whose equation is $y^2=4nx$, and verify the result by means of the calculus.

4. Show that the method above referred to, although it does not involve the actual employment of the calculus, still rests upon the fundamental notion of a limit, and applies that notion in determining the limiting value of a vanishing fraction.

5. Determine the maximum or minimum values of the following functions of x, viz.:—

$$\frac{9a^2+3ax+x^2}{3a+x},\quad\left\{\frac{e}{x}\right\}^x,\quad\frac{a\sin x+b\cos x}{\sin x\cos x}$$

6. Investigate general expressions for the radius of a curvature in a plane curve. 1st, when referred to rectangular, 2ndly, when referred to polar co-ordinates, considering the two cases *independently*.

7. Verify the polar formula by deducing it from the rectangular one.

8. Find an expression for the radius of curvature of the catenary curve whose equation is $y=\frac{a}{2}\left\{e^{\frac{x}{a}}+e^{\frac{-x}{a}}\right\}$. Show from the result that the radius of curvature is a minimum when $x=0$.

9. Deduce from the above equation the general form of the catenary curve.

10. Integrate the following differentials:—

$$\frac{dx}{x(x+1)},\quad\frac{dx}{\sqrt{1+x+x^2}},\quad\frac{dx}{(x^4-1)^{\frac{1}{2}}}$$

11. Integrate the differential $\frac{dx}{x^{2n}-1}$, n being a positive integer.

12. Deduce expressions for the differentials of the area and of the arc of a plane curve referred to polar co-ordinates.

13. Refer to polar co-ordinates the curve whose rectangular equation is $(x^2+y^2)^2=a^2(x^2-y^2)$, and then determine by integration the whole area of the curve.

Algebra, Trigonometry, and Analytical Geometry.

1. Solve the simultaneous algebraic equations

$$\frac{axy}{bx+ay}=\frac{bxy}{ax-by}=c;$$

also the simultaneous system—

$$x^2+xy+y^2=7$$
$$y^2+yz+z^2=19$$
$$z^2+zx+x^2=13.$$

2. Form the biquadratic equation whose roots are $2, -3, 1+\sqrt{-3}$, and $1-\sqrt{-3}$. Show also that if x^2+px+q be the quadratic factor corresponding to a pair of imaginary roots, the value of that factor will be positive for all real values of x.

3. When the roots of a cubic equation are known to be in arithmetical or in harmonical progression, they may be determined by the solution of a quadratic equation. Prove this.

4. Determine the condition which must be satisfied among the coefficients of the equation x^2+ax+b, in order that its roots may be in arithmetical progression.

5. Solve the reciprocal biquadratic equation $x^4-3x^3+3.25x^2-3x+1=0$.

6. Given *any* biquadratic equation $x^4+ax^3+bx^2+cx+d$, it is possible to reduce it to a reciprocal biquadratic equation by a transformation of the form $x=my+n$, the determination of m and n involving only the solution of a cubic equation.

7. Prove that if a number is divisible by 9 the sum of its digits is divisible by 9. Extend this theorem to any scale of notation.

8. If $A+B+C=\pi$, prove that $\cos^2A+\cos^2B+\cos^2C=1-2\cos A\cos B\cos C$.

9. Prove the following theorems of plane trigonometry.

$$\tan\left\{45^\circ+\frac{A}{2}\right\}+\tan\left\{45-\frac{A}{2}\right\}=2\sec A$$

$$\cos^{-1}x+\cos^{-1}y=\cos^{-1}\left\{xy-\sqrt{(1-x^2)(1-y^2)}\right\}$$

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

10. Find an expression for the length of a perpendicular, from a given point $x'\ y'$, upon a straight line,

whose equation is $y=ax+b$. Explain the origin of the double sign.

11. Hence deduce an expression for the length of a perpendicular from the focus of a parabola upon the tangent to the curve,—the position of the tangent being defined by the angle which it makes with the axes.

12. Show that if the co-ordinates x and y are connected with a variable quantity θ by the equations

$$x \cos \theta = a$$
$$y \cos \theta = b$$

the point (x, y) will, by the variations of the value of θ, trace out an hyperbola.

13. Find the position and magnitude of the ellipse which is defined by the equation $x^2+(y-x)^2=2x$.

Senior Science Scholarships.

1. Find the locus of the centre of a circle which passes through a given point and touches a given straight line.

2. Determine the equation of a curve, which is touched by all the straight lines that cut off from the co-ordinate axes (supposed rectangular) intercepts α, β, connected by the relation

$$\frac{1}{\alpha^2}+\frac{1}{\beta^2}=\frac{1}{\gamma^2}.$$

3. Determine what species of curve is represented by the polar equation $r=a(\cos\theta-\sin\theta)$, and find for what values of θ the radius vector r is a maximum or a minimum.

4. Effect also the integration which is requisite to determine the area of the above curve, and interpret the results.

5. Eliminate the arbitrary function ϕ from the equation

$$x^2+y^2+z^2=\phi\,(ax+by+cz).$$

6. Integrate the partial differential equation obtained by the solution of the previous problem.

7. Find the general equation of the tangent plane to a surface at a given point (x', y', z'). Apply the result to the surface whose equation is $x^3+y^3+z^3-3xyz=1$, exhibiting the equation of the tangent in its simplest form.

8. Define the curve of double curvature called a helix, and deduce its equations, the axis being supposed vertical.

9. Determine the equations of the tangent to the helix at the point x', y', z'.

10. Integrate the linear differential equations with constant coefficients

$$\frac{d^4y}{dx^4}-y=0 \ (1), \quad \frac{d^4y}{dx^4}+2\frac{d^2y}{dx^2}+y=0 \ (2), \quad \frac{d^4y}{dx^4}-y=x^2 \ (3).$$

11. Integrate the linear equation with variable coefficients

$$\frac{dy}{dx}-\frac{1+x}{2+2x+x^2}y=\frac{a}{2+2x+x^2}.$$

12. Explain what is meant by the singular solution of a differential equation. Do all differential equations admit of singular solutions?

13. Apply the theory to the differential equation

$$y\frac{dy}{dx}=x\left\{\frac{dy}{dx}\right\}^2+a,$$

deducing both the ordinary and the singular solution, and showing by geometrical considerations the connexion of the results with each other.

14. Evaluate the definite integrals

$$\int_{-\infty}^{\infty} e^{-h^2x^1}dx, \int_{-\infty}^{\infty} e^{-(x^2+x+1)}dx.$$

15. A body moves in the arc of a parabola; find the law of centripetal force tending to the focus.—(Newton, Sec. III., Prop. 13.)

16. Investigate the above case analytically.

Agricultural Scholarships.

1. Define a fraction. . State to what species each of the following fractional expressions belongs, viz. :—

$$\tfrac{3}{5}, \tfrac{17}{4}, \tfrac{2}{3} \text{ of } \tfrac{5}{9}, \tfrac{4}{27} \text{ of } 3\tfrac{1}{4}, \tfrac{2\frac{4}{5}}{14}.$$

2. Reduce the three last of the above expressions to simple fractions.

3. What fraction of an acre would 2 roods $15\frac{1}{2}$ perches be, and what would be its value if an acre were worth £160?

4. The estimated rental of a parish is £2,748 16*s.* 8*d.*, and a rate is to be levied thereon so as to produce £76 5*s.* 3*d.* What is the rate on the pound sterling?

5. If 12 horses can plough $17\frac{1}{2}$ acres of land in 3 days, how many acres will 27 horses plough in $6\frac{3}{4}$ days?

6. The sides A D and B C of a four-sided field, A B C D, are respectively perpendicular to the side A B. It is found that A B measures 500 links, A D 475 links, and B C 525 links. Draw a rough plan of the field, and determine its area and the length of the side D C.

7. How would you describe the figure of the field referred to in the last problem? In what part of ordinary surveying does that figure very frequently present itself?

8. If a square plot of ground contained 365 square yards, what would be the length of a side?

9. A cubical tank contains 12,345 solid yards of water, what are its length, breadth, and depth?

10. Find the cost of excavating a drain whose length is $33\frac{1}{3}$ yards, breadth at the top $11\frac{1}{2}$ yards, at the bottom $8\frac{1}{2}$ yards, depth 3 yards; all the cross sections being trapezoidal and equal, and the cost of excavating each solid yard being one shilling.

11. A field of 27A. 3R. 15P. is rented at £2 per acre. The occupier expends upon it during the year, in seed and manure, £76 10*s.*; and upon its cultivation and the preparation of its produce for the market, an amount of labour equal to that of 350 times the day's labour of a man valued at 2*s.* 3*d.*, and 65 times the day's labour of a horse valued at 1*s.* 2*d.* The crop amounts to $3\frac{1}{2}$ quarters of wheat per acre, and it is sold at 55*s.* per quarter. Draw up a debtor and creditor account, exhibiting the final gain or loss on the field.

G. BOOLE, LL.D., F.R.S., *Professor*.

Medical Scholarships of Second Year.

Natural Philosophy.

1. Explain what is meant by "The work done by a force," and compute the work done in moving a load of 5 cwt. up an inclined plane, the length being 500 feet, and height 25 feet.

2. Find the force which would cause a body to acquire a velocity of 2,000 feet per minute after passing through 100 yards.

3. What is the volume of 25 grains of a gas at temperature 100, Fahrenheit, and pressure 30·56 inches, the specific gravity of the gas being 1·106, and 100 cubic inches of air at temperature 60, Fahrenheit, and pressure 30 inches, weighing 31·0117 grains?

4. A piece of wood, which weighs 50 grains, is sunk with a brass weight, which, when immersed in water, weighs 87·22 grains; the compound body weighs 42·88 grains in water. Determine the specific gravity of the wood.

5. Explain what is meant by chromatic aberration, its effect on microscopes, and the method of correcting the errors caused by it.

6. When a thin film of oil is formed on the surface of water, brilliant colours are frequently observed. Explain the cause.

7. Explain how a thin plate of tourmaline acts as a polarizer.

8. State the relations which exist between the reflecting, absorbing, and emissive powers of bodies.

9. State the influence which the form of a body has on the accumulation of electricity on its surface, and hence explain the effect of points.

APPENDIX B.
Examination Papers for Scholarship Examinations

10. How can an electric current be generated by means of a magnet, and state its direction.

11. What is the distinction between the intensity and quantity of a current; and how are they respectively measured?

12. What is the cause of an echo?

JOHN ENGLAND.

SENIOR SCHOLARSHIP IN NATURAL PHILOSOPHY.

1. A body of known elasticity (e) falls from a given altitude (a) above a hard horizontal plane, and rebounds continually until its velocity is destroyed; find the whole space described.

2. Prove that the time of oscillation of a circular pendulum is nearly found by the formula—

$$T=\pi\sqrt{\frac{a}{g}}\left(1+\frac{h}{8a}\right)$$

3. A string of given length passes over a fixed point; to its extremities are attached two weights, one of which is capable of sliding freely on an inclined plane; determine the curve on which the other must be placed that there may be equilibrium.

4. Find when twilight is shortest in a given latitude.

5. How can the effects of aberration and annual parallax be distinguished?

6. Prove the following equation:—

$$(\mu^2-1)\sin^2\epsilon=4\cos\gamma.\cos(\gamma-\epsilon)\cos(\gamma-\alpha)\cos(\gamma-\alpha')$$

where ϵ = angle of a prism, α and α' the angles which incident and emergent rays form with the sides of the prism and $\gamma=\frac{\alpha+\alpha'+\epsilon}{2}$.

THIRD YEAR SCIENCE, AND SECOND YEAR MEDICAL, ENGINEERING, AND AGRICULTURAL SCHOLARSHIPS.

Chemistry.

1. Give in symbols the preparation of carbonic oxide from oxalic, and from ferrocyanide of potassium.

2. What is meant by Catalytic action? Illustrate by examples.

3. Give, shortly, the laws of combination.

4. State the composition and cause of formation of the white crystals in preparing sulphuric acid on the large scale.

5. Give the mode of preparation and the tests for nitric and hydrochloric acids.

6. How is Bromine prepared? Give the formulæ of its oxygen and hydrogen compounds.

7. State the doctrine of Isomorphism. Illustrate by examples.

8. Give in symbols a neutral sulphate of a protoxide and of a sesquioxide, and state the reasons for such formulæ.

9. Give the process for preparing potassium.

10. How are manganic and permanganic acids prepared?

11. Give the relations of the axes of the square prismatic and of the right prismatic systems of crystallization.

12. Write, according to the Binary theory of salts, the formulæ of hyposulphite of soda, perchlorate of potash, nitrate of the sesquioxide of iron, and phosphate of alumina.

13. Give the mode of preparation, the properties, and the tests of hydrocyanic acid.

J. BLYTH, M.D., *Professor.*

SECOND YEAR'S ENGINEERING SCHOLARSHIP.

Geology and Mineralogy.

1. Name the most important characters of the sedimentary rocks.

2. To what formation does the Gault belong, and in what position does occur?

3. What are the Cephalopoda, the Lamellibranchiata, and Brachiopoda which serve to indicate the muschelkalk?

4. To what position is the German deposit known under the name of Kuperschiefer referable, and what forms of fossils are found therein.

5. To what formation does the *Caen* stone appertain, and what is its English equivalent?

6. From what formation is the great bulk of the British ironstone derived, and in what condition does it usually occur?

7. What are the minerals which enter into the composition of granite, and in what respect does this rock differ from sienite?

8. What is the nature of amygdaloid rock, and what are the minerals commonly associated therewith?

9. What is the origin, nature, and contents of mineral veins, especially such as afford metals?

10. What is the nature of the mineral chiastolite, and under what circumstances does it usually occur?

11. What form does flour-spar generally assume, and of what is it composed?

12. From what mineral is porcelain earth derived?

ROBERT HARKNESS, *Professor.*

SCHOLARSHIP EXAMINATION IN NATURAL HISTORY.

Zoology.

1. In the more highly organized classes of the animal and vegetable kingdoms, it is easy to distinguish an animal from a plant; but as we descend the scale of creation this becomes difficult or impossible. Name and describe some of the beings to which this observation applies.

2. Give the classification of the animal "kingdom," the subdivisions of the two first of these classes, and a short definition of each subdivision.

3. Name the bones in the arm and hand of man, and state how these bones are modified in the foreleg and hoof of the horse.

4. Describe the processes of the digestion, respiration, and circulation in man; and advert to a modification of some of these processes in the case of ruminant animals, and in insects.

5. In what countries are the following animals indigenous, viz.:—The Ouran-Outang, the Quagga, the Bison, the Lama, the Hyena, the Lynx, the Tapir, the Echidna, the Alligator, the Tortoise, and the Boa-Constrictor. Refer each to its place in the classification, and mention a few characteristic traits in the natural history of each.

6. Name as many species of animals and reptiles which are or were indigenous to Ireland as you can recollect.

7. Give a few characteristic traits of the natural history of one or more species in each of the subdivisions of the class of insects.

8. Have you considered the views of naturalists on the subject of the metamorphosis of certain Entozœ? If you have, please state your opinion as to these views, and give the reasons for such opinion.

Botany.

1. What are the functions of the root of a phanerogamous plant? Name and describe shortly the varieties of reservoirs of nutriment to which the term root is commonly but incorrectly applied.

2. Name the other "organs" of a phanerogamous plant, distinguishing such as are essential, and those whose functions may be performed by other organs.

3. Describe cellular tissue, and state your views as to its formation and function.

4. Describe the processes of the vegetation of a seed, and of the nutrition and growth of an exogenous perennial plant.

5 Describe what you suppose to be the process of fertalization of the seed of a phanerogamous plant.

6. Define the "artificial" and also the "natural" classification of plants.

7. Determine the species of one or more of the plants now before you.

Physical Geography.

1. Give the elevation of the more important mountain ranges on the globe, and their height above the snow line.

2. On a map in Johnston's Physical Atlas is laid down a diagram of the Himalaya, with its several regions of vegetation. Can you state what these regions are, and their elevation above the sea?

3. On a map in the same atlas the following regions are indicated, viz.:—The region of northern grains, of northern grains with wheat, of wheat with northern grain, of wheat with tropical grains, of tropical grains. Can you name the limits of these regions to the north of the Equator?

4. Certain great rivers bring down to the ocean immense quantities of mud and debris. Give some of the more important results of these accumulations.

5. Name the principal seats of active volcanic force in the present period.

6. It is believed that appearances presented, for example, in the coal formation, may be accounted for on the supposition of repeated upheavals and subsidences. Can you refer to known phenomena at present in action which tends to corroborate such a supposition?

7. Dublin and Moscow are nearly on the same parallel of latitude, yet, whilst the average summer temperature of Dublin is 60°, and its average winter temperature 40°, the corresponding range of the thermometer in Moscow is 70° and 6°. How is this discrepancy to be accounted for?

8. On what principles may we account for the mild, moist climate of the south of Ireland?

9. Blumenbach arrives at the conclusion that the genus Homo comprehends but a single species. Can you name the varieties into which he divides this species, and give the characteristics and range of habitation of each variety?

E. MURPHY, *Professor*.

SCHOLARSHIP OF THIRD YEAR.

Logic.

1. How far does logic differ from grammar in its treatment of language?

2. Should division precede or follow definition?

3. Can the number of "summa genera," or infima species, be defined?

4. How should propositions be divided according to their substance?

5. Does the law of subaltern opposition bear any relation to the "dictum de omni?"

6. Construct a syllogism on Dimaris, Baroko, and Disamis: reduce ostensively and per impossible.

7. What is the measure of confidence that should be attached to the conjoint method of agreement and difference?

8. Give a short mode of conducting an investigation according to the deductive method, adducing examples.

9. What do you mean by composition of causes?

10. What alterations in the special rules of syllogisms would be rendered necessary by the introduction of Sir W. Hamilton's new class of propositions?

FACULTY OF MEDICINE—SCHOLARSHIP OF SECOND YEAR.

Anatomy and Physiology.

1. What are the characters distinguishing a dorsal vertebra?

2. What are the constituents of the blood?

3. Detail the disposition of the serous pericardium, and then mention the arrangement of the fibrous layer.

4. What do you observe on the internal examination of the right auricle of the heart?

5. What are the functions performed by the diaphragm?

6. State the use and structure of the pyloric valve.

7. What are the relations, the structure, and office of the gall bladder?

8. Describe the mode in which the small intestine communicates with the large.

9. What are the relations of the kidneys and ureters?

SCHOLARSHIP OF THIRD YEAR.

Anatomy and Physiology.

1. Describe the structure and office of a serous membrane.

2. Mention the structure, disposition, and processes of the pia-mater of the brain.

3. Contrast the pia-mater of the brain with that of the medulla spinalis.

4. State the mode of connexion of the spinal nerves with the cord, and detail some experiments made in order to determine their functions.

5. Give an outline of the office performed by the kidneys, and mention the constituents of the urine.

6. Describe the mechanism by which the urine is expelled from the bladder.

7. Mention the several passages which communicate with the nasal cavities, and describe the turbinated bones.

8. Describe the position, relations, structure, and functions performed by the large intestine.

Practical Anatomy.

1. What are the several relations of the submaxillary gland?

2. State the origin, course, relations, and branches of the middle or great meningeal artery.

3. Describe the articular surfaces and ligaments of the elbow joint.

4. Mention the attachments of the anterior annular ligament of the carpus, and state the parts in relation with its superficial aspect, with its deep surface, with its upper and lower borders.

5. Describe the origin, the insertion, and several relations of the obturator externus muscle.

6. State the origin, insertion, and relations of the psoæ muscles.

7. Describe the relations and ligaments of the urinary bladder.

8. Mention the connexions and relations of the triangular ligament of the urethra.

9. What are the relations of the prostrate gland?

SCHOLARSHIP OF FOURTH YEAR.

Anatomy and Physiology.

