

THE REPORT
OF THE
PRESIDENT
OF
QUEEN'S COLLEGE, CORK,
FOR
THE ACADEMIC SESSION 1875-6;
WITH APPENDICES.

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



DUBLIN:
PRINTED BY ALEXANDER THOM, 87 & 88, ABBEY-STREET,
PRINTER TO THE QUEEN'S MOST EXCELLENT MAJESTY.
FOR HER MAJESTY'S STATIONERY OFFICE.

1876.

[C.—1561.] *Price 8d.*

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PRESIDENT OF QUEEN'S COLLEGE, CORK,
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TO THE QUEEN'S MOST EXCELLENT MAJESTY.

MAY IT PLEASE YOUR MAJESTY—

In compliance with a provision of the Act of Parliament founding the Queen's Colleges (8 and 9 Vict., c. 66, s. 20), and in accordance with the College Statutes, I have the honour of submitting to Your Majesty the following Report of the Proceedings and of the Condition of Queen's College, Cork, for the Academic Session 1875-76.

Since my last Report several changes have taken place in the College. Your Majesty not having been pleased to appoint a successor to the late Dr. Ryall, Vice-President, that office is now in abeyance, as contemplated by the existing statutes. Mr. E. Vaughan Boulger, M.A., who has succeeded Dr. Ryall as Professor of Greek, was able to enter upon his duties at once, and accordingly assisted at the Matriculation and Scholarship examinations. J. H. Corbett, M.D., Professor of Anatomy and Physiology, having resigned early last Autumn on account of bad health, his successor, J. J. Charles, M.A., M.D., was appointed in sufficient time to enable him to enter upon his duties at the opening of the Session, so that no interruption took place in the work of that important chair. By the resignation of Dr. Corbett the College has lost a zealous and conscientious professor, who contributed much to the success of its Medical School. In my last Report I notified the illness of Dr. Purcell O'Leary, Professor of Materia Medica, and the appointment of Matthias O'Keeffe, M.A., M.D., as his substitute. Dr. O'Leary's health not having improved in the course of the summer, he resigned. The appointment of Dr. O'Keeffe to the vacant chair by your Majesty, and his appointment by the Council to lecture on the medical part of Medical Jurisprudence, an office which he also held in the Session of 1874-75, greatly facilitated the work of the Medical Faculty; for as Dr. O'Leary's substitute he had acquired experience, and had got his department into working order before he became professor. Dr. O'Keeffe having held the Librarianship of the College for many years, his appointment as Professor of Materia Medica caused another vacancy. Some delay necessarily took place in selecting a new Librarian; the gentleman appointed, Richard Caulfield, LL.D., was, however, able to enter upon his duties early in the Second Term.

In connexion with the retirement of Dr. Corbett and Dr. O'Leary, we have to thank your Majesty's Government for the

important and just concession made in regard to those Professors of the Queen's Colleges who are entitled under existing regulations to pensions, of having their class fees included as part of their salary in calculating the pensions to which they might become entitled, as is the case in the Scottish Universities. I trust that, as in the latter institutions, the right to pensions will also be extended to all the Professors of the Queen's Colleges alike. Such a regulation would greatly promote the efficiency of the Colleges, and consequently deserves, on public grounds, the favourable consideration of your Majesty's Government.

1. MATRICULATION EXAMINATION, TOTAL NUMBER OF STUDENTS, AND THEIR CLASSIFICATION ACCORDING TO ACADEMIC STANDING AND FACULTIES.

The General Matriculation or Examination for Entrance, was held on Tuesday, the 19th of October, and following days; and a Supplementary Examination on the 16th of November. The subjects of examination prescribed by the Council of the College, and printed in the College Calendar, will be found in Appendix A, No. I, p. 21, annexed to this Report. Of the Candidates who presented themselves for examination, 76 passed. There also entered for the first time 15 Non-Matriculated Students, making the total number of new Students 91.