1. Mention the varieties of the cartilaginous tissue in different regions of the body.

2. How is cartilage primordially developed?

3. Describe the microscopic characters of the nervous tissue.

4. Describe the transparent humours of the eye.

5. Describe the lachrymal puncta, canals, sac, and nasal duct.

6. Describe the nerves of the tongue, and mention the office of each.

7. Mention the composition of the saliva, and describe the mechanism by which mastication is effected.

8. Describe the position, relations, nerves, and arteries of the tonsillitic glands.

9. Describe the superior constrictor of pharynx.

10. Describe the thyroid and arytenoid cartilages.

11. State the composition and use of the pancreatic secretion.

12. Detail the plan on which the circulation of the blood is maintained in fœtal life.

Practical Anatomy.

1. Describe the articular surfaces, ligaments, and synovial apparatus of the knee joint.

2. Mention the origin, course, relations, and branches of the great gluteal artery.

3. Describe the origins, insertions, and relations of the hamstring muscles.

4. Mention the attachments and relations of the soleus muscle.

5. Describe the plantaris and popliteus muscles.

APPENDIX B.

Examination Papers for Scholarship Examinations

6. What are the connexions and relations of the accelerators urinae muscles?

7. Mention the origin, course, relations, and branches of the internal pudic artery.

8. Describe the origin, course, relations, and branches of the subscapular artery.

9. What are the boundaries of the inguinal channel?

10. Detail the varieties of the obturator artery, with respect to origin and relations, and mention the practical bearings of such conditions of the artery.

J. H. CORBETT, *Professor.*

SENIOR SCHOLARSHIP.

Therapeutics.

1. Define an emetic—enumerate the chief substances employed as such, and contrast their modes of operation.

2. Where the use of a purgative is indicated, what are the principal circumstances which will influence your selection of one in particular?

3. In what cases of sleeplessness will opium, in what will hyosciamus, be preferable?

4. Are there any cases in which opium will act as a purgative?—if so, explain its action.

5. May narcotics become tonics in any cases?—if so, explain the mode in which they act as such.

6. Explain the action which diffusible stimulants exercise on the different organic systems.

7. Classify tonics according to their primary actions, enumerate the chief vegetable ones, and state on what active principle the tonic power of each depends.

8. In how many ways may diuretics produce their specific action? State the relative value of the different classes, and the morbid states to which they are applicable.

9. How do saline solutions taken into the alimentary canal cause an increased flow from the intestinal mucus membrane?

10. Explain the meaning of the term "tolerance being established" with regard to active medicines.

JUNIOR SCHOLARSHIP.

Materia Medica.

1. Quinine: its various salts, physiological action, uses in disease, doses of its salts—their relative value; its advantages and disadvantages as compared to bark?

2. Rhubarb: name and natural order of plant furnishing it, part employed in medicine, its uses, action in large and small doses. Compare its properties with those of aloes.

3. State the full dose for an adult, of iodine as a deobstruent, of iodide of iron as a tonic, of sulphate of zinc as an emetic, of elaterium as a purgative.

4. State the uses of the Oleum Terebinthinæ, whether it acts better alone or in combination; when taken internally, how recognised in the secretions?

5. Describe and explain the process of the Dublin Pharmacopeia for obtaining the bi-chloride of mercury.

6. Scammony: from what plant obtained, and how? its physiological action, uses in diseases, dose and mode of administration.

7. Digitalis: natural family of plant, uses in disease, quickest mode of obtaining its specific influence on circulation. What is to be guarded against in prolonging its administration?

8. Liquor Potassæ: what are its effects and uses in disease? what its doses and mode of administration?

9. Describe and explain the process of the Dublin Pharmacopeia for the preparation of the liquor arsenicalis; to what its medicinal action due? Give its doses and uses.

10. Strychnia: its physiological action, morbid states to which applicable.

APPENDIX C.

Examination Papers for Sessional Examinations

APPENDIX C.

SELECTION of EXAMINATION PAPERS for SESSIONAL EXAMINATION.

JUNIOR GREEK CLASS.

Translate into Greek:—

1. I desire wisdom.
2. One ought to reverence the Gods.
3. You ought to attempt the work.
4. The King will not fight within ten days.
5. Socrates was one of those who served at Miletus.
6. The General was put to death by his own soldiers.
7. The General said that he was ready to assist.
8. I entreat you to be ready.
9. I advise you to be ready.
10. If thou shalt say this, thou wilt err.
11. If thou hadst said this, thou wouldst have erred.
12. If thou wert to say this, thou wouldst err.

N.B.—Additional credit will be given for *correct* accentuation.

SENIOR GREEK CLASS.

Translate—

EURIPIDES—ALCESTIS, vv. 962–1005.

ἐγὼ καὶ διὰ μούσας — στρ.
καὶ μετάρσιος ᾖξα, καὶ
πλείστων ἁψάμενος λόγων
κρεῖσσον οὐδὲν Ἀνάγκας
εὗρον, οὐδέ τι φάρμακον
Θρῄσσαις ἐν σανίσιν, τὰς
Ὀρφεία κατέγραψεν
γῆρυς, οὐδ' ὅσα Φοῖβος Ἀ-
σκληπιάδαις ἔδωκε
φάρμακα πολυπόνοις
ἀντιτεμὼν βροτοῖσιν.
μόνας δ' οὔτ' ἐπὶ βωμοὺς — ἀντ.
ἐλθεῖν οὔτε βρέτας θεᾶς
ἔστιν, οὐ σφαγίων κλύει.
μή μοι, πότνια, μείζων
ἔλθοις ἢ τὸ πρὶν ἐν βίῳ.
καὶ γὰρ Ζεὺς ὅ τι νεύσῃ,
σὺν σοὶ τοῦτο τελευτᾷ.
καὶ τὸν ἐν Χαλύβοις δαμά-
ζεις σὺ βίᾳ σίδαρον,
οὐδέ τις ἀποτόμου
λήματός ἐστιν αἰδώς.
καὶ σ' ἐν ἀφύκτοισι χερῶν εἷλε θεὰ δεσμοῖς· — στρ.
τόλμα δ'· οὐ γὰρ ἀνάξεις ποτ' ἔνερθεν
κλαίων τοὺς φθιμένους ἄνω·
καὶ θεῶν σκότιοι φθίνουσι
παῖδες ἐν θανάτῳ.
φίλα μὲν ὅτ' ἦν μεθ' ἡμῶν,
φίλα δὲ θανοῦσα κεῖται·
γενναιοτάταν δὲ πασᾶν
ἐζεύξω κλισίαις ἄκοιτιν.
μηδὲ νεκρῶν ὡς φθιμένων χῶμα νομιζέσθω — ἀντ.
τύμβος σᾶς ἀλόχου, θεοῖσι δ' ὁμοίως
τιμάσθω, σέβας ἐμπόρων.
καί τις δοχμίαν κέλευθον
ἐμβαίνων τόδ' ἐρεῖ·
αὕτα ποτὲ προύθαν' ἀνδρός,
νῦν δ' ἐστὶ μάκαιρα δαίμων·
χαῖρ', ὦ πότνι', εὖ δὲ δοίης·
τοῖαί νιν προσεροῦσι φᾶμαι.

1. Is the Alcestis reckoned among the earlier or later productions of Euripides?—To what class of compositions would you assign it?

2. State what is known of the early life and studies of Euripides. Could he have been a pupil of Socrates?

3. Comment on the following phrases and expressions in the above extract:—διὰ μούσας ἦξα,—Θρῄσσαις ἐν σανίσιν,—Ὀρφεία γῆρυς,—ἀντιτεμών,—τὸν ἐν Χαλύβοισι σίδαρον,—δοχμίαν κέλευθον ἐμβαίνων,—δαίμων.

4. What objection, on the score of *propriety*, has been made to the above song of the Chorus; and how may the poet be defended?

Translate—

HOMER—ODYSSEY, Book XII., vv. 303–319.

Ὣς ἐφάμην, οἱ δ' αὐτίκ' ἀπώμνυον ὡς ἐκέλευον.
αὐτὰρ ἐπεί ῥ' ὄμοσάν τε τελεύτησάν τε τὸν ὅρκον,
στήσαμεν ἐν λιμένι γλαφυρῷ εὐεργέα νῆα
ἄγχ' ὕδατος γλυκεροῖο, καὶ ἐξαπέβησαν ἑταῖροι
νηὸς, ἔπειτα δὲ δόρπον ἐπισταμένως τετύκοντο.
αὐτὰρ ἐπεὶ πόσιος καὶ ἐδητύος ἐξ ἔρον ἕντο,
μνησάμενοι δὴ ἔπειτα φίλους ἔκλαιον ἑταίρους,
οὓς ἔφαγε Σκύλλη γλαφυρῆς ἐκ νηὸς ἑλοῦσα·
κλαιόντεσσι δὲ τοῖσιν ἐπήλυθε νήδυμος ὕπνος.
ἦμος δὲ τρίχα νυκτὸς ἔην, μετὰ δ' ἄστρα βεβήκει,
ὦρσεν ἔπι ζαῆν ἄνεμον νεφεληγερέτα Ζεὺς
λαίλαπι θεσπεσίῃ, σὺν δὲ νεφέεσσι κάλυψεν
γαῖαν ὁμοῦ καὶ πόντον· ὀρώρει δ' οὐρανόθεν νύξ.
ἦμος δ' ἠριγένεια φάνη ῥοδοδάκτυλος Ἠὼς,
νῆα μὲν ὡρμίσαμεν, κοῖλον σπέος εἰσερύσαντες·
ἔνθα δ' ἔσαν Νυμφέων καλοὶ χοροὶ ἠδὲ θόωκοι·
καὶ τότ' ἐγὼν ἀγορὴν θέμενος μετὰ πᾶσιν ἔειπον.

HOMER—ODYSSEY, Book XIV., vv. 160–190.

ἦ μέν τοι τάδε πάντα τελείεται ὡς ἀγορεύω.
τοῦδ' αὐτοῦ λυκάβαντος ἐλεύσεται ἐνθάδ' Ὀδυσσεύς·
τοῦ μὲν φθίνοντος μηνὸς, τοῦ δ' ἱσταμένοιο,
οἴκαδε νοστήσει, καὶ τίσεται ὅστις ἐκείνου
ἐνθάδ' ἀτιμάζει ἄλοχον καὶ φαίδιμον υἱόν.
τὸν δ' ἀπαμειβόμενος προσέφης, Εὔμαιε συβῶτα·
ὦ γέρον, οὔτ' ἄρ' ἐγὼν εὐαγγέλιον τόδε τίσω,
οὔτ' Ὀδυσεὺς ἔτι οἶκον ἐλεύσεται· ἀλλὰ ἕκηλος
πῖνε, καὶ ἄλλα παρὲξ μεμνώμεθα, μηδέ με τούτων
μίμνησκ'· ἦ γὰρ θυμὸς ἐνὶ στήθεσσιν ἐμοῖσιν
ἄχνυται, ὁππότε τις μνήσῃ κεδνοῖο ἄνακτος.
ἀλλ' ἤτοι ὅρκον μὲν ἐάσομεν, αὐτὰρ Ὀδυσσεὺς
ἔλθοι ὅπως μιν ἔγωγ' ἐθέλω καὶ Πηνελόπεια
Λαέρτης θ' ὁ γέρων καὶ Τηλέμαχος θεοειδής.

1. Notice any examples in the above extracts which make *for*, or *against*, the doctrine of the Digamma; and state, generally, the grounds of its admission into the text of Homer, and the way of accounting for those cases to which it appears to be inapplicable.

2. ἀπόμνυμι; what is the Latin equivalent to this word, as here used? κλαιόντεσσι; from what did the various forms of the dative plural arise? Give an example from Homer of the original form. νήδυμος; what is the opinion of Buttman as to this word?

3. What appears to have been the general termination of the *infinitive active* of the Homeric verb? Show by examples how the *common* forms, in the several tenses, may be derived from it.

4. Distinguish between ἀλφή, ἀλώη, and ἀλωῇ.

5. Comment on the words τοῦ μεν φθίνοντος μηνός, τοῦ δ' ἱσταμένοιο, and explain the Attic mode of expressing the days of the month.

6. Discuss the meaning and etymology of each of the following:—ἠριγένεια, ὀπώρη, αὦρος, βωστρεῖν, διάκτορος, ἀρνεύτηρ, ἐπιτηδές, ἀκήν, ἠλίβατος, εὐδείελος, ἀλφηστής, ἐπητής, κρήδεμνον, ἀλλοδαπός, ἀμαίμακετος, παρέκ, τολυπεύειν, ἀπάρχεσθαι, αὔτως, πεπνυμένος.

7. Explain the following grammatical forms:—ποτιπεπτηυῖαι, τετυκεῖν, ἀδδηκότας, σάω, ὑπέδεκτο, ἔγρεο, ἐλάαν, ζαῆν.

8. Give Buttman's explanation of the phrases, πρήσσειν, διαπρήσσειν, κέλευθον or ὁδοῖο, and his reasons.

Translate into Iambic trimeter verse:—

Beneath a mountain's brow, the most remote
And inaccessible, by shepherds trod,
In a deep cave, dug by no mortal hand,
A hermit lived, a melancholy man;
Who was the wonder of our wand'ring swains.
Austere and lonely, cruel to himself,
Did they report him; the cold earth his bed;
Water his drink; his food the shepherds' alms.

(A).—Translate—

THUCYDIDES, Book I., c. 84.

Καὶ τὸ βραδὺ καὶ μέλλον, ὃ μέμφονται μάλιστα ἡμῶν, μὴ αἰσχύνεσθε. σπεύδοντές τε γὰρ σχολαίτερον ἂν παύσαισθε διὰ τὸ ἀπαράσκευοι ἐγχειρεῖν, καὶ ἅμα ἐλευθέραν καὶ ἐνδοξοτάτην πόλιν διὰ παντὸς νεμόμεθα· καὶ δύναται μάλιστα σωφροσύνη ἔμφρων τοῦτ' εἶναι. μόνοι γὰρ δι' αὐτὸ εὐπραγίαις τε οὐκ ἐξυβρίζομεν καὶ ξυμφοραῖς ἧσσον ἑτέρων εἴκομεν, τῶν τε ξὺν ἐπαίνῳ ἐξοτρυνόντων ἡμᾶς ἐπὶ τὰ δεινὰ παρὰ τὸ δοκοῦν ἡμῖν οὐκ ἐπαιρόμεθα ἡδονῇ, καὶ ἤν τις ἄρα ξὺν κατηγορίᾳ παροξύνῃ, οὐδὲν μᾶλλον ἀχθεσθέντες ἀνεπείσθημεν. πολεμικοί τε καὶ εὔβουλοι διὰ τὸ εὔκοσμον γιγνόμεθα, τὸ μὲν ὅτι αἰδὼς σωφροσύνης πλεῖστον μετέχει, αἰσχύνης δὲ εὐψυχία, εὔβουλοι δὲ ἀμαθέστερον τῶν νόμων τῆς ὑπεροψίας παιδευόμενοι, καὶ ξὺν χαλεπότητι σωφρονέστερον ἢ ὥστε αὐτῶν ἀνηκουστεῖν, καὶ μὴ τὰ ἀχρεῖα ξυνετοὶ ἄγαν ὄντες, τὰς τῶν πολεμίων παρασκευὰς λόγῳ καλῶς μεμφόμενοι ἀνομοίως ἔργῳ ἐπεξιέναι, νομίζειν δὲ τάς τε διανοίας τῶν πέλας παραπλησίους εἶναι καὶ τὰς προσπιπτούσας τύχας οὐ λόγῳ διαιρετάς. ἀεὶ δὲ ὡς πρὸς εὖ βουλευομένους τοὺς ἐναντίους ἔργῳ παρασκευαζώμεθα· καὶ οὐκ ἐξ ἐκείνων ὡς αμαρτησομένων ἔχειν δεῖ τὰς ἐλπίδας, ἀλλ' ὡς ἡμῶν αὐτῶν ἀσφαλῶς προνοουμένων. πολύ τε διαφέρειν οὐ δεῖ νομίζειν ἄνθρωπον ἀνθρώπου, κράτιστον δὲ εἶναι ὅστις ἐν τοῖς ἀναγκαιοτάτοις παιδεύεται.

(B).—1. Does the insertion or the omission of the *article* before μέλλον, in the first sentence of the above extract, make any difference in its sense? What is the government of ἡμῶν in the same sentence? Explain the connexion of the clause introduced by καὶ ἅμα with what precedes.

2. What is the government of τῶν ἐξοτρυνόντων? State the exact force of the *tense* and of the *preposition* in ἀνεπείσθημεν.

3. Reduce to a logical form the argument introduced by τὸ μὲν ὅτι αἰδώς κ. τ. λ.

4. What is the object of the verb ἐπεξιέναι? Discuss the different interpretations which may be given to the sentence νομίζειν δὲ . . . . παραπλησίους εἶναι.

(C).—Re-translate into Greek:—

Alcibiades, on the other hand, said that they ought not, after sailing from home with so large a force, to return with dishonour and without effecting their purpose; but to send heralds to all the other cities, except Selinus and Syracuse, and endeavour also to get some of the Sicels to revolt from the Syracusans, and to gain the friendship of others amongst them with a view to obtaining corn and troops; but first of all to win over the Messenians, for they lay just in the passage and approach to Sicily, and there would be a harbour for them there, and the most suitable station for observing the enemy.

(D).—Translate into Attic prose:—

"Such were the beginnings of the professed hostility between Thebes and Sparta, and the first breaking out of their secret enmity, that had long time, though hardly, been concealed. For when the Phocian ambassadors came to Sparta, complaining of the violence done by the Thebans, and requesting succour, they had very favourable audience and ready consent to their suit; it being the manner of the Lacedæmonians to defer the acknowledgment of injuries received until occasion of revenge were offered, and then to discover their indignation in cold blood."

APPENDIX C. — Examination Papers for Sessional Examinations

(E).—Describe the state of political parties at Athens at the time when the Sicilian expedition was undertaken. Give a brief account of that expedition, supplying dates and topographical explanations, and state its immediate results, as affecting the general issue of the Peloponnesian war.

JOHN RYALL, *Professor.*

JUNIOR LATIN CLASS.

Horace—Odes, Book III., 2.

Translate into English:—

Augustam amice pauperiem pati
Robustus acri militia puer
Condiscat et Parthos feroces
Vexet eques metuendus hasta,
Vitamque sub divo et trepidis agat
In rebus. Illum ex mœnibus hosticis
Matrona bellantis tyranni
Prospiciens et adulta virgo
Suspiret, eheu, ne rudis agminum
Sponsus lacessat regius asperum
Tactu leonem, quem cruenta
Per medias rapit ira cædes.
Dulce et decorum est pro patria mori,
Mors et fugacem persequitur virum,
Nec parcit imbellis juventæ
Poplitibus timidoque tergo
Virtus repulsæ nescia sordidæ
Intaminatis fulget honoribus,
Nec sumit aut ponit secures
Arbitrio popularis auræ.
Virtus recludens immeritis mori
Cœlum negata tentat iter via,
Cœtusque vulgares et udam
Spernit humum fugiente penna.
Est et fideli tuta silentio
Merces; vetabo, qui Cereris sacrum
Vulgarit arcanæ, sub isdem
Sit trabibus fragilemve mecum
Solvat phaselon; sæpe Diespiter
Neglectus incesto addidit integrum:
Raro antecedentem scelestum
Deseruit pede pœna claudo.

1. Mention some instances in which Horace has imitated Greek writers.

2. Discuss the chronology of the Horatian poems.

3. State the laws of the Sapphic metre. Give the principal rules for determining the quantity of final syllables.

4. Explain the following phrases:—dives Achæmenes, platanus cælebs, trabes Hymettiæ, satelles Orci.

5. Draw a map of Italy; and mark in it Baiæ, lacus Lucrinus, ager Cæcubus, mons Lucretilis, Brundusium.

6. Name the most celebrated contemporaries of Horace.

Translate into Latin elegiacs:—

Wine prepares the minds, and makes them fit for warmth:
Care flies, and is washed away by wine,
Then laughter comes; then the poor man exults;
Then grief, care, and the wrinkled forehead depart;
Then simplicity, rare in our age, opens minds;
For the God drives away artifices.
The son of Atreus, who had escaped Mars and Neptune,
Was the victim of his wife.
Who has not wept for the flame of Creusa,
And a mother stained with her children's blood?
Phœnix was deprived of his eyes;
Maddened horses tore Hippolytus to pieces.