The following table gives the number of these new Students who joined each Faculty:—

	Matriculated.	Non-Matriculated.	Total.
Faculty of Arts,	19	2	21
„ Law,	—	1	1
„ Medicine,	46	11	57
School of Engineering,	12	1	13
Gross Total,	77	15	92
From which are to be deducted number of Students attending Lectures in two Faculties. }	1	—	1
True Total,	76	15	91

The total number of Matriculated Students in the College in the Session of 1875-76, was 226, and of Non-Matriculated 24, or together 250.

The following table shows the distribution among the several Faculties of all the Students attending the College during the Session 1875-76:—

	Matriculated Students.	Non-Matriculated.	Total.
Faculty of Arts,	51	2	53
„ Law,	2	1	3
„ Medicine,	156	20	176
School of Engineering,	26	1	27
Total,	235	24	259
Deduct number of Students attending Lectures in two Faculties. }	9	—	9
True Total,	226	24	250

In the following table the Matriculated Students attending the College in the Session of 1875-76 are classified according to Faculties and Academic Standing:—

	Number of Students attending the courses of the				
	First Year.	Second Year.	Third Year.	Fourth Year.	Total.
Faculty of Arts, . . .	26	8	10	7	51
" Law, . . .	—	1	1	—	2
" Medicine, . . .	58	30	40	28	156
School of Engineering, . .	13	10	3	—	26
Gross Total, . . .	97	49	54	35	235
From which must be deducted the Number of Students attending Lectures of another Year also, }	2	1	5	1	9
True Total, . . .	95	48	49	34	226

2. COMPARISON OF THE NUMBER OF STUDENTS ATTENDING THE COLLEGE DURING THE PAST SESSION WITH THE NUMBER IN EACH OF THE PRECEDING FIVE SESSIONS RESPECTIVELY.

During the last six years the total number of Students attending the College has been remarkably constant. Even the fluctuations which take place in the number of Students of each year's Academic Standing, and in the number who adopt the several professions, with the exception of that of Law, have practically compensated each other within the period in question. The following table shows the number in each of those years classified according to Academic Standing:—

	Session of					
	1870-71.	1871-72.	1872-73.	1873-74.	1874-75.	1875-76.
Matriculated Students—						
Of the First Year, . . .	89	90	106	77	79	95
" Second " . . .	57	47	61	68	60	48
" Third " . . .	39	52	36	52	58	49
" Fourth " . . .	35	27	26	31	30	34
Attending Special Courses, . .	5	14	3	—	—	—
Total, . . .	225	230	232	228	227	226
Non-Matriculated Students, . .	25	23	20	22	23	24
Total Number of Students, . .	250	253	252	250	250	250

In the following table the Students attending during the same years are classified according to Faculties:—

	Total Number of Students in the Session					
	1870-71.	1871-72.	1872-73.	1873-74.	1874-75.	1875-76.
Faculty of Arts, . . .	50	56	49	64	58	53
" Law, . . .	11	12	12	7	7	3
" Medicine, . . .	167	173	174	170	174	176
School of Engineering, . . .	30	25	22	19	23	27
Gross Total, . . .	258	266	257	260	262	259
Deduct Number of Students attending Lectures in two Faculties, . . . }	8	13	5	10	12	9
True Total, . . .	250	253	252	250	250	250

The decrease in the number of Law Students is undoubtedly chiefly due to the regulations of the Benchers of the King's Inns which practically ignore the Law Schools of the Queen's Colleges,* and to those of the Incorporated Society which entirely ignore them.

3. LOCALITIES FROM WHENCE STUDENTS COME.

Queen's College, Cork, was established to provide university education chiefly for the province of Munster; the majority of its Students ought, therefore, to be drawn from that province; and this is the case, for in the Session of 1874-75, 93·8 per cent. of all the Matriculated Students came from different parts of Munster, and in the Session of 1875-76, 85·8 per cent. If the different counties of Munster contributed Students in proportion to their population, about 37 per cent. of the Munster Students attending ought to be from the county and city of Cork, whereas 76·5 per cent. of the Munster Students in the Session of 1874-75, and 75·2 in the Session of 1875-76, were from the county and city of Cork. The natural inference to be drawn from these facts is that the advantages of the College are most availed of where it is best known and most accessible, and that as it becomes better known and understood in the adjoining counties, a larger number of Students may be expected from them.