JUNIOR LATIN CLASS.

Sallust.—Catiline, Chaps. 30, 54.

Translate into English:—

Post paucos dies L. Sœnius senator in senatu litteras recitavit, quas Fæsulis allatas sibi dicebat, in quibus scriptum erat, C. Manlium arma cepisse cum magna multitudine ante diem VI. Calendas Novembris. Simul, id quod in tali re solet, alii portenta atque prodigia nuntiabant, alii conventus fieri, arma portari, Capuæ atque in Apulia bellum moveri. Igitur senati decreto Q. Marcius-Rex Fæsulas, Q. Metellus Creticus in Apuliam circumque ea loca missi; hi utrique ad urbem imperatores erant; impediti, ne triumpharent, calumnia paucorum, quibus omnia honesta atque inhonesta vendere mos erat. Sed Prætores Q. Pompeius Rufus Capuam, Q. Metellus Celer in agrum Picenum; hisque permissum uti pro tempore atque periculo exercitum compararent. Ad hoc, si quis indicavisset de conjuratione, quæ contra rempublicam facta erat, præmium servo libertatem et sestertia centum, libero impunitatem ejus rei et sestertia ducenta; itemque decrevere, uti gladiatoriæ familiæ Capuam et in cetera municipia distribuerentur pro cujusque opibus; Romæ per totam urbem vigiliæ haberentur, iisque minores magistratus præessent.

Igitur his genus, ætas, eloquentia prope æqualia fuere; magnitudo animi par, item gloria, sed alia alii: Cæsar beneficiis ac munificentia magnus habebatur, integritate vitæ Cato. Ille mansuetudine et misericordia clarus factus, huic severitas dignitatem addiderat. Cæsar dando, sublevando, ignoscendo; Cato nihil largiundo gloriam adeptus est. In altero miseris perfugium erat, in altero malis pernicies; illius facilitas, hujus constantia laudabatur. Postremo Cæsar in animum induxerat laborare, vigilare; negotiis amicorum intentus, sua negligere; nihil denegare, quod dono dignum esset; sibi magnum imperium, exercitum, bellum novum exoptabat, ubi virtus enitescere posset. At Catoni studium modestiæ, decoris, sed maxume severitatis erat. Non divitiis cum divite, neque factione cum factioso, sed cum strenuo virtute, cum modesto pudore, cum innocente abstinentia certabat, esse quam videri bonus malebat; ita quo minus petebat gloriam, eo magis [illum] sequebatur.

1. Give the substance of Cæsar's speech on the punishment of the Catilinarian conspirators.

2. Give an account of the war between the Romans and Perseus. By what battle was it ended, and at what date?

3. Explain the grammatical terms:—protasis, apodosis, asyndeton.

4. Distinguish between maneo and mano, prædīco and prædĭco, emetior and ementior.

5. Derive delubrum, publicus, infestus, pronus, officium, ingenium, profecto, prudens.

Translate into Latin:—

One of them was a Greek, the other a Roman. Thales of Miletus was the first of the Greeks who predicted an eclipse of the sun. I did the same when Consul. He says that there is no occasion for making haste. The body has need of much food. Are not serpents of immense size found in the Island of Lemnos? It cannot be doubted, that he is a man of no honour. What need have we of your authority? It cannot be denied, that the body has need of meat and drink. We have need of deliberation. It cannot be denied, that we have need of deliberation. Is not custom a second nature. Verres used to say, that he had need of many things. How much money have you need of? I left nothing undone to draw away Pompey from his connexion with Cæsar. How many are there of you? I will ask, how many there are of them?

SENIOR LATIN CLASS.

Tacitus.—Histories, Chap. 50.

Translate into English:—

Trepidam urbem, ac simul atrocitatem recentis sceleris, simul veteres Othonis mores paventem, novus insuper de Vitellio nuntius exterruit, ante caedem Galbae suppressus, ut tantum superioris Germaniae exercitum descivisse crederetur. Tum duos omnium mortalium inpudicitia ignavia luxuria deterrimos velut ad perdendum imperium fataliter electos non senatus modo et eques, quis aliqua pars et cura rei publicae, sed volgus quoque palam maerere. nec iam recentia saevae pacis exempla, sed repetita bellorum civilium memoria, captam totiens suis exercitibus urbem, vastitatem Italiae, direptiones provinciarum, Pharsaliam Philippos et Perusiam ac

Mutinam, nota publicarum cladium nomina loquebantur, prope eversum orbem etiam cum de principatu inter bonos certaretur; sed mansisse G. Julio, mansisse Caesare Augusto victore imperium; mansuram fuisse sub Pompeio Brutoque rem publicam. Nunc pro Othone an pro Vitellio in templa ituros? utrasque impias preces, utraque detestanda vota, inter duos quorum bello solum id scires, deteriorem fore qui vicisset. Erant qui Vespasianum et arma Orientis augurarentur, et ut potior utroque Vespasianus, ita bellum aliud atque alias clades horrebant. et ambigua de Vespasiano fama; solusque omnium ante se principum in melius Mutatus est.

1. Pharsaliam, Philippos et Perusiam ac Mutinam, narrate the events here referred to.
2. Describe the Forum Romanum, and specify the chief objects of interest around it.
3. Draw the character of Galba. Support your statements by references to Tacitus and Suetonius.
4. Mention some poetical words and phrases used by Tacitus. Briefly characterize his style.
5. Give an account of the revolt of Civilis.
6. What are the ancient names corresponding to Mayence, Metz, Cologne, Turin?

Translate into Latin:—

When he heard this, he suffered nobody to rest. I am come to recompense you with some reward, if not a great one. When he heard this, he uttered the name of Quinctilius in a very pathetic manner. I will call upon Caius, whom, though I think he will keep his promises, I will, nevertheless, bind by an oath. Would you assert that those evils are to be feared, which are over in a moment of time? Listen to what that Caius of yours has done. If Demetrius has an audience, it will be all over with the army. Though Caius owes his life to me, yet he endeavours to bring me into odium.

This was the beginning of the end. Despair took possession of the city. The whole population had been long subsisting upon an allowance of a pound of bread to each man, and half a pound for each woman; but the bread was now exhausted, the famine had already begun, and, with the loss of the lake, starvation was close at their doors. They sent urgent entreaties to the Prince to attempt something in their behalf. Three weeks more they assigned as the longest term during which they could possibly hold out. He sent them word, by carrier pigeons, to endure yet a little time, for he was assembling a force, and would still succeed in furnishing them with supplies.

LATIN SENIOR CLASS.

Georgics.—Book III., v. 478–508

Translate into English:—

Hic quondam morbo cœli miseranda coorta est
Tempestas totoque auctumni incanduit aestu,
Et genus omne neci pecudum dedit, omne ferarum;
Corrupitque lacus; infecit pabula tabo.
Nec via mortis erat simplex; sed ubi ignea venis
Omnibus acta sitis miseros adduxerat artus,
Rursus abundabat fluidus liquor, omniaque in se
Ossa minutatim morbo collapsa trahebat.
Sæpe in honore deûm medio stans hostia ad aram,
Lanea dum nivea circumdatur infula vitta,
Inter cunctantes cecidit moribunda ministros.
Aut si quam ferro mactaverat ante sacerdos,
Inde neque impositis ardent altaria fibris,
Nec responsa potest consultus reddere vates;
Ac vix suppositi tinguntur sanguine cultri,
Summaque jejuna sanie infuscatur arena.
Hinc lætis vituli vulgo moriuntur in herbis,
Et dulces animas plena ad præsepia reddunt.
Hinc canibus blandis rabies venit, et quatit ægros
Tussis anhela sues ac faucibus angit obesis.
Labitur infelix studiorum atque immemor herbæ,
Victor equus, fontesque avertitur, et pede terram
Crebra ferit; demissæ aures; incertus ibidem
Sudor et ille quidem morituris frigidus; aret
Pellis, et ad tactum tractanti dura resistit.
Hæc ante exitium primis dant signa diebus
Sin in processu cæpit crudescere morbus,
Tum vero ardentes oculi, atque attractus ab alto
Spiritus, interdum gemitu gravis; imaque longo
Ilia singultu tendunt; it naribus ater
Sanguis, et obsessas fauces premit aspera lingua:

1. Write explanatory notes on the preceding extract; and illustrate the subject by quotations from Thucydides and Lucretius.
2. Give an outline of the second book of the Georgics; notice particularly those passages in it, which you consider most striking.
3. Derive volema, colurnus, exta, mollis, gramen, abdico.
4. Describe the situation of Taburnus, Ismara, Mæotis Tmolus.
5. When did the poet Nicander flourish? What are the subjects of his extant works?

Translate into Latin elegiacs:—

He shall not dread misfortunes angry mien,
Nor feebly sink beneath her tempest rude,
Whose soul hath learnt, through many a trying scene,
To smile at fate, and suffer unsubdued.
In the rough school of billows, clouds, and storms,
Nursed and matured, the pilot learns his art;
Thus fate's dread ire, by many a conflict, forms
The lofty spirit and enduring heart.

B. LEWIS, *Professor.*

THE ENGLISH LANGUAGE.

1. Enumerate the languages of the Celto-Gothic group.
2. What language was spoken by the earliest inhabitants of Britain; and what is the testimony of Latin writers on this subject?
3. Has any theory been proposed, to the effect that, before the Roman invasion, a Germanic language was spoken in Britain? If so, state the arguments on both sides.
4. Give dates of the first Roman invasion, and of the actual subjugation of the Island.
5. Specify the original settlements of the Angles and Saxons on the Continent.
6. Give some account of the Anglo-Saxon settlements in Britain, with the dates of the various invasions.
7. What do you understand by the "Old Saxons?"
8. What dialect forms the basis of modern English? Compare the cognate dialects.
9. Give a literal translation of the following verses:—

(1) Se Hælend for on reste-dæg ofer æceras; sodhlice his leorning-cnihtas hyngrede, and hig ongunnon pluccian tha ear and etan.
(2) Sodhlice tha tha sundor halgan thæt gesawon, hi cwædon to him: Nu thine leorning-cnihtasdodh thæt him alyfed nis reste dagum to donne.
(3) And he cwæhd to him: Ne rædde ge hwæt David dyde tha hine hyngrede, and tha the mid him wæron.
(4) Her he ineode on Godes hus, and æt tha offring-hlafas, the næron him alyfede to etanne, buton tham sacerdum anum?

Parse every word in verse 1.

10. Explain the following passages, and particularly the underlined words:—

(*a*) Thus, after greeting, speaks the King of France:
In my *behaviour* to the majesty—
The borrow'd majesty of England here.
(*b*) *He* hath a *trick* of Cœur-de-Lion's face. The accent of *his* tongue *affecteth him.*
(*c*) Because he hath a *half-face* like my father; with half that face he would have all my land;
A half-fac'd groat five hundred pound a year.
(*d*) *Lord of thy presence,* and no land beside.
(*e*) 'Tis too *respective,* and too *sociable.* For your *conversion.*

APPENDIX C.

Examination Papers for Sessional Examinations

(*f*) And not alone in *habit*, and *device*, exterior form, outward *accoutrement;* but from the inward motion to *deliver* sweet, sweet, sweet poison for *the age's tooth.*

(*g*) Faulc. James Gurney, wilt thou *give us leave* a while.
Gur.—*Good leave*, good Philip.
Faulc, Philip ? — *sparrow !* — James. *There's toys abroad ;* anon I'll tell thee more.

(*h*) What! I am *dubb'd ;* I have it *on my shoulder.*

(*k*) Call for our chiefest *men of discipline, to cull the plots* of best *advantages.*

(*l*) His matches are *expedient* to this town.

(*m*) This little *abstract* doth contain *that large* which died in Geffrey ; and the hand of time shall draw this *brief* into as huge a volume.

(*n*) It ill beseems this presence to *cry aim* to these ill-tuned repetitions.

(*o*) Whose labour'd spirits, *forweary'd* in this action of swift speed, crave harbourage within your city walls.
Be pleased, then.
To pay that duty, which you truly *owe*, to him that *owes* it.

11. Notice any thing remarkable in the grammatical construction of these sentences :—

(*q*) That is my brother's plea, and none of mine ; the which, if he can prove, 'a pops me out, at least from fair five hundred pound a year.

(*r*) Madam, I'll follow you unto the death.

(*s*) The adverse winds,
Whose leisure I have staid, have given him time to land his legions all as soon as I.

(*t*) An 'a may catch your hide, and you alone.

(*v*) I'll smoke your skin-coat, an I catch your right.

(*w*) And but for our approach, those sleeping stones had been dishabited.

(*x*) Lo in this right hand, whose protection is most divinely vow'd upon the right
Of him it holds, stands young Plantagenet.

(*y*) And by this hand I swear,
That sways the earth this climate overlooks.

(*z*) If he see aught in you that makes him like, that any thing he sees which moves his liking, I can with ease translate it to my will.

12. Parse every word of these lines :—

With him along is come the mother Queen,
An Ate', stirring him to blood and strife.
With her her niece, the Lady Blanch of Spain.

13. Give the derivations and the meanings of the following words :—" Indenture, coop, cull, scath, ordnance, ordinance, harbourage, minion, smack, peremptory, owe."

14. Explain the use of *shall* and *will* in affirmative sentences.

15. Translate and explain the following passages :—

A.

He nom tha Englisca boc :
Tha makede Seint Beda.
An other he nom on Latin :
The makede Seint Albin.
And the feire Austin :
The fulluht broute hider in.
Boc he nom the thridde ;
Leide ther amidden.
Tha makede a Frenchis clerc :
Wace wes ihoten.
The wel couthe writen :
And he hoe gef thare ædhelen.
Ælienor the wes Henries quene :
Thes heges kinges.

B.

And unnc birrth bathe lofenn Godd
Off thatt itt was bigunnenn,
And thankenn God tatt itt iss brohht
Till ende thurrh his hellpe ;
Forr itt magg hellpenn alle tha
Thatt blithelike itt herenn
And lufenn itt, and follzhenn itt
Withth thohht, withth word, withth dede.
And whase wilenn shall thiss boc
Efft otherr sithe writenn,
Himm bidde icc thatt he 't write rihht,
Swa summ thiss boc himm tæchethth
All thwerrt u't affterr thatt itt iss
Uppo thiss firrste bime,
Withth all swille rime alls her iss sett
Withth all se fele wordess,
And tatt he loke wel thatt he
An bocstaff write twiggess
Egg whær thær itt uppo thiss boc
Iss writenn o thatt wise.
Loke he well thatt he't write swa,
Forr he ne magg nohht elless
Onn Ennglissh writenn rihht te word
Thatt wite he wol to sothe.

C.

With him ther was his sone, a yonge squier,
A lover, and a lusty bacheler,
With lockes crull as they were laid in presse,
Of twenty yere of age he was I gesse ;
Of his stature he was of even lengthe,
And wonderly deliver, and grete of strengthe,
And he hadde be sometime in chevachie,
In Flaundres, in Artois, and in Picardie,
And borne him wel, as of so litel space,
In hope to stonden in his ladies grace.
Embrouded was he, as it were a mede,
Alle ful of fresshe flowres white and rede ;
Singing he was, or floyting all the day,
He was as fresshe, as is the moneth of May.
Short was his goune, with sleves long and wide ;
Well coude he sitte on hors, and fayre ride ;
He coude songes make, and wel endite,
Juste, and eke dance, and wel pourtraie and write.
So hote he loved, that by nightertale,
He slept no more than doth the nightingale.
Courteis he was, lowly, and servisable,
And carf before his fader at the table.

D.

There was also a nonne—a prioresse,—
That of hire smiling was ful simple and coy ;
Hire gretest othe n' as but by Seint Loy,
And she was cleped Madame Eglentine.
Ful wel she sange the service devine,
Entuned in hire nose ful swetely ;
And Frenche she spake ful fayre and fetisly,
After the scole of Stratford atte bowe,
For French of Paris was to hire unknowe.
At mete she was wel ytaughte withalle ;
She lette no morsel from hire lippes falle,
Ne wette hire fingers in hire sauce depe.
Wel coude she carie a morsel, and wel kepe,
Thatte no drope ne fell upon hire brest.
In curtesie was sette ful moche hire leste,
Hire over lippe wiped she so clene,
That in hire cuppe was no ferthing sene
Of grese, whan she dronken hadde hire draught;
Ful semely after hire mete she raught ;
And sikerly she was of grete disport ;
And ful plesant, and amiable of port ;
And peined hire to contrefeten chere,
Of court, and ben estatelich of manere,
And to ben holden digne of reverence.
But for to speken of hire conscience,
She was so charitable and so pitous,
She wolde wepe if that she saw a mous
Caughte in a trappe, if it were ded or bledde.
Of small houndes hadde she that she fedde
With rosted flesh, and milke, and wastel brede ;
But sore wept she if on of hem were dede ;
Or if men smote it with a yerde smert ;
And all was conscience and tender herte.

WILLIAM RUSHTON, *Professor.*

Modern Languages.

Translate into French—

If a fool knows a secret, he tells it because he is a fool; if a knave knows one, he tells it wherever it is his interest to tell it. But women and young men are very apt to tell what secrets they know from the vanity of having been trusted. Trust none of these, whenever you can help it.

In attention to the present business, be it what it will, the doing one thing, and thinking at the same time of another, or the attempting to do two things at once, are the never failing signs of a little frivolous mind.

Distrust all those who love you extremely upon a very slight acquaintance, and without any visible reason. Be upon your guard, too, against those who confess, as their weaknesses, all the cardinal virtues.

In your friendships and in your enmities let your confidence and your hostilities have certain bounds; make not the former dangerous, nor the latter irreconcilable. There are strange vicissitudes in business!

Smooth your way to the head through the heart. The way of reason is a good one; but it is commonly something longer and not so sure.

It is always right to detect a fraud and to perceive a folly; but it is often very wrong to expose either. A man of business should always have his eyes open; but he must often seem to have them shut.

There is a court jargon, a chit-chat, a small talk, which turns singly upon trifles, and which, in a great many words says little or nothing. It stands fools instead of what they cannot say, and men of sense instead of what they should not say. It is the proper language of levees, drawing-rooms, and antechambers; it is necessary to know it.

At court people embrace without acquaintance, serve one another without friendship, and injure one another without hatred. Interest, not sentiment, is the growth of that soil.

Awkwardness is a more real disadvantage than it is generally thought to be; it often occasions ridicule; it often lessens dignity.

A man's own good breeding is his best security against other people's ill manners.

Knowledge may give weight, but accomplishments only give lustre; and many more people see than weigh.

Most arts require long study and application; but the most useful art of all, that of pleasing, requires only the desire.

Lord Chesterfield.

1. When is the negative *ne* applied in French without there being a corresponding negative in English?—Give examples.
2. What class of verbs is regularly conjugated in English with the auxiliary *to have*, while in French with *être*.
3. What has been the influence of the reign of Francis I. on French literature.
4. State what you know of Racine and of his works.

English Literature.

1. Describe the state of Britain under the Romans.
2. Review the poetical literature of the Anglo-Saxons, stating what you know of Beowulf and Caedmon's song, with remarks upon the versification of those poems.
3. What were the works of Beda and King Alfred? What influence did those works exercise upon the literature of the country?
4. What were the characteristics of Norman-French poetry? Mention the works of Maistre Wace and Geoffroi Gaimar.
5. Trace some of the British legends, as they appear in Geoffrey of Monmouth, Wace, and Layamon.
6. Give some account of the following works:—(1) Layamon's Brut; (2) the Ormulum; (3) Robert of Gloucester's Chronicle; (4) Robert de Brunne's Chronicle.
7. To whom do you ascribe the "Visions of Piers Ploughman?" What is the nature of that work?
8. Review the ancient English ballads, and particularly the "Robin Hood" series.
9. Give a short statement of the lives and writings of John Gower, Geoffrey Chaucer, and William Dunbar.
10. Give a tabular view of English writers during the Elizabethan era.

RAYMOND DE VERICOUR.

Arithmetic and Algebra.

Junior Class.

1. Representing π by 3.14159, express the value of $\frac{1}{\pi}$ to four places of decimals. Hence calculate the diameter of a circle whose circumference is 1000.
2. Divide 17.5 by .0025, and prove the truth of the result by vulgar fractions.
3. Define the terms *factor*, *coefficient*, and *index*, and from the definition of the last of these terms deduce the following theorems, viz.: $x^0=1$, $x^{-1}=\frac{1}{x}$, $x^m \times x^n = x^{m+n}$.
4. Find the side of a square whose area is 493.7284 square feet. Determine also the sides of a rectangle equivalent to the above, but such that one side is to the other in the ratio of 3 to 5.
5. Explain the theory of the process for the extraction of the square root.
6. Extract the cube roots of 40353607 and of $6\frac{104}{125}$. In what class of problems in mensuration is the extraction of the cube root involved?
7. Define the terms *ratio* and *proportion*. Show how when any three terms of a proportion are given the remaining term may be found. Ex.: the first term of a proportion being $2\frac{1}{2}$, the third $3\frac{1}{4}$ and the fourth 9, find the second. Find also a mean proportional between $\frac{1}{9}$ and 4.
8. Solve the following simple equations:—

$$2x+12\tfrac{1}{4}-\frac{4x}{3}-6=\frac{3x}{4}-\frac{43}{8}$$

$$3.25x-5.007-x=.2-\frac{17x}{50}$$

$$x-\frac{x-1}{2}+\frac{x-7}{3\frac{1}{2}}=\frac{x-2}{5}+\frac{3x}{7}$$

$$(a+x)^{\frac{1}{m}}=(x^2+5ax+b^2)^{\frac{1}{2m}}$$

9. Explain the origin of quadratic equations, and construct one whose roots shall be 3 and 5. Also one whose roots shall be $3+2\sqrt{-1}$ and $3-2\sqrt{-1}$.
10. Solve the following equations:—
    (1) $x^2-5x=-\frac{7}{4}$
    (2) $3\sqrt{112-8x}=19+\sqrt{3x+7}$
    (3) $x^4+3x^2=28$.
11. Solve the following simultaneous equations:—

$$(1)\begin{cases} x+y=a \\ x^2+y^2=b \end{cases} \quad (2)\begin{cases} x-y=3 \\ x^2-xy+y^2=13. \end{cases}$$

12. Deduce formulæ for the calculation of compound interest and of annuities.
13. Apply Horner's method of approximation to obtain a root of the equation—$x^3-12x=28$.
14. Demonstrate Cardan's method, and apply it to the above example.
15. Prove the binomial theorem, and illustrate it by a particular example.

Euclid and Trigonometry.

Junior Class.

1. Explain the nature and object of the science of Geometry, and define the following terms, viz.:—*Axiom*, *Postulate*, *Problem*, *Theorem*; also the terms *Line*, *Angle*, and *Surface*.
2. To draw a straight line through a given point parallel to a given straight line.—Euclid I., 31.
3. The interior angles of a polygon are equal to twice as many right angles, diminished by four, as the figure

APPENDIX C.

Examination Papers for Sessional Examinations

has sides.—Euclid I., 32. Prove this and find the sum of the exterior angles.

4. Define *similar segments* of a circle. Define also *similar polygons*. Are the two definitions in any way related?

5. On a given straight line to describe a segment of a circle which shall contain an angle equal to a given angle.—Euclid III., 33. Explain the practical use of this problem.

6. Give Euclid's definition of proportion, and show that it virtually involves the arithmetical definition.

7. Parallels cut diverging lines proportionally. Prove this, and show its connexion with the doctrine of similar triangles.

8. The base of a right-angled triangle measures 100, and the acute angle at the base contains 30°. Calculate the hypothenuse and the perpendicular. Mention also some other values of the base angle for which the calculation can be performed without the aid of trigonometrical tables.

9. Trace the variations of the sine, cosine, and tangent, as the arc varies through a circumference.

10. Prove that in a plane triangle $a^2=b^2+c^2-2bc\cos A$.

11. The sides of a triangle are proportional to the sines of the opposite angles. Prove this.

12. Investigate formulæ for the solution of the different cases of plane triangles.

13. Prove the theorem, $\sin(a+b)=\sin a\cos b+\cos a\sin b$; and hence show that $\sin(90^\circ+a)=\cos a$, and $\cos(90^\circ+a)=-\sin a$, and $\sin(180^\circ\pm a)=\mp\sin a$.

14. Prove the following theorems:—

$$\cos 2a=\frac{1-\tan^2 a}{1+\tan^2 a}$$

$$\cos^2 a-\sin^2 b=\cos(a+b)\cos(a-b)$$

15. Give two or three definitions of a plane, and show first, how the inclination of one plane to another, secondly, how the inclination of a straight line to a plane may be determined.

ARITHMETIC, ALGEBRA, AND TRIGONOMETRY.

Second Year's Class.

1. What fraction of a guinea and a half is 16*s.* 4*d.*? Express the same amount also as a decimal, and show why it is a recurring one.

2. The sides of a rectangular parallelopipedon are in the proportion of 1, 2, and 3, and the solid content is 2,058 cubic feet. Determine the sides.

3. Find all the roots of the following equations:—

$$(1)\ 4x^2=21+\sqrt{4x^2-9}.$$
$$(2)\ x^4+x^3-x-1=0.$$

4. Determine to four places of decimals a root of the equation—

$$x^3+2x^2+3x=125.$$

5. Solve the simultaneous equations—

$$\left\{\begin{array}{l} x+y=\frac{5}{6} \\ x^2+xy+y^2=\frac{19}{36} \end{array}\right\}$$

6. What is the geometrical interpretation of the last problem, supposing x and y to represent rectangular co-ordinates?

7. Demonstrate the rule for finding the greatest common measure of two quantities. Apply it to reduce the fraction $\frac{x^3-3x-2}{x^4-x^3+x-10}$ to its lowest terms.

8. The solution of a reciprocal equation of the degree $2n$ is reducible to that of an equation of the degree n. Prove this generally, and exemplify it in the case of $n=2$.

9. The three roots of the equation

$$x^3-9x^2+26x-24=0$$

are in arithmetical progression. Find them.

10. Prove the following formulæ of plane trigonometry:

$$(1)\ \sqrt{\frac{1+\sin 2a}{1-\sin 2a}}=\tan(a+45^\circ)$$

$$\frac{2\sec a}{1+\sec a}-\tan^2\frac{a}{2}=1$$

11. Show that the area of a regular polygon of n sides is to the area of the inscribed circle as $n\tan\frac{\pi}{n}$ is to π. Show, also, how the value of $\tan\frac{\pi}{n}$ may be determined when n is an integer power of 2.

12. The sides a b of a parallelogram are inclined at an angle θ; find the mutual inclination of the diagonals.

13. Two planes which have three points common will coincide throughout their whole extent unless the points are situated in a straight line. Prove this.

14. How is the magnitude of a solid angle determined? Show that it is proportional to the excess of half the sum of the dihedral angles which form it over as many right angles diminished by two.

15. Define the terms latitude and longitude as applied to the stars. Given the latitudes and longitudes of two stars: show, first, how their right ascensions and declinations may be found; secondly, how the angle between them may be found.

ANALYTICAL GEOMETRY, AND DIFFERENTIAL CALCULUS.

1. The straight line whose equation is $y=mx+n$ intersects the hyperbola whose equation is $x^2-y^2=1$. Find, first, the co-ordinates of the points of intersection; secondly, the length of the intercepted chord.

2. Ascertain what must be the relation between m and n, in the above example, in order that the straight line may touch the hyperbola.

3. Find the locus of the middle point of the chord in Ex. 1, n being a variable perimeter.

4. Determine the nature, position, and magnitude of the curve defined by the equation $x^2+y^2-2x+2y=0$.

5. Determine the species of the curve defined by the equation $x^2+xy+y^2=4$.

6. Investigate formulæ for the rectangular transformation of co-ordinates. Apply them to determine more fully the position of the curve referred to in the last example, and the magnitude of its axes.

7. Investigate the general equation of the tangent to a plane curve. Apply it to express in its simplest form the equation of the tangent to the curve given in Ex. 5.

8. Find an expression in terms of the co-ordinates of the point of contact for the triangle intercepted between the tangent and the co-ordinate axes in the last example.

9. Define a plane, investigate its equation, and interpret the constants.

10. Find the cosine of the angle included between the straight lines whose y equations are

$$\frac{x}{4}=\frac{y}{2}=z \text{ and } x=\frac{y}{2}=\frac{z}{4}.$$

11. How are the equations of the projections of the line, in which two given surfaces intersect, determined? Give an example.

12. Define the *radius of curvature* of a plane curve. Explain also what is meant by the terms involute and evolute.

13. Determine the radius of curvature and the evolute of the curve whose equation is $y=2x^2$.

14. Investigate the form of the above curve as well as of its evolute.

15. Find the area of the above curve between the limits $x=0$ and $x=1$; show also that the curve admits of rectification.

16. Integrate the following differentials, viz.:—

$$(1.)\ x\frac{dx}{(1+x^2)^{1}}. \qquad (2.)\ x^3\sqrt{1+x^2}\,dx.$$

G. BOOLE, F.R.S., *Professor.*

ENGINEERING PHYSICS.

1. What is the relation between the "vis viva" and the work accumulated in a moving body; and determine the work accumulated in a weight of 2 tons in falling through 30 feet?

2. A beam 30 feet long, which weighs $1\frac{1}{2}$ tons, is capable of turning on one of its ends, to the other end

is attached a rope, which is fastened to a point 40 feet over the fixed end of the beam; required the strain on the rope when the beam is inclined 45° to the horizon?

3. What is the "mechanical advantage" of an endless screw, the length of the handle being 1·4 feet, the number of teeth in the cog wheel being 30, and the diameter of the axle .2 feet.

4. Find the amount of pressure on a rectangular sluice 4 feet square, the upper edge of which is 10 feet below the surface.

5. A train, weighing 180 tons, moves up an incline of 1 in 200 with a velocity of 25 miles an hour; required the effective horse-power of the engine, friction being 7 lbs. per ton, and the resistance of the air, at a speed of 10 miles per hour, being 40 lbs.?

6. What would be the centrifugal force of the same train on a curve of $\frac{1}{2}$ mile radius, at a velocity of 40 miles per hour?

NATURAL PHILOSOPHY.

Junior Division.

1. Describe the construction of Fahrenheit's thermometer. In what respect does it differ from the Centigrade thermometer?

2. A gas occupies 100 cubic inches at 32°, Fahrenheit, what volume would it fill at 212°, Fahrenheit, at the same pressure?

3. What is meant by the latent heat of steam? How may its existence be shown experimentally?

4. What is meant by the principal focus of a lens? and what by the centre of a lens?

5. What is meant by compound lens? why are such lenses used for the object-glasses of microscopes?

6. State the several methods used for polarizing a ray of light.

7. Describe the action of the electrophorus.

8. Describe the construction and use of the gold leaf condenser.

9. What is meant by the magnetic equator of the earth?

10. How can the earth's inductive action be shown experimentally?

11. Describe the construction of Grove's battery, stating the direction of the current.

12. Describe the action of a current on a magnetic needle.

13. What is meant by a thermo-electric current? and describe the construction of a thermo-electric battery.

NATURAL PHILOSOPHY.—MECHANICS, HYDROSTATICS, ACOUSTICS, ASTRONOMY.

Senior Division.

1. An uniform horizontal bar, 12 inches long, has two weights, one 25 lbs., the other 5 lbs., suspended from its ends; at what point must a prop be applied to produce equilibrium, the weight of the bar being 10 lbs.?

2. By what experiments has it been proved that gravity is an universal property of matter?

3. At what distance from each other must the threads of a screw be cut, that a power of 20 lbs., acting at the extremity of an arm 20 inches long, may pass, by means of the screw, with the weight of 5 tons?

4. A body is projected vertically upwards in vacuo with a velocity of 1600 feet per second; in what time will it again reach the ground?

5. If a body move in a circle under the action of a force directed to the centre, its velocity must be uniform.

6. The mercury in a barometer indicates 30.254, temperature 62° Fahrenheit; reduce it to the equivalent height at 32° Fahrenheit, the constants of the barometer being neutral point 29.861, capacity $\frac{1}{48}$, capillary attraction 0.036.

7. What is meant by the "metacentre" of a floating body, and explain how the stability of equilibrium depends on its position.

8. If, when 60 grains of mineral be introduced into a 500 grain specific gravity bottle, and the bottle then filled with water, it weighs 540 grains, what is the specific gravity of the mineral?

9. What is the volume of 1,000 grains of oxygen at the temperature 100° Fahrenheit, and pressure 28 inches, the absolute density of oxygen being 1.106, and 100 cubic inches of air at 32° Fahrenheit, and 30 inches pressure, weighing 31 grains.

10. How is it shown that all the sounds travel with the same velocity?

11. What relations subsist between the number of vibrations which produce the musical notes, 1st, major, 3rd, 5th, and octave?

12. How has the moon's distance from the earth been ascertained?

13. What is meant by the moon's "libration in longitude," and state its cause?

14. What is known as the aberration of the fixed stars?

15. When does the motion of an inferior planet appear retrograde?

ENGINEERING PHYSICS.

1. Assuming 770 foot pounds as the mechanical equivalent of 1 unit of heat, determine the mechanical effect of the combustion of 1 lb. of coal, if 7 lbs. of coal evaporate 1 cubic foot of water, at 62° Fahrenheit, into steam at 212° Fahrenheit.

2. The length of a metallic bar at 32° Fahrenheit being 11.80 feet, and its length at 83 Centigrade being 11.853 feet, calculate its coefficient of expansion for 1° Fahrenheit.

3. A piece of iron weighing 750 grains, and at the temperature 212° Fahrenheit, is placed in 425 grains of water at 60° Fahrenheit; if the specific heat of iron be 0.1138, what change of temperature will it effect in the water?

4. A steam engine has two cylinders, each 4 feet in diameter, the length of stroke is 6 feet, pressure of steam in the cylinder 60 lbs. per square inch; if the steam be cut off at $\frac{1}{4}$ stroke, pressure of uncondensed steam 4 lbs. per square inch, when the engine makes twenty double strokes per minute, calculate

A.—The horse-power,
B.—The effective evaporation,
C.—The effective consumption of fuel,

1 lb. of coal producing the effect given in question 1.

5. Describe the principle of parallel motion as applied by Watt to the steam engine.

6. Given the temperature and pressure of steam, how can its volume, relative to the volume of the water which produces it, be calculated?

MATHEMATICAL PHYSICS.

1. A pencil of rays being incident nearly perpendicularly on a thin prism, required the focus of the refracted pencil.

2. Determine the position of minimum dispersion.

3. The index of refraction of crown glass being 1.53, and its dispersive power 0.036, determine the dispersion produced by an equi-convex lens 2 inches in aperture and 40 inches curvature.

4. Determine the relation between the foci of the incident and emergent rays in a lens of given thickness.

5. Find the declination of the sun when the time of passing from one given altitude to another is the minimum.

6. What is the greatest distance of the moon's conjunction from a node at which a solar eclipse can take place?

7. How can the height of a lunar mountain be computed?

8. Investigate the law of atmospheric refraction?

MATHEMATICAL PHYSICS.

1. Investigate the condition that any number of forces should have a single resultant.

2. A beam rests against a smooth vertical plane and a smooth curve; find the nature of the curve that the beam may rest in all positions.

Appendix C.

Examination Papers for Sessional Examinations

3. In any system of heavy particles, prove that the sum of the products of the mass of each particle by its distance from the centre of gravity is less than the sum of the similar products for any other point.

4. If a point move in a straight line, under the action of a force directed to a fixed point, find the time of descent to the centre of force, when the force varies as the distance.

5. If a heavy body be projected in a resisting medium, the resistance being proportional to the square of the velocity, determine the equation which expresses the relation between the direction of motion and the length of the curve described.

6. Given the base of an inclined plane, find its inclination, so that a body projected up it with a given velocity shall fall at the greatest possible distance beyond the base.

7. Find the centre of pressure of a trapezium having one of its sides in the fluid.

John England, *Professor.*

Chemistry.

1. State the essential points of difference between chemical and physical phenomena.

2. In what respects do the forces of cohesion and chemical affinity differ?

3. State the doctrine of combination by chemical equivalents, and explain what is meant by the hydrogen and oxygen scales.

4. Give, in symbols, the preparation of protoxide and of binoxide of nitrogen; state their chief properties.

5. Give all the reactions which take place in preparing phosphorus from bones.

6. Give examples, in symbols, of binary, ternary, and quaternary compounds.

7. Give the tests for HI, HCl, SO_3, PO_5, and NO_5.

8. Give the properties of the two modifications of silicic acid, and mention how they may be converted into each other.

9. Illustrate, by examples, single and double decomposition.

10. Write the formulæ of the salts of ammonia according to the old and new views.

11. Explain the phenomena which take place on throwing K on water.

12. Give the tests for potash, zinc, manganese, copper, and lead.

13. How is the neutrality of salts ascertained? Explain this on the binary theory of salts.

14. Give the reason of the changes which take place on adding acids and alkalis to manganic and permanganic acids.

15. Explain the mode of preparation, and give, in symbols, the reactions which take place in preparing hydrate of baryta from the carbonate and from the sulphate of baryta.

16. What are the relations of the axes of the rhombohedral system?

17. Explain the reactions which take place in the different portions of a hot-blast furnace in the reduction of iron from the carbonate.

18. Explain the nature of polymeric and metameric bodies.

J. Blyth, *Professor.*

Botany.

1. Name the several characters which separate exogens from endogens.

2. To what Linnean classes should the natural orders:—Cruciferæ, Malvaceæ, and Orchidaceæ, be referred?

3. Contrast the orders:—Iridaceæ, Liliaceæ, and Amaryllidaceæ.

4. What are the characters of the order Leguminosæ? Give examples.

5. Explain the terms:—"hypogynous," "perigynous," "epigynous," and "epipetalous stamens." Give illustrative examples.

6. What vegetable forms are included under the division Thallogens?

7. Define the botanical terms,—"thallus," "sporangium," "ligule," "spathe," "umbel;" also the technical words—versatile, imperfect, and incomplete.

8. Refer the following genera—Aconitum, Daucus, Digitalis, Fucus, Juniperus, Narcissus, and Quercus, to their respective sub-classes and orders.

Zoology.

1. Describe the circulation in mammals.

2. The dental formula of man?

3. Name in their proper order the several classes of the sub-kingdom Mollusca, and give an example of each.

4. Contrast the different modes in which the respiratory function is performed in the several orders of the class Annelida.

5. Define the term,—"zooid."

6. Compare the classes Rhizopoda and Infusoria.

7. Distinguish *affinity* from *analogy*. Give illustrative examples.

8. Refer the wild boar, the parrot, the stickleback, the pearly nautilus, the lobster, the woodlouse, and the sea-urchin, to their respective classes and orders.

Physical Geography.

1. What are the agents which modify the relative distribution of land and water?

2. Name the several forms of coral reefs, and give the theory as propounded by Darwin for occurrence of *atolls.*

3. What is the nature of the sea-bottom, as shown from the products of the deep-sea soundings?

4. What is the nature of Artesian wells, and under what circumstances do they originate?

5. Name the causes which give rise to dew, and the conditions which are most favourable for its occurrence.

6. On what portion of the earth's surface is the largest annual rain-fall; and what are the causes which influence the amount of rain in this area?

7. What is the nature of the trade-winds, and to what causes do they owe their occurrence?

8. Name the features which characterize the Mongolian race? Over what portions of the earth's surface is this race distributed?

J. Reay Greene, *Professor.*

Geology and Mineralogy.

1. Name the four principal groups into which geologists divide the solid matter forming the crust of the earth, and give some of the features which characterize each of these groups.

2. What are the various sedimentary deposits which result from the agency of water, and what are the bases upon which these deposits are classified?

3. Name the two groups into which volcanic products are generally divided; and what are the minerals which enter into the composition of each of these groups?

4. When sedimentary and igneous rocks come in contact, what are often the results? and give some examples of the products of contact.

5. What genus of tetrabranchiate cephalopod is most characteristic of the Devonians?

6. In what respects do the fossil plants of the coal-bearing strata of the lower oolite differ from those of the coal measures of the carboniferous formation?

7. If the following specimens of fossils were submitted to you, to what formation would you refer them:—*Lithostrotion basaltiforme, Platycrinus lævis, Phillipsia pustulata, Fenestella plebeia, Orthis resupinata, Conocardium aliforme, Euomphalus dionissii, Goniatites crenestria.*

8. What is the name and position of that deposit which has in many parts of England received the name of *Blue Slipper;* and why has this term been applied to it?

9. What is the meaning of the term foliation? as this is applied to metamorphic rocks.

10. What are the most common substances known under the name of vein-stuffs, which are associated with metals in mineral veins?

Mineralogy.

11. What is the number of axes in the hexagonal system of crystals, and what is the mode in which these are arranged?

12. In what forms of the felspar family does the earth lithia occur?

13. What are the external characters, by means of which gypsum can be distinguished from calc-spar?

14. In what condition, as a mineral, does the substance from whence antimony is usually procured occur?

ROBERT HARKNESS, *Professor.*

THEORY OF AGRICULTURE.

1. Describe the formation and usual constituents of agricultural soils, and the principles of their classification.

2. What are the characteristics of a productive soil?

3. Describe the *organs*, internal and external, of a phanerogamous plant.

4. Describe the processes of the vegetation, nutrition, and growth of a phanerogamous plant.

5. Experience shows that land is deteriorated by cropping. Can you account for this fact scientifically?

6. Give the constituents of ordinary farm-yard manure, also of a good sample of superphosphate of lime, and of Peruvian guano; and describe a simple means by which adulteration in either of the two last-named manures may be detected.

7. Describe some of the more important of the agricultural grasses and forage plants.

8. Give the name, natural family, and description of some of the most troublesome of the agricultural weeds.

9. Do the same with respect to some of the insects most injurious to farm crops.

EDMUND MURPHY, *Professor.*

METAPHYSICS.

1. Explain the doctrine of pre-established harmony.

2. What are the Idola of Bacon? and do they resemble any of the sources of fallacy enumerated by writers on logic?

3. Explain the distinction between presentative and representative knowledge.

4. Was the philosophy of Spinoza a legitimate result of the Cartesian?

5. Examine Locke's arguments against innate ideas.

6. What are meant by synthetical *à priori* propositions in Kant's system?

7. Give the steps by which Hume endeavours to arrive at his conclusions respecting causation.

8. What is Reid's theory of perception?

9. What are the chief defects of the Scotch school?

10. What is Brown's account of causation?

11. Compare the theories of Hobbes and of Hartley with respect to sensation.

12. Explain Hartley's laws of association and of transference.

LOGIC.

1. Define logic.

2. What is a "common" noun?

3. Can generalization exist without abstraction?

4. What are the rules for good division?

5. How should propositions be divided according to their quantity.

6. What are the laws of contrary opposition? Are they necessary?

7. For what reasons was conversion by negation introduced? What are its rules?

8. Define syllogism.

9. Construct and reduce syllogisms in cameres, bokards, and dimaris.

10. Prove that if one premiss be particular the conclusion must be particular.

11. Special rules for the second figure, with proofs.

12. What is a dilemma?

13. How many legitimate inferences can be drawn from a hypothetical?

14. Give Whately's division of fallacies.

a. Upon what principle is the system of predicables adopted by Whately based? Can you suggest another?

b. Are Aristotle's categories intended for the same purpose as those of Kant?

c. Compare the laws of subaltern opposition with the dictum de omni. Are they identical?

d. Why was reduction introduced into logic? Is it necessary? Is reduction per impossibile conclusive?

e. What are the objections to the fourth figure? How can you explain its introduction into logic?

f. Give the special rules for sorites, with proofs. How does it differ from prosyllogism?

I. Can induction be properly defined as a colligation of facts under appropriate conceptions?

II. How far does the conjoint method remedy the weakness of the method of agreement?

III. To what classes of phenomena is the method of concomitant variations best adapted?

IV. Why is the deductive method alone to be relied upon in cases where the experimental methods are inapplicable?

V. In how many ways is a law of nature said to be explained?

VI. Is the distinction between agent and patient tenable in science?

VII. How do "bias" and "indifference to truth" produce erroneous reasoning, and why is it unnecessary to discuss them in a treatise on fallacies?

VIII. What is the distinction between fallacies of malobservation and the record class of fallacies of non-observation?

G. S. READ, *Professor.*

ENGINEERING.

Junior Class.

1. Describe the prismatic compass. How is it used in surveying?

2. What is the "line of collimation" of a theodolite of the ordinary construction? How would you ascertain if the spirit-level, attached to the telescope, be parallel to the line of collimation, and how correct the error, if there be any?

3. How does hilly ground interfere with correct chaining in a survey? What precaution would you adopt in chaining over such ground?

4. How would you find the contents of the several parts of a chain survey?

5. If a map were plotted to a scale of 10 Irish perches to an inch, how would you construct on it a scale of English perches?

6. How may the latitude be found from an observation of the sun?

7. If the latitude be required accurately, an approximate knowledge of the longitude is necessary?

8. Mention some of the scales used for surveys and sections for different purposes.

9. Before using an ordinary level, how would you examine whether it be in adjustment?

10. If the instrument be in adjustment, mention the precautions necessary to insure accuracy in the section.

ENGINEERING.

Junior Class.

1. Draw a perpendicular at the end of a line without producing it.

2. Draw a false ellipse with 5 centres.

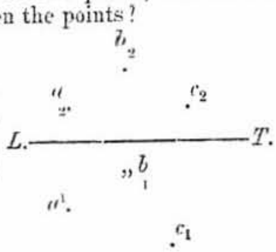
3. Explain the construction of the Marquois scales.

4. How would you construct a triangular ruler to set off inches with the Marquois scales?

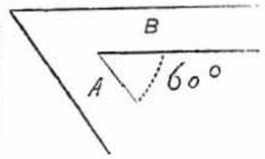
5. Explain how, in the system called orthographic projection, solids of 3 dimensions are represented by figures drawn on one sheet of paper.

6. Given the projections of two points, how would you find the distance between the points?

7. In the sketch in the margin, determine the angle made with the horizontal plane by the plane passing through the three given points.



8. Determine the angle which the intersection of the plane A and B, in the sketch, makes with the horizontal plane. A has a slope of 5 to 3, B of 7 to 5.

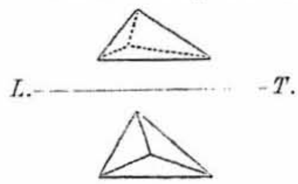


9. If any number of lines lie in parallel planes, how are the vanishing points of their perspective representations connected.

10. In a perspective drawing, how would you set off a given length on a line lying $\perp$ to the plane of the picture?

11. Find the projections of the shadow cast by the horizontal edge of a cap resting on a vertical cylinder.

12. Find the shadow cast by the pyramid, in the sketch, on planes coincident with the planes of projection.



Engineering.

Senior Class.

1. Give the proportions of the principal features of the Doric (Chambers) order of architecture.

2. How does the intercolumniation in the Doric order differ from that in the other Grecian and Roman orders?

3. Describe the general character of the early English mouldings.

4. Describe the changes which the decorated style of architecture underwent in England and France.

5. What are the different bonds used in brickwork; what are their respective advantages?

6. Give the items which go to make up the cost of a cubic yard of brickwork.

7. Mention the principal limes and cements used by engineers; state shortly their leading properties and how you would examine specimens of them.

8. For what purposes is concrete chiefly used; what are the different methods of making it, according to the purpose for which it is intended?

9. Describe the different pile-driving engines; giving the details of any one or more, together with the amount of labour required with it, and the average amount of work which can be done by it.

10. Give the details of the foundation of the pier of a bridge; the arches on either side being 50′ span and 20′ rise, the soil being clay; and give the quantities of all the material required for it.

Engineering.

Senior Class.

1. Describe some of the designs which have been adopted in the piers of stone bridges, to lighten the weight on each square foot of the foundation.

2. If a road were completely out of repair, how would you put it in repair, and how, then, keep it in repair?

3. Give a cross section of a completed railroad:—
 (*a*) In clay cutting, 20′ deep.
 (*b*) In embankment, 20′ high.

4. What are the limiting gradients, admissible under different circumstances, on a railroad?

5. What are the ordinary principles, on which the strength of a beam is computed?

6. How may these principles be shown to be insufficient?

7. State the laws of the expansion and contraction of cast and wrought iron, under forces of tension and compression.

8. How would you find the maximum strain that can be produced in the diagonal of a lattice girder by a load of a given weight per foot run?

9. $\left.\begin{array}{l}\text{Length of weir} = 8' \\ \text{Depth of water on weir} = 3'' \\ \text{Head of reservoir over do.} = 3''\!\cdot\!45\end{array}\right\}$ find discharge.

Alexander Jack, *Professor.*

Anatomy and Physiology.

1. Describe the process of deglutition.

2. Mention the actions performed by the muscles of the palate.

3. State the attachments of the superior constrictor of the pharynx.

4. Describe the apertures which communicate with the pharynx.

5. Describe the vocal cords and the arytenoid cartilages of the larynx.

6. Describe the relations of the trachea in the neck and in the thorax; then, describe the several components of that tube.

7. Describe the posterior pulmonary plexus of nerves.

8. State the functions performed in the small intestines.

9. Describe the nature and properties of the gastric juice.

10. Describe the nature and properties of the bile.

11. Mention the constituents of the blood.

12. Mention the constituents of the chyle.

13. Describe the duodenum intestine.

14. Describe the anatomy of the pancreas, and the properties of the secretion of that organ.

Practical Anatomy.

1. Describe the temporal fascia.
2. Describe the fascia transversalis abdominis.
3. Describe the inter-columnar fascia.
4. Describe the fascia iliaca.
5. Describe the spermatic cord.
6. Describe the rectus abdominis muscle.
7. Describe the levator ani muscle.
8. Mention the muscles in relation with the hip joint.
9. Describe the capsular and cotyloid ligaments of the hip joint.
10. Describe the course, relations, and branches of the brachial artery.
11. Describe the relations and branches of the femoral artery in Scarpa's space.
12. State the course, relations, and branches of the internal pudic artery.

J. H. Corbett, *Professor.*

Physic.

1. What are the distinguishing marks of typhus and typhoid fever compared with each other, in reference to external marks, symptoms, and pathology.

2. What is the seat of dysentery? State the pathological appearances of the intestine in its various stages.

3. State the distinguishing marks between chronic ulcer and cancer in the stomach.

4. How does cancer in the stomach influence the size of that organ.

5. State, in detail, the causes of ascites; and explain each.

6. Describe the situation and appearances of dilated bronchial tubes, and state the explanations generally given of this disease.

7. What variety of opinion is there as to the cause of emphysema of the lung?

8. How do you distinguish the influence of dilatation of the right side of the heart on the lungs from chronic bronchitis?

9. Whether is the power of the arm or leg sooner restored in cases of cerebral paralysis?

10. What is the condition of the lower extremities in the several stages of inflammation of the spinal marrow?

11. If the inflammation should be confined to the cervical, dorsal, or lumbar portion of the spinal marrow, what are the peculiar symptoms in each case.

D. C. O'CONNOR.

SURGERY.

1. Describe what is meant by mortification.
2. What are the several forms of mortification?
3. Explain your practice with regard to amputating a mortified limb.
4. Describe the symptoms and appearances of subclavian aneurism.
5. What symptoms contra-indicate tying the artery?
6. Describe the operation of tying the subclavian artery.
7. What are the several forms of dislocation of the elbow joint?
8. Describe the operation of resection of the elbow joint.
9. What is ranula?
10. For what diseases may ranula be mistaken?
11. Give the treatment of ranula.
12. What are hæmorrhoids?
13. Mention the predisposing causes of hæmorrhoids.
14. Give a general outline of the treatment of hæmorrhoids.

DENIS B. BULLEN, M.D., *Professor.*

MIDWIFERY.

1. Give the various points which are characteristic of a well-formed pelvis in the human female; what character of labour is to be expected where the pelvis is too large; and what dangers may result from this condition?

2. Describe the female urethra, noticing its structure, dimensions, relations, and course; describe also the mode of introducing the catheter; what conditions occasionally give rise to difficulty in performing this operation?

3. Compare the internal surface of the uterus, in the unimpregnated state, with the same part just previous to the arrival of the ovum after impregnation.

4. How is the amnion formed, and about what period is it completed? What uses does it serve in gestation?

5. At what periods is conception most likely to occur; and why at those periods? How do you calculate the duration of pregnancy?

6. Give the diagnosis between an ovarian tumour reaching to the umbilicus and the gravid uterus about the sixth month.

7. A married woman, who has not menstruated for three months, is suddenly seized with hæmorrhage from the uterus, sickness, and shivering. What do you apprehend here, and what would be your course of investigation, so as to arrive at a correct diagnosis?

8. Describe the mechanism and progress of a labour in which the head presents in the second position, what is the presenting part at the os uteri, and how does the child face, on emerging from the vagina?

9. You are attending a woman who has had severe labour for the last eight hours; she becomes suddenly sick and faint, with weak rapid pulse, and the pains cease: an examination discovers the child's head higher up than before and more movable—what is the case, and what would be your practice?

10. Give an outline of the mechanism of the labour in which an arm presents, and delivery is completed by the unaided powers of nature. How is this process designated?

11. In case of hæmorrhage from the uterus, previous to delivery, does the child lose blood; and if not, why not—what do you consider the most common cause of the child's death in such cases?

12. Trace the steps by which the pulmonary circulation comes to be substituted for the placental, on the birth of the child.

J. R. HARVEY.

MATERIA MEDICA.

1. What are the chief active ingredients of bark; what is its use, dose, and mode of administration?

2. What are the chief preparations of iron, and what their doses? How does iron act and in what cases is it indicated?

3. What is the usual dose of sulphate of magnesia? Describe its action.

4. What is the active principle of belladonna? For what purposes is it chiefly used?

5. What is the action of digitalis? What is the best mode of administering it?

6. What is the action of calomel? For what purposes is it employed?

7. What is the active principle of squills? What is its action?

Prize Questions.

8. Contrast the action of bitter with that of acid tonics.

9. How many kinds of emetics are there? How does each variety act, and what are their different indications?

10. How do metals enter the system, and how are they eliminated?

11. How do saline cathartics differ from acrid in their physiological action?

12. How do the different stimulants vary as to their primary sphere of action, and what is the difference between their general action and that of tonics?

MEDICAL JURISPRUDENCE.

1. State the symptoms to which oxalic acid gives rise, when taken in large and in small doses. Give the process for detecting it in organic mixtures after an antidote, such as chalk, has been administered.

2. In exhumation, after a lengthened period, in a case of suspected arsenical poisoning, how would you meet the objection—that the arsenic found was derived from the earth of the cemetery?

3. Give the post mortem appearances, the antidotes, and the tests of copper.

4. Mention the kinds of water which are corrosive and those which are preservative to lead cisterns.

5. Why are single unconnected lead cisterns more objectionable than the same cisterns when connected with the general water supply system of a town.

6. Give the process and the reactions for detecting chloroform in the blood.

7. Give the characters of incised wounds inflicted before and after death.

J. BLYTH, *Professor.*

LEGAL PORTION OF MEDICAL JURISPRUDENCE.

1. Have medical witnesses any and what privilege to protect them from disclosing to a court of justice matters professionally communicated to them? Refer to a case in which such privilege was claimed, and state the result.

2. What is the nature and object of "the examination *in chief*," "cross-examination," and "re-examination" respectively?

3. Is it essentially necessary, in order to render "a dying declaration" admissible evidence, that the party who has made it should have actually and in terms expressed a sense of approaching death?

4. In order to entitle a witness to refresh his memory while under examination, by reference to memoranda

Appendix C.
Examination Papers for Sessional Examinations.

in writing, what must appear with respect to such memoranda?

5. State Lord Coke's description of the crime of murder (3, Inst. 47), and what is "a reasonable creature *in being*" within the meaning of such description?

6. Give the legal description of a wound, "a maim," and what is "a disabling" as distinguished from "a grievous bodily harm?"

7. If a person, not of medical education, undertakes to administer medicines which may have a dangerous effect, but without any evil intention, and thereby occasions death, is he guilty of any and what offence in law?

8. What is a testable capacity?

9. State the purport and effect of the opinions of the Judges on the questions propounded by the House of Lords in consequence of the acquittal, on the ground of insanity, of Daniel McNaughton, for shooting Mr. Drummond, especially on the last question, viz:—"Can a medical man, conversant with the disease of insanity, who never saw the prisoner previously to the trial, but who was present during the whole trial and the examination of all the witnesses, be asked his opinion as to the state of the prisoner's mind at the time of commission of the alleged crime, or his opinion whether the prisoner was conscious at the time of doing the act, that he was acting contrary to law, or whether he was labouring under any and what delusion at the time?"

MICHAEL BARRY, *Professor*.

ENGLISH LAW.—FIRST YEAR.

Real Property.

1. State the doctrine of perpetuity.
2. What is a shifting use? Give an example of one.
3. Give an outline of a settlement of real estate, and advert to some of the limitations and provisions usual in such a settlement. What is pin money?
4. State the canons of descent, and say how far they are founded on Common and how far on Statute Law.
5. A devises land to B. who is also his heir; does B take by purchase or descent?
6. A, seized in fee, dies intestate, leaving a daughter; what effect on the estate has the birth of a posthumous son of A?
7. Explain the meaning of the maxim *nemo est hæres viventis*, and what is the difference between an heir *apparent* and an heir *presumptive*?
8. Why is it that a Manor cannot be created since the Statute *Quia Emptores?*
9. How does an assignment differ from a lease?

ENGLISH LAW.—SECOND YEAR.

Personal Property.

1. What Letters Patent are excepted from the operation of the Statute of Monopolies?
2. Mention the chief requisites for the subject of a Patent, and what is the form and object of the specification?
3. Can property in personal chattels be given so as to vest in possession at a future time, and has the doctrine of perpetuity any and what application to personal estate?
4. Give an outline of a settlement of personal property, and advert to some of the limitations and provisions usual in such a settlement. What is the meaning of "Hotch pot?"
5. Is there any exception to the "*jus accrescendi*" in reference to any kind of personal property held jointly?
6. By what names are contracts by deed and those not by deed respectively known?
7. Explain a guarantee, and state what is provided as to this kind of contract by the statute of frauds.
8. To what class of persons are the bankrupt laws confined in their application?
9. What are emblements?

1. Define "things personal," and state the different species of title to them.
2. What is the distinction between express and implied contracts, and give some instances of those of the latter description?
3. State the law as to the time in which the property in things sold becomes changed?
4. What is "stoppage in transitu," and when is the vendor entitled to this remedy?
5. What is a "del credere" commission?
6. What is provided as to a contract of guarantee by the statute of frauds?
7. When is a person said to die intestate?
8. Who are capable of being testators, and what are the chief exceptions to the general rule upon this subject?
9. What alteration was made by the last Wills Act as to the capacity of an infant to make a will?
10. What is the Probate?
11. What are "bona notabilia?"
12. What is the difference between a general and a special acceptance of a Bill of Exchange?
13. Describe a charter party.

ENGLISH LAW.—THIRD YEAR.

Smith's Leading Cases.

1. State the point decided in Dumpor's case.
2. Into what five species have bailments been decided by an eminent authority? Distinguish the cases in which the bailee is liable for "negligence," "gross negligence," and "slight negligence," respectively.
3. State the law as to inns and innkeepers in reference to their responsibility for the safety of goods entrusted to them.
4. Explain generally the extent to which the contract of the agent is in law the contract of the principal, and when is the agent personally liable.
5. In what cases is the replication "de injuria" applicable?
6. State the point decided in Mitchel *v.* Reynolds.
7. A consigns goods to B, and transmits the bill of lading; before delivery of the goods B endorses the bill of lading for a valuable consideration, and subsequently, and before the delivery of the goods, becomes bankrupt; what effect has this on A's right of "stoppage in transitu?"

MICHAEL BARRY, *Professor*.

Appendix D.
List of Sessional Honors, &c.

APPENDIX D.

LIST of SESSIONAL HONORS for the SESSION 1857–58.

After the Sessional Examination held in May and June, 1858, the Council awarded prizes to the following students:—

English History and Literature.—William T. Heron and David Macafei, equal, 1st.

Metaphysics.—Robert Spidding, 2nd.

Natural Philosophy.—James C. Ledger, 1st; Francis O'Callaghan, 2nd.

Natural Philosophy (Med.)—James Mulcahy, 1st; Edmond Willet, 2nd.

Physical Geography.—James Goold, 1st.

Greek (senior).—Thomas T. Allen, and Alex. P. Cleary, equal 1st; Bernard Norton, 2nd; Daniel Brown, and Francis Woodroff, equal 3rd; Michael Seymore, 4th.

Greek (junior).—John Moore, 1st.

Latin (senior).—Thomas Allen, 1st; Alex. P. Cleary, and Bernard G. Norton, equal 2nd; Francis Woodroff, 4th; Daniel Brown, 5th; Michael Seymore, 6th.

Latin (junior).—John Moore, 1st; D. M'Mullen Testro, 2nd; Frederick A. Purcell, 3rd.

Mathematics (senior).—William F. Madden, 1st; James C. Ledger, Henry Ridings, Francis O'Callaghan, equal 2nd; John F. Lacy, and John J. Barry, 3rd; Francis Walker, 4th; William Hill, 5th.

Mathematics (junior).—John Moore, 1st; Joseph Unkles, 2nd; D. M'Mullen Testro, 3rd; John Popham, F. A. Purcell, and Pierce Power, equal 4th; Edward Elliot, 5th.
Logic.—Thomas Allen, 1st; Arthur P. Cleary, 2nd; John F. Lacy, 3rd; Bernard G. Norton, 4th.
Chemistry.—Thomas T. Allen, 1st; Henry Ridings, 2nd; John F. Lacy, 3rd; Edward Elliot, 4th; Patrick O'Keeffe, 5th.
Natural History.—Thomas Allen, 1st; Henry Ridings, 2nd.
English Language.—John Moore, 1st; Alex. G. Gilmore, and D. M'Mullen Testro, equal 2nd.
French (Arts and Med.).—Pierce Power, 1st; James Mulcahy, 2nd; John Connolly, 3rd.
French (Arts).—Francis Woodroff, 1st; Ferd. A. Purcell, 2nd; John Wall, 3rd.
Civil Engineering.—James C. Ledger, 1st; John F. Lacy, 2nd.
Mineralogy and Geology.—Edward Elliot, 1st; Charles D. Roe, 2nd.
Engineering Physics.—William O'Connor, 1st; James C. Ledger, 2nd; John T. Lacy, and Francis O'Callaghan, 3rd.
Law, first year.—Michael R. Barry, 1st. *Second year.*—John O'Regan, and John Marshall, 1st, equal. *Third year.*—Thomas Wall, 1st.
Civil Law.—John Marshall.
Agriculture.—William Foley, and Patrick O'Keeffe, 1st.
Anatomy and Physiology (senior).—John S. Levis, 1st; Albert A. Gore, 2nd; William H. Jones, 3rd; Charles Haines, 4th; (junior)—Franklin Gillespie, 1st; Joseph Curtis, 2nd.
Practical Anatomy.—John S. Levis, 1st; Albert A. Gore, 2nd; William H. Jones, 3rd; Denis A. O'Riordan, 4th.
Surgery.—John P. Macafee, 1st; Michael Rahilly, 2nd; Thomas Heayle, 3rd.
Medicine.—William J. Busteed, 1st; Thomas Heayle, 2nd.
Midwifery.—Patrick Crowley, 1st; Michael Rahilly, 2nd; George Sigerson, 3rd; George Cooper, 4th.
Medical Jurisprudence.—William J. Busteed, 1st; Usher B. Eaton, 2nd.
Materia Medica.—John S. Levis, Thomas Moriarty, and William H. Jones, 1st, equal.
Practical Chemistry.—John S. Levis, 1st; Albert A. Gore, 2nd; Michael Breen, 3rd.

Robert J. Kenny, *Registrar.*

Appendix D. List of Sessional Honors, &c.

APPENDIX E.

Appendix E. Lists of Successful Candidates.

Lists of Successful Candidates from Queen's College, Cork, for University Degrees and University Honors at the Commencements of the Queen's University in Ireland, September, 1858, furnished by Mr. G. J. Stoney, Secretary to the Queen's University in Ireland.

Nominal Return of the Candidates from Queen's College, Cork, to whom Prizes were awarded for distinguished answering at the Examinations of the Queen's University, in September and October, 1858.

With the Degree of LL.B. :—

Charles John Hooper,* LL.B. First in Laws. Medal and Prizes.

With the Degree of Bachelor in Arts :—

Robert D. Spedding, A.B. Second in Classics. Prize.
James Goold, A.B. Third in Pure Mathematics. Certificate of Honor.

With the Diploma in Civil Engineering :—

James C. Ledger, C.E. First in Engineering. Medal and Prize.
William M. O'Connor, C.E. Second in Engineering. Prize.
Thomas R. Roberts, C.E. Third in Engineering. Prize.

First Medical Examination.

John S. Levis. Third at First Medical Examination. Certificate of Honor.

* This candidate was educated partly in Queen's College, Galway.

Nominal Return of the Candidates from Queen's College, Cork, on whom Degrees, Diplomas, or Certificates were conferred after the Examinations of the Queen's University in September and October, 1858.

Degree of M.D.

Garrett Barry, . M.D.
Jeremiah J. Dowling, A.B., M.D.
Jas. Stewart Land, A.B., M.D.
Francis M. Luther, . M.D.
James M'Carthy, . M.D.
Robert Thomas Warren, M.D.
Thomas H. White, . M.D.

Degree of A.M.

William Haynes, A.B., A.M.
Wm. M. O'Connor, A.B., A.M.

Degree of LL.B.

Charles John Hooper,* A.M., LL.B.

Degree of A.B.

John F. Clark, . . A.B.
James Goold, . . A.B.
Thomas Barry Moriarty, A.B.
Owen O'Ryan, . . A.B.
Robert D. Spedding, . A.B.

Diploma in Engineering.

Richard Holmes Donnelly, C.E.
John T. Lacy, C.E.
James C. Ledger, C.E.
Thomas H. Marmion, C.E.
Francis L. O'Callaghan, C.E.
William M. O'Connor, A.M., C.E.
Thomas R. Roberts, C.E.

Certificate of First Medical Examination.

George Cooper.
Thomas Gelston.
Thomas Heazle.
John S. Levis.
Richard Read.

APPENDIX F.

Appendix F. Official Reports of Professors.

Official Circular and Official Reports of Professors, furnished in compliance therewith.

No. 1.—Form of Circular from President.

Return to be filled up by the Professor of ———, and to be returned to the Registrar so filled up, for the official information of the President, on or before the 10th of November, being for the Collegiate Session, 1857–58.

A.—As to the course or courses of lectures given by the Professor: 1st. Duration and extent of the course, number of terms. 2nd. Number of weeks of lectures in each term. 3rd. Number of lectures weekly, and days and hours of lectures.

B.—The description or title of the course or courses of lectures delivered, and a general abstract of the subjects of instruction contained in the course, and the title of the text-books recommended.

C.—Whether the lectures are illustrated by reference to maps, diagrams, specimens, or experiments, and a general notice of the kind of illustrations used.

D.—Whether any method of tutorial or other special instruction is employed, as by setting out portions of text-books for lessons, by themes, or exercises in composition, or problems; and whether special class examinations are held, and at what time; or whether herborization excursions or field exercises are given:

E.—What faculties or division of students are those attending courses of lectures of the Professors making the return.

F.—The number of students attending each course, distinguishing matriculated and non-matriculated students, and the general regularity of attendance.

G.—The general conduct of students at the Professor's lectures, and the general state of discipline as regards the Professor's classes.

H.—The general condition of the department of which the Professor has charge, as to supplies, fitments, cleanliness, and accommodation, for the purposes of instruction.

The Professor, in making the above returns, is requested to mark the answers with the letter designating the portion of the form of return as above, to which each answer refers.

By order of the President,

(Signed,) Robert J. Kenny, *Registrar.*

APPENDIX F.

Official Reports of Professors.

No. 2.—REPORT of the PROFESSOR of GREEK.

A.—1. The course extended over three terms. 2. The first term began on the 20th of October, and ended on the 19th of December, 1857, occupying eight weeks and four days. The second term began on the 4th of January, and ended on the 27th of March, 1858, occupying eleven weeks and five days. The third term began on the 12th of April, and ended on the 12th of June, 1858, occupying eight weeks and five days. The total number of lectures given to the several classes was 237. 3. The students of the ordinary Greek class were divided into a senior and a junior division, to the former of which three, and to the latter four lectures were given in each week; the days of lecture being Monday, Wednesday, Thursday, and Friday, and the hours from 9 to 11 o'clock, A.M. There was also an extra or voluntary class, who received two lectures in each week, viz., on Tuesday and Thursday.

B.—The divisions of the ordinary Greek class were lectured on portions of Homer, Sophocles, Euripides, Thucydides, and Xenophon. The extra class on portions of Æschylus and Aristophanes. The exercise books were those of Arnold and Beatson, together with a manual of Greek prose composition, for the more advanced students, prepared by the Professor.

C.—The lectures were illustrated by reference to maps and diagrams.

D.—Portions of the authors read were prepared by the students in the intervals between the lectures; there was a daily examination, accompanied by comments from the Professor. Exercises in prose and verse were required from the students, and corrected by the Professor.

E.—The students of this class come exclusively from the Faculty of Arts.

F.—The total number of students attending Greek during the session was thirty-three. The attendance of the majority was regular. Thirteen students were less regular in their attendance; and of these, four lost credit for the session.

G.—The general conduct of the students, while in attendance on the lectures, was unexceptionable.

H.—The condition of the lecture-room, as to supplies, fitments, cleanliness, &c., was satisfactory, with this one exception, that the window-sashes could not be closed so as to exclude the wind and weather.

JOHN RYALL.

November 1, 1858.

No. 3.—REPORT of the PROFESSOR of LATIN.

A.—1. Three terms. 2. First term, eight weeks; second term, eleven weeks; third term, six weeks. 3. Junior class, four lectures weekly, Monday, nine, A.M.; Tuesday, ten, A.M.; Wednesday, ten, A.M.; Thursday, ten, A.M. Senior class, three lectures weekly, Monday, ten, A.M.; Wednesday, nine, A.M.; Friday, ten, A.M. Extra class, two lectures weekly, Tuesday, eleven, A.M.; Thursday, eleven, A.M.

B.—The Latin language—Text-books of lectures. Junior Class, the Catiline of Sallust, and part of the Odes of Horace. Senior class, the Georgics of Virgil, Books II. and III., and part of the First Book of the Histories of Tacitus. Extra class, the Trinummus of Plautus, and the Third Book of Cicero's Letters to Atticus. In the extra class, passages from English poets and prose writers were translated into Latin by the students.

C.—Large maps of ancient Greece, Italy, and Asia Minor, hung on the walls of the lecture-room, were used for illustration of the lectures. Frequent reference was also made to a collection of electrotype copies of ancient coins, medals, and gems.

D.—The students were always expected to prepare for each lecture a portion of the text-book, in which they were examined by *vivâ voce* questions. In the senior and junior classes, Arnold's Introductions to Latin Verse and Prose Composition were used as exercise books. In these Latin classes, the progress of the students was tested at the close of the session by examination papers, to which they returned answers in writing.

E.—Students in Arts.

F.—Junior, thirteen; twelve matriculated; one non-matriculated. Senior, eleven matriculated. Extra, five matriculated.

G.—Quite satisfactory.

H.—Satisfactory.

BUNNELL LEWIS.

No. 4.—REPORT of the PROFESSOR of HISTORY and ENGLISH LITERATURE.

A.—1. History from October to Christmas; English language from Christmas to Easter; English literature from Christmas to Easter. Three terms. 2. Ten to twelve. 3. Three days weekly, from October to Christmas; six days weekly, from Christmas to Easter; at noon on Tuesdays and Thursdays; and at eleven on Saturday.

B.—On history, English language, and English literature. History from the fifth to the fifteenth century; Gibbon's Rome, and Hallam's Middle Ages. English language, Latham's Hand Book, Craik's Outlines. English literature, Craik's Literature, Spalding's do., Chambers' Cyclopædia.

C.—By maps and historical diagrams.

D.—Historical and biographical essays required; criticism on composition, &c.

E.—Arts.

F.—English language, twelve; attendance good. English literature, eight; attendance good. History, eight; attendance good. All matriculated.

G.—Good.

H.—Fair.

WM. RUSHTON.

No. 5.—REPORT of the PROFESSOR of MODERN LANGUAGES.

A.—1. The duration of the course was of three terms. 2. First term comprised seven weeks; second term, ten weeks; third term, seven weeks. 3. Three lectures a week to each class; at twelve and one on Mondays, Wednesdays, and Fridays.

B.—The lectures are on the grammar and literature of the language taught; text-books being Massillon, Bossuet, Lafontaine, Barthe's literature.

C.—Lectures not illustrated by maps or diagrams.

D.—Tutorial system blended with professorial; exercises being given, translations and re-translations, reading of text-books, &c.

E.—Students belong to the Faculties of Arts and Medicine.

F.—Number of students in senior class, fourteen; in the junior, fifteen.

G.—The general conduct of the students was excellent.

H.—The general condition of fitments, attendance, and accommodation, very satisfactory.

R. DE VERICOUR.

No. 6.—REPORT of the PROFESSOR of HISTORY (*pro. tem.*).

A.—1. The course of history; one term. 2. The term comprised seven weeks. 3. The lectures were delivered three times a week.

B.—The lectures on history comprised the period between the fifth and fourteenth centuries. Various works on special periods were recommended, besides the general histories of Henri Martin, Menzel, Hallam, &c.

C.—The map of Europe was made use of.

D.—The tutorial method was blended with the professorial.

E.—The students belonged to the Faculty of Arts.

G.—The general conduct of the students was excellent.

H.—The general supply, &c., was most satisfactory.

R. DE VERICOUR.

No. 7.—REPORT of the PROFESSOR of CELTIC.

2, Clanbrassil-place,
16th Nov., 1858.

MY DEAR SIR,—Unfortunately, as you are aware, I had no class last session; but I am informed I may expect three or four in this session. The return I now send you is intended as a general report, and not for the last session. On a former occasion I furnished a similar return, which appeared in the President's Report, and it is on that account I take the present liberty.

I am, my dear Sir,
Yours very truly,
OWEN CONNELLAN.

To Robert J. Kenny, Esq.

N.B.—Since 7th January, 1859, three students have been attending my lectures (12th March, 1859).—O. C.

A.—1. Two terms, second and third. The course of lectures commence at the beginning of the second term. 2. Second term, twelve weeks; third term, about seven weeks. 3. Three lectures weekly; days of lecture, Monday, Wednesday, and Friday; hours of lecture, from twelve to one.

B.—Lectures on the grammar, and on the Ancient History and Topography of Ireland. Text-books, Keating's History of Ireland, Haliday's edition; Annals of the Four Masters; some of the works of the Archæological Society.

D.—The pupils are expected to prepare portions of the text-books; also, grammatical exercises.

E.—The students attending my lectures have been of the Faculty of Arts, and of the Faculty of Medicine.

G.—The conduct of my pupils was excellent.

H.—The rooms were kept very clean.

OWEN CONNELLAN.

16th November, 1858.

No. 8.—REPORT of PROFESSOR of MATHEMATICS.

A.—Three courses of lectures were delivered, each extending over the three terms. To the junior class three lectures were given per week. To the senior class three lectures per week; and to an extra class of advanced pupils two lectures per week were given. The times of lecture were Monday, Wednesday, and Friday, at twelve and two, P.M.; and Tuesday and Thursday, at three, P.M.

B.—The subjects of lecture to the junior class were—Arithmetic, Algebra and Geometry, and Plane Trigonometry. The text-books were Hind's Arithmetic, Hind's Algebra, Thomson's Trigonometry, and Potts's Euclid. The subjects of lecture to the senior class were—Algebraic Geometry and Conic Sections, Spherical Trigonometry, and Differential and Integral Calculus, together with the subjects of the junior class. The text-books were—Todhunter's Algebraic Geometry, Todhunter's Differential Calculus, Thomson's Trigonometry, and Chambers's Solid Geometry. The subjects of lecture to the extra class were Geometry of three dimensions, Integral Calculus, and Differental Equations. The text-books were—Gregory's Solid Geometry, Gregory's Examples, and Hymers's Differential Equations.

C.—Lectures were illustrated by the black board, and occasionally by apparatus.

D.—Problems were set at the close of each lecture. Printed papers of questions were also set weekly, or as often as possible.

E.—Students in the Faculty of Arts and in the School of Engineering.

F.—In the junior class about forty, of whom five were non-matriculated; in the senior class about seventeen; in the extra class, three.

G.—The conduct of students, while attending lectures, has been invariably good.

H.—Satisfactory.

GEORGE BOOLE, F.R.S.

No. 9.—REPORT of the PROFESSOR of NATURAL PHILOSOPHY.

A.—Four courses. 1. Each extending through three terms. 2. In the first term seven weeks; in the second, ten weeks; in the third, seven weeks. 3. In the senior class of General Physics three lectures were delivered in each week, viz., on Mondays, Wednesdays, and Fridays, from ten to eleven o'clock. In the junior class of General Physics two lectures in each week, viz., on Tuesdays and Thursdays, from eleven to twelve o'clock. In the class of Engineering Physics three lectures in each week, viz., on Mondays, Wednesdays, and Fridays, from twelve to one o'clock. In the class of Mathematical Physics, three lectures in each week, viz., Tuesdays, Thursdays, and Saturdays, from one to two o'clock.

B.—In the classes of General Physics the subjects were—Mechanics, Hydrostatics, Optics, Astronomy, Heat, Magnetism, Electricity, and Electro-Magnetism. Text-books — Galbraith and Haughton's Manuals; Ganot, Traite de Physique; Dr. Golding Bird's Natural Philosophy. In Mathematical Physics—Duhamel, Cours de Mecanique; Lloyd's Optics; Brinkley's Astronomy. In Engineering Physics—Tate's Exercises on Mechanics; selections from Moseley's Mechanics; Dixon's Heat; De Pambour's Theory of the Steam Engine.

C.—The lectures on General Physics were fully illustrated by experiments and diagrams.

D.—In Mathematical and Engineering Physics the tutorial method of instruction was chiefly used; in the classes of General Physics the professorial.

E.—The senior class of General Physics was attended by students of third year in Arts, and second year in Engineering. The class of Mathematical Physics was optional for students in Arts and Engineering. The class of Engineering Physics was attended by students of the second year in Engineering. The junior class of General Physics was attended by students of the first year in Medicine, and first year in Agriculture.

F.—Senior class, General Physics, nineteen matriculated; junior class, General Physics, twelve matriculated; Mathematical Physics, five one term, two three terms; Engineering Physics, twelve matriculated.

G.—The conduct of students in the lecture room has been invariably good. The general attendance has been tolerably regular; but the option which students have of absenting themselves from a considerable number of lectures, and which privilege several have availed themselves of, has not alone considerably retarded their own progress but has been productive of much inconvenience to the class in general.

H.—The department is now in possession of a very good collection of apparatus. When the improvements now in progress by the Board of Works, shall be completed, the general arrangements promise to be satisfactory.

JOHN ENGLAND.

No. 10.—REPORT of the PROFESSOR of CHEMISTRY.

A.—Two courses; a theoretical and practical. 1. The theoretical course extended through three terms. 2. In the first term, eight and a-half weeks; in the second, eleven and a-half; in the third, eight and a-half. 3. There were three lectures a week, on Monday, Wednesday, and Friday, at eleven, A.M. The practical course extended through three months; the hours for instruction being, on Monday and Wednesday, from two to three, and on Tuesday and Thursday, from three to four.

B.—The theoretical or systematic course embraced the laws of combination; the history and properties of the metallic and non-metallic substances; the theories of organic chemistry; and the description of organic compounds. The second, or practical course, was de-

Appendix F. Official. Reports of Professors.

voted to instructions in the laboratory, in chemical manipulation, analysis, and testing for poisons. In addition to this, the laboratory was open—under certain regulations—to other students desirous of pursuing a more extended course of analysis.

C.—The theoretical course was abundantly illustrated by diagrams, specimens, and experiments.

D.—The professorial system was followed; but questions were frequently put to the students during the lectures, and ample opportunity afforded, after each lecture, for the discussion of difficulties and for explanations.

E.—Students of the Faculties of Arts and Medicine.

F.—1. Forty-five matriculated and six non-matriculated in the theoretical course. 2. Fourteen matriculated and one non-matriculated in the practical course. The attendance was very regular.

G.—The general conduct was good, and the state of discipline excellent.

H.—The general condition of the chemical department, as to supplies, fitments, &c., for the purposes of instruction is very good.

Nov. 10, 1858. J. Blyth, M.D.

No. 11.—Report of the Professor of Natural History.

A.—1. The course extended over two terms; these being the second and third terms of the session. 2. The lectures of the second term were delivered during eleven weeks; those of the third term during six weeks. 3. The hour of lecture was from three to four, P.M., on Mondays, Wednesdays, and Fridays.

B.—The course of lectures on Natural History may be defined as a series of attempts, on the part of the Professor, to present his students with an explanation of the leading principles of Biological (*i.e.*, Zoological and Botanical) science; or rather, with a summary of the more important facts which have hitherto been brought to light, in connexion with the Morphology, Physiology, Development and Distribution of organized beings. The subject of Classification was especially attended to. The text-books recommended were, in Zoology—Milne Edwards' Cours Elémentaires de Zoologie, and Patterson's Zoology for Schools; in Botany—Henfrey's Elementary Course of Botany; Lindley's School Botany, and Gray's Lessons in Botany. Carpenter's Principles of Comparative Physiology was also recommended to the students for perusal.

C.—The lectures were illustrated by maps, diagrams, specimens, and microscopical preparations.

D.—The mode of instruction employed was, for the most part, professorial. Only one herborization was given during the third term; but the botanical portion of the course was illustrated by freshly gathered specimens of native plants; and the students were enabled to study living examples of the more important natural orders of the vegetable kingdom, in the garden attached to the College.

E.—The lectures were attended by students of the second year in the Faculty of Arts, of the first year in the department of Agriculture, and of the first year in the Faculty of Medicine.

F.—Thirty students attended the course, of whom twenty-nine were matriculated.

G.—The conduct of the class was apparently satisfactory, with the exception of that of two students, whose names were reported to the College Council.

H.—The lecture-room is inconveniently small. The want of a green-house or conservatory for the culture of early flowering and medicinal plants, suited for the illustration of the botanical lectures, has been already called attention to by the President. There is no private room for the use of the Professor, in which he might be enabled to make those extempore preparations in Comparative Anatomy, which are sometimes required for the explanation of the subjects alluded to in the lectures. In other respects, the department of Natural History is in an efficient condition.

J. Reay Greene.

No. 12.—Report of the Professor of Geology and Mineralogy.

A.—The course of Geology and Mineralogy commenced on the 26th of October, 1857, and ended on 19th May, 1858, extending over the period of three terms, included seventy lectures. During the first term the lectures continued for nine weeks; during the second, nine weeks; and during the third term, seven weeks. The number of lectures given weekly was three. The days of lecture being Mondays, Wednesdays, and Fridays, and the hour of lecture from one to two, P.M.

B.—The course of lectures included Physical Geography, Mineralogy, Physical Geology, and Palæontology. The text-books recommended were—Somerville's Physical Geography; Hughes's Physical Geography; Nicol's Mineralogy; Page's Elementary Text-book on Geology; Lyell's Elements; Lyell's Principles; and Jukes' Physical Geology.

C.—The lectures were illustrated by maps, diagrams, specimens, and models, of which there are a large supply, either belonging to the College or the property of the Professor.

D.—The mode adopted in teaching the course of Geology and Mineralogy was altogether by lectures, and conversation with the students after lecture. During the last term field excursions were made, in order that the student might acquire some knowledge of Practical Geology and Practical Mineralogy.

E.—The students attending the course of Geology and Mineralogy, during last session, were exclusively engineers of the first year.

F.—The number of students, during last session, was twenty-one; of which nineteen were matriculated and two non-matriculated; and the attendance of these was very satisfactory.

G.—The conduct of the students, during the Professor's lectures, was such as to merit the approval of the Professor, and the state of discipline was also very good.

H.—The general state and condition of the department over which the Professor of Geology and Mineralogy has charge, as regards supplies, fitments, cleanliness, and accommodation, for the purposes of instruction, is such as to meet the approval of the Professor, and enable him to carry on the business of his department in a perfectly satisfactory manner.

Robert Harkness.

No. 13.—Report of the Professor of Civil Engineering.

A.—1. Junior class, (lectures) three terms; senior class, (lectures) three terms; senior and junior classes, (drawing school) three terms. 2. First term, eight weeks; second term, twelve weeks; third term, seven weeks. 3. Junior class, three: Monday, Wednesday, and Friday, ten, A.M.. to eleven, A.M.; senior class, three: Tuesday, Thursday, and Saturday, ten, A.M. Drawing school open on Tuesday, Thursday, and Saturday, from ten, A.M., to two, P.M.

B.—Junior class:—Use of Instruments; Simms, Heather—Surveying and Levelling; Baker, Williams—Geometrical Drawing. Senior class:—Civil Engineering.

C.—Illustrated by means of maps, diagrams, and instruments.

D.—The instruction is partly professorial partly tutorial, according as the subject requires. Field exercises are given.

E.—Students in Engineering and Agriculture.

F.—Junior class—nineteen matriculated, four non-matriculated; senior class, thirteen matriculated, two non-matriculated; drawing-school, thirty-two matriculated, eight non-matriculated. Attendance—regular.

G.—General conduct of students, good. State of discipline of class, satisfactory.

H.—The general condition of department is satisfactory.

Alexander Jack.

No. 14.—Report of Professor of Agriculture.

A.—Theory of Agriculture. 1. From 5th of November to 1st of June, three terms. 2. In the first term, six weeks; second term, ten weeks; third term, six weeks. 3. Three lectures, weekly: Tuesdays, Thursdays, and Saturdays, one to two o'clock.

B.—Theory or Science of Agriculture—being the application of Geology, Chemistry, and Natural History to Agriculture. Text-books—Jukes' and Whitley's Geology; Fownes' Chemistry; Henfrey's and Balfour's works on Vegetable Physiology and Botany.

C.—The lectures are illustrated by reference to maps, diagrams, specimens, and experiments.

D.—Class examinations are held at the conclusion of each subject, and portions of the text-books and of other works are pointed out, and it is attempted to ascertain by examination, whether or not they have been attentively considered. In future, I propose to require written replies to questions, bearing on each subject. Occasional visits were paid to witness the operations on the Model Farm and in the City Park; but there being no second year's class these visits were not regular.

E.—Faculty of Arts—Department of Agriculture.

F.—Number of matriculated students, three; non-matriculated students, five. The attendance of all the students, with the exception of two of the non-matriculated ones, namely—George and Henry Foote, brothers—was excellent.

G.—Conduct of students, at my lectures, every thing I could possibly wish.

H.—My department is in good working order. I obtain, on application to the President, every thing I require or consider necessary to aid me in the instruction of my class; and I am happy to be enabled to report this year, that the National Board's Model Farm is now in working order and capable of affording valuable information to my class, which, by an order of the Board of Education, is permitted to visit it.

Edmund Murphy.

No. 15.—Report of Professor of Logic and Metaphysics.

1.—*Logic.*

A.—1. Hilary Term. 2. Twelve weeks. 3. On Tuesdays and Thursdays, from two to three o'clock, on Saturdays, from nine to ten o'clock.

B.—On Logic, Ratiocinative and Inductive—text books—Whately, Thompson, Baynes, and Mill.

C.—No illustrations are used, except such as are drawn upon a black board during the lectures.

D.—Both the tutorial and professorial methods are employed in the course. The students are required to reduce arguments into strict logical form; and special class examinations are held during the course.

E.—Students in the Faculty of Arts.

F.—Thirteen matriculated students. The attendance generally very good.

G.—General conduct of the students in the classes unexceptionable.

H.—The lecture-room, allotted to the mental sciences, is still occupied by the Pathological Museum, and I am, therefore, unable to report as to its condition.

2.—*Metaphysics.*

A.—1. Michaelmas and Hilary Terms. 2. Eight and twelve weeks. 3. On Tuesdays and Thursdays, from one to two o'clock, on Saturdays, from ten to eleven o'clock.

B.—The History of Philosophy and Psychology; text books not much employed.

C.—As in previous return.

D.—The class are examined during the course, and also required to write essays on special topics connected with the course.

E.—Third year students in Arts.

F.—Four matriculated students; attendance very regular.

G.—General conduct unexceptionable.

H.—As in previous return.

G. S. Read.

No. 16.—Report of the Professor of Anatomy and Physiology.

A.—Two courses. 1. The two courses consist of 120 lectures, and 110 anatomical demonstrations, delivered during the medical session. 2. Seven weeks in the first term; seventeen weeks in the second term. 3. Ten lectures and demonstrations, in each week, during the Winter session, delivered from twelve to one, and from one to two o'clock, daily.

B.—One course is entitled Anatomy and Physiology; the other course, Practical Anatomy, or Anatomical Demonstrations and Dissections.

The dissections performed by the students, occupying several hours daily, are superintended by the Professor of Anatomy and Physiology and by his Assistant, Dr. Shinkwin, the Demonstrator of Anatomy. The dissections commence in October and continue to the middle of May.

The course of Anatomy and Physiology comprehends the following subjects:—

1. Nature of life and organization; general exposition of the vital functions; general and special descriptions of the tissues of the human frame; the structure and composition of the solids and fluids, viz., the blood, the chyle, saliva, gastric juice, bile, &c. This portion of the course includes histology and microscopic anatomy.

2. Physiological Anatomy of the organs of support and locomotion, circulation, respiration, digestion, secretion, excretion, absorption, reproduction; the brain and its membranes; the spinal cord and its membranes; the ganglia and nerves; the organs of the senses of touch, taste, vision, hearing, smell; organ of voice, &c.

3. The course comprehends all branches of human physiology, and is constantly elucidated by reference to comparative anatomy and pathology.

The course of Physiology is illustrated by microscopical demonstrations.

The course of Practical Anatomy comprehends the demonstrations of the bones, ligaments, joints, muscles, arteries, veins, absorbent glands, and the relative anatomy of the viscera, membranes, and fasciæ.

In this course the Professor is assisted by the Demonstrator of Anatomy. Surgical Anatomy is taught by special demonstrations of the principal regions of the human body, considered in their practical relations to accidental injuries and to operative surgery.

The text-books chiefly used are the following, viz., Todd and Bowman on Physiological Anatomy; Carpenter's Human Physiology and Comparative Physiology; Valentin's Physiology; the works of Quain and Sharpey; Harrison's Dublin Dissector; Harrison on the Arteries; Corbett on the Arteries; Wilson's Anatomist's Vade Mecum; Ellis's Demonstrations; Kölliker, Gerber, Quickett, and Hassal on Microscopic Anatomy.

C.—The lectures are illustrated by recent and preserved dissections, by charts, diagrams, plates, and anatomical preparations. The principles of Physiology are elucidated by experiments instituted upon animals, when deemed necessary.

D.—The students are examined, *vivâ voce*, on the subjects treated of in the lectures; sometimes once per week, at other times every fortnight; on particular occasions the examinations are held more frequently, according to the difficulty of the subjects to which their attention has been directed. Examinations are generally held on Monday or Saturday, at the hours of twelve and one o'clock.

Written questions and answers, in these classes, have been resorted to only at the Examinations held in October for the Medical Scholarships, and at the Examinations for Prizes, which take place at the termination of the session.

E.—The courses attended only by students of Medicine and Surgery.

F.—Total number, forty-seven; forty matriculated; seven non-matriculated students; thirty-two attended the course of Anatomy and Physiology; thirty-seven were engaged in Practical Anatomy.

The students in general attend the lectures, demonstrations, and dissections with great regularity.

APPENDIX F.

Official Reports of Professors.

G.—The students conduct themselves with extreme order and attention during the delivery of the lectures. The general state of discipline in the Anatomical Classes has been exemplary.

H.—Supply of anatomical preparations, plates, charts, and diagrams, available for the purposes of instruction considerable; the rooms are kept in a state of cleanliness; but the apartments in the Clarendon Building do not afford proper accommodation for the delivery of lectures, requirements of the Professor, the arrangement and conservation of the Anatomical Museum; the theatre being deficient in size, ventilation, and light is a source of considerable inconvenience to the Professor and students.

J. H. CORBETT.

No. 18.—REPORT of PROFESSOR of the PRACTICE of MEDICINE.

A.—Two terms in all; about sixty lectures delivered on Tuesdays, Thursdays, and Saturdays, at three o'clock.

B.—A course of lectures on the Practice of Medicine, commencing with fevers, next with local diseases, and thirdly with diseases which, though not idiopathic fevers, cannot be traced to inflammation or disorganization of any particular organ.

C.—The lectures are illustrated by reference to pathological specimens and coloured engravings; and students are requested to attend at the Mercy Hospital, where the Professor gives practical illustration of the diseases which form the subject of his lectures, and explains their treatment.

D.—Besides the lectures, the Professor sets off a portion of a work on the Theory of Medicine, on which he examines the students on each Saturday, at the termination of his lecture.

E.—The students of the Faculty of Medicine solely.

F.—Matriculated, twenty-two; non-matriculated, five. In general, the attendance and conduct of the students was excellent.

G.—The discipline and conduct was excellent.

H.—There is only one defect in the department, the want of an apartment in which the Pathological specimens may be properly classified and to which students could have access for the purposes of study. This want constitutes a great evil in the management of the department, of which the Professor has charge, and would require a speedy remedy.

D. C. O'CONNOR, M.D.

No. 18.—REPORT of PROFESSOR of SURGERY.

A.—1. From November 2nd to May 1st. 2. Sixty lectures in the course. 3. Mondays, Wednesdays, Fridays, at three o'clock.

B.—Principles and Practice of Surgery.—Inflammation, surgical pathology, diseases and injuries of the several regions, and their treatment; surgical operations shown on the subject. Text Books—Cooper, Miller, Thompson, Druitt, Pirrie, Liston, Syme, &c.

C.—The lectures are illustrated by plates, models, preparations, apparatus.

D.—Tutorial instruction not employed.

E.—Students of the Faculty of Medicine.

F.—Matriculated, twenty-five; non-matriculated, five.

G.—The conduct of the students invariably good, and the attendance of the class most satisfactory.

H.—A considerable amount of preparations, models and instruments have been procured for the department of surgery, but commensurate advantages cannot be derived from these extremely valuable means of instruction until a suitable building is obtained for the medical school, with a museum in which the students may be enabled to make use of this collection during their studies.

Nov. 8, 1858. DENIS B. BULLEN, M.D.

No. 19.—REPORT of PROFESSOR of MIDWIFERY.

A.—1. Lectures on Midwifery, six months. 3. Three lectures weekly—Monday, Wednesday, Friday, four o'clock.

B.—1. Theory and Practice of Midwifery, including the physiological anatomy and physiology of the generative organs; history, physiology, and pathology of gestation; parturition, its mechanism; physiology, pathology, and treatment; diseases of parturient women and their treatment; management of infants.

C.—Diagrams, models, casts, plates, specimens, &c.

E.—Medical Faculty.

F.—Eleven matriculated students; three non-matriculated. Attendance, on the whole, good.

G.—General conduct very good.

H.—Department generally in good order.

Nov. 11, 1858. J. R. HARVEY.

No. 20.—REPORT of PROFESSOR of MATERIA MEDICA.

A.—Course of lectures extends over one medical session, consisting of twenty-six weeks. During each week three lectures are delivered, on Tuesdays, Thursdays, and Saturdays, from two to three, P.M.

B.—The course consists of lectures on Materia Medica and Therapeutics, embracing jamatology in general, pharmacognosy, pharmacology, pharmacy, posology, formulation, and therapeutics. The text-books recommended are, Pereira Elements of Materia Medica, Neligan on Medicines, Christison Dispensatory, Forbes and Royle's Manual; Bouchardat's Matiere Medicale, Souberian's Traité de Pharmacie, Oesterlen's Heslmittellepre, Bucheim's Arzneimittellehre, Schroff's Pharmacognosie.

C.—Lectures illustrated by diagrams, schematic figures on the board, specimens from the botanical garden of the College, and from the herbarium; chemical and microscopical demonstrations, together with the exhibition of the various articles of the materia contained in the cabinet of Materia Medica; both their preparation and the tests of their purity being practically demonstrated.

D.—The practical instruction consists in the above chemical and microscopical exercises.

E.—The students attending are those engaged in the study of Medicine.

F.—Number of students, fifteen; of whom two only are non-matriculated.

G.—The conduct of the students attending the Professor's lectures cannot be too highly praised; the attention displayed and anxiety for instruction exhibited, were truly remarkable.

H.—The fittings, supplies, and general condition of the department, are admirable; the Professor, however, is greatly in need of a separate laboratory for experimental researches, inasmuch as his museum has been made the general ante-room to the medical classes.

PURCELL O'LEARY.

No. 21.—REPORT of PROFESSOR of JURISPRUDENCE and POLITICAL ECONOMY.

A.—Four courses.

1. Jurisprudence and Political Economy (Arts Students). 2. Jurisprudence (Law Students). 3. Civil Law, ditto. 4. Constitutional Law, ditto. First, two terms; second, three weeks; third, four—Tuesday, Wednesday, Thursday, Friday. Hours.—First course above-mentioned, eleven o'clock; second ditto, one o'clock; third ditto, four o'clock.

The above hours were those fixed by the Council; they were sometimes changed to suit the convenience of the students when the class were unanimous in desiring such change to be made.

These returns apply to the first three courses above-mentioned.

In the fourth course there was but one student; ten lectures were delivered in the second term.

B. — Text-books:—In Political Economy. — Adam Smith, Wealth of Nations; Senior, Political Economy; Longfield, ditto; Longfield, Lectures on Commerce; Huskisson, "Question stated."

In Jurisprudence—I know of no book which is fit for a text-book on Jurisprudence, understanding the term as "the Science of Legislation." The books in use are—Reddie, Inquiries on the Science of Law; Lord Bacon, Tract on Universal Justice; Adam Smith, Wealth of Nations, third book.

In Civil Law—The Institutes of Justinian, Gardiner's Survey of the Civil Law.

In Constitutional Law—Hallam, Constitutional History.

C.—None.

D.—There are constant examinations throughout the courses, either in the text-books or in the lectures which have been delivered by the Professor.

E.—Students in Arts of the third year, and of Law in the first, second, and fourth years.

F.—In Jurisprudence and Political Economy—Arts, seven; in Jurisprudence (Law), three; in Civil Law, ditto, two; in Constitutional Law, ditto, one.

G.—Excellent.

H.—The lecture-room had no fire-place. This defect is now corrected.

R. H. Mills.

No. 22.—Report of Professor of English Law.

A.—There were three classes. The course prescribed for each class comprised twenty-four lectures. Sixteen lectures were given to each class during the first term, and eight during the third. They occupied four weeks in the first, and two in the third term; four lectures having been given weekly, on Tuesday, Wednesday, Thursday and Friday, at the hours of eleven o'clock, A.M.; twelve o'clock, and three o'clock, P.M., respectively.

B.—The subject and title of the course for the class of the first year, were, "The Law of Real Property." It comprised elementary instruction in this branch of law, and in practical conveyancing. The text-book read was "Williams on Real Property." The first volume of Stephens' edition of Blackstone's Commentaries, and the second volume of Kerr's edition, were recommended for perusal. The titles and subjects of the course for the class of the second year, were, "The Law of Personal Property," Equity, and "Bankruptcy." It comprised instructions in those branches of law, and in the practical application of precedents, &c. The text-books read were, "Williams on Personal Property," "Smith's Manual of Equity," "The late Statute of Bankruptcy and Insolvency." The second volume of Stephens', and Kerr's editions of Blackstone's Commentaries, and Smith's "Mercantile Law," were recommended for perusal. The subject and title of the course for the class of the third year, were, "Common and Criminal Law." It comprised the history, constitution, and jurisdiction of the several Courts of Justice; Procedure in Crown and Civil Causes at Law and in Equity, as also in the local courts. The text-books were the third and fourth volumes of Blackstone's Commentaries, Stephens' and Kerr's editions, "Broom's Common Law," "Broom's Maxims," "Smith's Leading Cases," and "Copinger's County Courts," were recommended for perusal.

C and D.—The lectures were illustrated by instructions and the perusal of abstracts of title and cases, and (so far as it was practicable) by the consideration of cases for opinions, &c., and by oral examination, and requiring students to write on the subjects of them, and by reference to the books containing approved precedents of pleading, conveyancing, &c.

E.—Students in Arts and the Law Faculty.

F.—Four in the class of the first year, two in the second, and one in the third.

G.—Very good and attentive.

I also delivered during the session the legal portion of the lectures in the class of Medical Jurisprudence, and respectfully take leave to refer the President to the joint return of my colleague, Dr. Blyth, and myself, in reference to that course.

Michael Barry.

No 23.—Report of the Medical Jurisprudence Course.

A.—Three months. Three lectures weekly, on Tuesday, Thursday, and Friday, at 2, P.M.

B.—The subjects chiefly enlarged upon were Toxicology, infanticide, injuries, wounds, the rules regulating the admission of evidence in legal procedure. The text-books recommended were Taylor's Medical Jurisprudence, and Taylor on Poisons, with the perusal of leading cases reported, as for example, Lord Ferrer's case, Hadfield's case, the Gardner and Douglas Peerage cases, &c., &c.

C.—The course was illustrated by experiments when necessary.

D.—The method of teaching was by lectures alone.

E.—Students of the Faculty of Medicine and Law attended.

F.—Twelve matriculated students attended very regularly.

G.—Their conduct was good, and the discipline excellent.

H.—The department of Medical Jurisprudence is at present entirely dependent on the department of Chemistry for the apparatus and materials necessary for illustrating the toxicological portion of the course.

Nov. 10, 1858.

J. Blyth, M.D.
Michael Barry.

APPENDIX G.

Official Report of Librarian.

The number of volumes in the library at the date of this Report is 9,793, including 337 volumes of atlases, maps, plates, &c., but not the pamphlets, on various subjects, which amount to more than 500.

Once every year all books in circulation are called in, to give the Librarian an opportunity of ascertaining the exact condition of the library. On the last occasion of making this supervision, by comparing the catalogue with the books on the library shelves, I found the losses for the year to be two pamphlets on medical subjects.

The books are classed according to their professional departments (as nearly as possible) as follows:—

	Vols.
The Greek and Latin Classics,	1,152
English Language and Literature,	1,049
Modern do., do.,	671
Celtic do., do.,	200
Oriental do., do.,	117
History,	1,105
Logic and Metaphysics,	318
Theology and Church History,	373
Mathematics, Pure and Mixed,	407
Experimental Physics,	251
Fortification, &c.,	150
Geography, Voyages, Travels,	318
Natural History,	783
Chemistry,	533
Geological Science,	324
Engineering, Architecture, &c.,	247
Agriculture,	163
English Law,	304
Jurisprudence and Political Economy,	228
Medical Library,	1,120
Total,	9,793
Total at end of previous Session,	8,683
Increase during Session 1857–58,	1,110

With the exception of about a dozen volumes presented, this 1,110 have been purchased by the College.

It was deemed advisable to make some slight alteration in the arrangement of books in certain cases. For instance, transferring a number of volumes of Comparative Anatomy from the Medical library to the Natural

APPENDIX G.

Official Report of Librarian.

History department, &c. Owing to these changes, some discrepancy will appear on contrasting the numbers denoting the professional distribution of the library, as given in this report, with that of last year.

The mode of receiving, stamping, and cataloguing is the same as that described in last report.

There have been bound during the past year 695 volumes. The work was satisfactorily done, and according to contract.

With the exception of the loss of the pamphlets above alluded to, the library has suffered no injury in its book or other property.

The discipline is excellent. I had no occasion to report any breach of it.

M. O'KEEFFE, M.A., *Librarian.*

18th Nov., 1858.

APPENDIX H.

Report of Curator of Museum.

APPENDIX H.

REPORT of CURATOR of MUSEUM.

1. The number of departments in the Museum of Queen's College, Cork, is five, viz.:—Zoological, Botanical, Geological, Palæontological, and Mineralogical.

2. The number and general nature of the objects of the several departments remains the same as in last year's report, except in the case of the Zoological, which has received an addition in the form of a series of shells from Megatlan; and the Palæontological, which has also received a considerable addition through the kindness of the Director-General of the Geological survey, consisting of fossils from several portions of the English formations, and including a valuable series from the tertiary shale of the Isle of Wight.

3. The above additions, to which is to be added a fine specimen of a slab of Carboniferous Limestone, containing modociums, presented by Edward Wood, Esq., Richmond, Yorkshire, constitute the objects which have been obtained during the official year, 1857–58. Casts, made by Mr. Waterhouse Hawkins, of the reptiles of the mesogire period, have also been procured during this period.

4. Reference has been made to such objects as are of interest in the above paragraph.

5. With reference to the arrangement and condition of the Museum, and of the classification and cataloguing of the specimens, it must again be stated that as concerns the Zoological department great blanks yet remain to be filled up, and many very important types of animals are still absent from the Museum. This portion is in the least satisfactory condition; and until this want of typical specimens is supplied, the arrangement and cataloguing of this portion must be delayed. In the matter of the Botanical department, the classification is nearly complete; and the same remark applies to the Geological and Mineralogical departments, which are arranged and catalogued so far as is possible.

6. The condition of the Museum, as regards fitments, cases, &c., is not in such a satisfactory condition as could be wished. More cases are required for the Zoological specimens; and a series of drawers is necessary to supply the wants of the Geological and Mineralogical departments. To meet these requirements I have applied to have the desideratum supplied.

7. The conduct of the students in regard to the Museum is quite satisfactory, no cause of complaint having arisen during the session.

8. Concerning cleanliness and attendance, I have to report very favourably. The damp, however, still exists, of which I complained in my last report; and it is desirable that the only remaining fire-place should be supplied with a stove, as this, from its smoking, causes considerable trouble, and gives to the walls a dirty aspect.

ROBERT HARKNESS.

28th October, 1857.

APPENDIX I.

Copies of accounts furnished by Bursar.

APPENDIX I.

COPIES of the several ACCOUNTS furnished by the BURSAR, showing the financial STATE of the COLLEGE.

No. 1.—GENERAL ABSTRACT of the ACCOUNT of the PRESIDENT or VICE-PRESIDENT, and BURSAR, of QUEEN'S COLLEGE, CORK, from 1st April, 1857, to 31st March, 1858.

Heads of Service—Receipts.	£	s.	d.	*Heads of Service—Payments.*	£	s.	d.
To Balance on the 1st April, 1857,	558	10	5	By amount paid for Salaries,	5,100	12	9
To amount received from Paymaster of Civil Services,	7,000	0	0	By amount paid for Scholars and Prizes,	1,395	16	6¾
To amount, undercast, in April, 1856,	2	0	0	By amount paid for Porters and Servants,	348	11	5½
To amount, Professor's salaries, disallowed,	47	6	4½	By amount paid for errors in January and February, 1856–57,	0	4	10
				By Balance indebted on 31st March, 1858,	762	11	3
	£7,607	16	9½		£7,607	16	9½

Signed, E. M. FITZGERALD, *Bursar.*

No. 2.—STATEMENT of RECEIPTS and EXPENDITURE of amount of FUNDS derived from College and Matriculation Fees, Fines, Rent of Robe Boxes, for the year ending 10th October, 1858.

Receipts.	£	s.	d.	*Expenditure.*	£	s.	d.
To Balance,	73	13	1½	By amount paid Carpenter,	5	1	4
To Matriculation Fees,	46	15	0	By amount paid for Models for Dr. Boole,	1	10	0
To Rent of Boxes for Cap and Gown,	2	12	6	By amount paid Purcell for Printing,	12	5	0
To Fines,	3	0	0	By amount paid Fitzgibbon for Matting for Library,	15	9	0
				By amount paid Pringle for Clerk for Library,	3	0	0
				By Miscellaneous,	1	18	0
				By Balance brought forward to credit of additional Grant, as per directions of Commissioners of Audit,	86	17	3½
	£126	0	7½		£126	0	7½

Signed, E. M. FITZGERALD, *Bursar.*

No. 3.—STATEMENT of PAYMENTS made from Parliamentary Grant for QUEEN'S COLLEGE, CORK, for year 1857–58. APPENDIX I.

Copies of Accounts furnished by Bursar.

Receipts.	£ s. d.	Expenditure.	£ s. d.
By Cash received from Treasury on account of Parliamentary Grant of 1857–58,	1,600 0 0	Libraries:—	
		Classical Languages,	79 12 1
		English Language and History,	88 9 0
		Celtic Languages,	10 2 0
		Foreign Modern Languages,	57 18 0
		Mathematics, Chemistry, and Physics,	55 1 2
		Natural Sciences,	94 11 10
		Civil and Military Engineering and Agriculture,	38 13 4
		Mental, Legal, and Political Sciences,	43 17 0
		Medical Sciences,	91 18 1
		Periodical Literature,	55 18 6
		Sundry Library Expenses,	8 16 4
		Binding Books,	96 14 5
		Museums:—	
		Classical Art and Antiquity,	35 10 0
		General Natural History,	145 2 3
		Medical Museums,	113 14 11
		Physical Cabinet,	112 9 6
		Chemical Laboratories,	43 7 5
		Engineering and Agriculture,	20 18 0
		Establishment:—	
		Printing, Stationery, and Office Expenses,	81 0 4
		Postage and Advertising,	87 4 11
By Balance to credit of Bursar,	0 12 1	Heating and Lighting, and Fireman's Wages,	135 0 4
		Botanic Garden and Grounds,	104 12 8
	£1,600 12 1		£1,600 12 1

Signed, E. M. FITZGERALD, *Bursar.*

APPENDIX K.

APPENDIX K.

Documents regarding Discipline and Conduct of Students, &c.

DOCUMENTS regarding DISCIPLINE and CONDUCT of STUDENTS, with REPORTS from the VICE-PRESIDENT and the DEANS of RESIDENCES.

No 1.—FORM of VICE-PRESIDENT'S RETURN.

Return to be filled up by the Vice-President, and sent in to the Registrar for the official information of the President, on or before the 10th day of November, for the Collegiate Session 1857–58.

A.—As to the state and efficiency of all the several departments of the College, to which the constant supervision of the Vice-President is directed by the Statutes.

B.—As to the state of order and discipline in the College, to which the particular attention of the Vice-President is directed by the Statutes.

Signed, By order of the President,
ROBERT J. KENNY, *Registrar.*

RETURN of the VICE-PRESIDENT.

A.—The educational departments of the College were generally in an efficient state during the Session 1857–58. The Vice-President thinks it necessary here to state, that he has hitherto been uncertain as to his duty, during the President's absence from the College, in reference to those departments which are placed by the Statutes under the immediate control of the President, and the supervision of which has been delegated by him to other officers of the College, and that he does not feel himself in a position to report on those particular departments.

B.—The state of order and discipline in the College was, on the whole, satisfactory. There were *three* cases of breach of discipline which the Vice-President thought it necessary to bring under the notice of the Council, in one of which the offender was admonished by the Chairman of the Council; in the second, a money fine was inflicted; and in the third, the student was deprived of credit for attendance on one of the Sessional courses. This last penalty was afterwards remitted.

The Vice-President begs to acknowledge the receipt of a report made by him to the President on the 2nd inst., and returned to him on the 24th, together with a minute by the President in reference thereto. The Vice-President observes certain alterations in the lettering of the paragraphs of the Report, made, apparently, by the President for convenience of reference. These alterations are of a slight nature; but the Vice-President thinks it necessary to notice them, as they impair the integrity of the document, and oblige him to re-write it, which he might not otherwise have thought necessary.

1. The Vice-President has adopted the suggestions contained in the minute accompanying the returned report, by incorporating in that which he now forwards a notice of the case of breach of discipline, which had been inadvertently omitted in the former report, but was contained in his explanatory letter to the President of the 13th inst.

2. In reference to minute No. 2, the Vice-President begs, respectfully, to state, that he considers the explanation appended by him to his reply to the question contained in paragraph (A) of the Form of Return, was rendered necessary by the comprehensive nature of the return required, viz.: "as to the state and efficiency of *all* the several departments of the College;" and by his ignorance, as to the state and efficiency of certain of those departments, arising from the cause stated in that explanation. The Vice-President has taken the occasion of re-writing the report, to make the explanation more full and explicit.

With reference to the suggestion made by the President, that the Vice-President should prepare a statement of the difficulties which he has hitherto felt, in administering the government of the College during the absence of the President, the Vice-President begs respectfully to state, that he does not think such a course necessary or expedient. It is his intention to adopt the interpretation of his duties, which is conveyed in the opinion expressed by the Commissioners appointed by Her Majesty to inquire into the Progress and Condition of the Queen's Colleges, until an authoritative decision on the subject shall have been pronounced.

JOHN RYALL, *Vice-President.*

November 27, 1858.

MINUTE of PRESIDENT, referred to in preceding Report of Vice-President, Queen's College, Cork.

In reference to the Vice-President's report of the 2nd instant, and his letter of the 13th, the President requests the Vice-President will favour him by reconsidering those documents under the following points of view:—

1. The Vice-President's letter of the 13th instant, being written merely to correct an omission in his report of the 2nd, the President suggests whether it may not be well to incorporate it with same, and thereby avoid the necessity of printing both as separate documents.

2. As the President will himself report on all depart-

G

Appendix K.

Documents regarding Discipline and Conduct of Students, &c.

ments more specially in his charge, and as the report to be furnished by the Vice-President, in accordance with the official request of the President, under Statutes, chap. v. sec. v., is supplied by paragraph (A and C), it appears to the President that paragraph (B) in which the Vice-President refers to his uncertainty as to his duties in certain regards, does not form any proper portion of the report; and may, if published, tend to introduce complications from which, under the circumstances, the President considers the official report to Parliament should be kept free.

The President requests, therefore, the Vice-President to consider whether it would not be better to omit that paragraph as irrelevant to the proper objects of his report. The President is, however, sensible of the inconvenience to the business of the College, and to the Vice-President, of such uncertainty of his duties on the part of that officer as he has described; and that although no practical injury has hitherto arisen to the business of the College thereby, such may at any time occur in the absence or illness of the President. He is, therefore, desirous that the uncertainty of the Vice-President on the subject, should be if possible removed completely and without delay; and he, therefore, suggests that the Vice-President should prepare such a statement of his uncertainties on all such points, as shall most fully explain his feelings on the matter; and the President will on receipt of same, forward it to the Government, with his recommendation that it shall be at once considered, in order finally to relieve the Vice-President from the state of uncertainty as to his duties in which he describes himself now to be.

The President requests that the annexed report may be returned as soon as convenient, in such form as the Vice-President may chose to adopt.

Signed, Robert Kane, *President.*

24th November, 1858.

No. 2.—Return of Cases of Breach of Discipline brought before the College Council in the Session 1857–58.

No.	Date.	Nature of Offence.	Punishment.
1	Dec. 16, 1857,	Seen in a public-house.	Solemnly admonished.
2	May 28, 1858,	Neglect of duty as scholar.	Fined Three Pounds.
3	Ditto,	Misconduct at lecture on Natural History, and at subsequent inquiry.	Deprived of credit for attendance for Session,* on the class of Natural History.

Signed, Robert J. Kenny, *Registrar.*

* This punishment was subsequently remitted by the Council.

No. 3.—Reports of Deans of Residences.

The Palace, Cork, December 13, 1858.

Sir,—I have had no students whatever under my care, officially, as there is no licensed boarding-house connected with the College that I am aware of. Four or five of the students, voluntarily, and *at great inconvenience to themselves*, attended, up to last May, a series of lectures I gave at the Cathedral, the only place which I had to assemble them in. These students gave me every satisfaction.

I have the honour to be, Sir,
Your obedient servant,

George Webster, *Clerk.*

Sir Robert Kane,
Queen's College, Cork.

Report of Presbyterian Dean of Residence.

Sir Robert Kane.

Sir,—The Presbyterian students in attendance on the Queen's College, during the Session 1857–58, were four in number. On no former occasion have I seen young gentlemen more attentive to their religious duties, or more decorous in their conduct.

I am yours, very truly,

William Magill.

Cork, December 14, 1858.

Report of Wesleyan Dean of Residence.

Lisburn, December 20, 1858.

My Dear Sir Robert,—I am happy to report that the students who were under my care, during the Session of 1857–58, were well-behaved and orderly, so far as I could ascertain. In addition to this, I may say, that some of them distinguished themselves in a literary point of view, which is a proof to all concerned that their time was not spent in folly or in any way unbecoming the wishes of their parents, or the professors of the College.

I remain, dear Sir Robert, yours, respectfully,

Daniel Macafee.

To Sir Robert Kane, President
of Queen's College, Cork.

Appendix L.

Report of Proceedings at Triennial Visitation.

APPENDIX L.

Report of Proceedings at Triennial Visitation of Queen's College, Cork, held March 18, 1858.

Present:—The Most Reverend the Archbishop of Dublin, Presiding; The Right Reverend the Bishop of Cork, The Right Honourable Baron Greene, The President of the College of Surgeons, Ireland.

The roll having been called, the Archbishop of Dublin inquired of the President, the Vice-President, and Students, if they had any complaint to make, when a Medical Student, William Wigmore, presented himself, and complained that having entered as a Matriculated Student in the Faculty of Arts in 1854, and having dropped his year, he, on his return to the College, entered in the Faculty of Medicine; that he then found the fees paid the year before had been appropriated to the use of the Professors in the Faculty of Arts; that having applied to each of these Professors the fees were returned, unless by Mr. Lewis, the Professor of Latin; that he now applied to the Visitors that Mr. Lewis be directed to return that fee. The Vice-President, Mr. Lewis, and the Bursar having been heard, the Visitors decided that there seemed to be merely a misconception of his right on the part of the Student, it being quite optional on the part of the Professor to return the fee or not.

Signed, Robert J. Kenny, *Registrar.*

Dublin: Printed by Alex. Thom and Sons, 87 and 88, Abbey-street,
For Her Majesty's Stationery Office.