4. AGES OF STUDENTS.

Of the new Students 88·1 per cent. were 17 years of age and upwards, and 11·9 per cent. under 17 years of age. Of all the Matriculated Students of the College for the Session 1875-76, only 6·2 per cent. were under 17 years of age, while 45·1 per cent. were 20 years of age and upwards.

5. RELIGIOUS DENOMINATIONS OF STUDENTS.

In the following table the new Students who entered in the Session 1875-76, are classified according to the religious denomination to which they belong:—

	Matriculated Students.	Non-Matriculated Students.	Total.
Roman Catholics, . . .	37	9	46
Church of Ireland, . . .	32	5	37
Presbyterians, . . .	2	—	2
Other Denominations, . .	5	1	6
	76	15	91

The following table shows the total number of Students attending the College in the last Session, classified according to religious denominations and Academic Standing:—

	First Year.	Second Year.	Third Year.	Fourth Year.	Non- Matriculated.	Total.
Roman Catholics, . . .	45	20	32	20	14	131
Church of Ireland, . . .	41	24	17	10	9	101
Presbyterians, . . .	3	1	—	3	—	7
Other Denominations, . .	6	3	—	1	1	11
Total, . . .	95	48	49	34	24	250

* Since the above was written the Benchers have, in last Trinity Term, modified their rule. See the new rule in Appendix A, No. III, p. 39.

Roman Catholics formed, therefore, 52.4 per cent. of all the Students attending the College in the last Session. The following table, in which the Students are classified according to Faculties, shows that the various religious denominations of the district are represented among the Students of the several departments of the College :—

Faculty.	Roman Catholics.			Church of Ireland.			Pres- byte- rians.	Other Denominations.			Total.		Gross Total.
	Matr.	Non- Matr.	Total.	Matr.	Non- Matr.	Total.		Matr.	Non- Matr.	Total.	Matr.	Non- Matr.	
Faculty of Arts, . . .	22	1	23	23	1	24	5	1	—	1	51	2	53
„ Law, . . .	2	1	3	—	—	—	—	—	—	—	2	1	3
„ Medicine, . . .	91	12	103	60	7	67	1	4	1	5	156	20	176
School of Engineering, . .	7	—	7	13	1	14	1	5	—	5	26	1	27
Gross Total, . . .	122	—	136	96	—	105	7	10	—	11	235	24	259
Deduct No. of Students attending two Faculties,	5	—	5	4	—	4	—	—	—	—	9	—	9
Total, . . .	117	—	131	92	—	101	7	10	—	11	226	24	250

The number of Students of the several religious denominations to whom Scholarships and Exhibitions were awarded at the commencement of last Session is given in the following table :—

	Roman Catholics.		Church of Ireland.		Pres- by- terians.	Other Denomi- nations.	Total.
	Scholar- ships.	Exhibi- tions.	Scholar- ships.	Exhibi- tions.			
Faculty of Arts, . . .	9	1	11	2	5	—	28
„ Law, . . .	1	—	—	—	—	—	1
„ Medicine, . . .	3	3	3	3	—	2	14
School of Engineering, . .	1	—	—	—	—	—	1
	14	4	14	5	—	—	—
Total, . . .	18		19		5	2	44

The following table gives the total number of Students of the several religious denominations who attended the College in each of the last ten Sessions :—

Religious Denominations.	TOTAL NUMBER OF STUDENTS OF EACH RELIGIOUS DENOMINATION IN THE SESSION OF									
	1866-67	1867-68	1868-69	1869-70	1870-71	1871-72	1872-73	1873-74	1874-75	1875-76
Roman Catholics, . . .	108	111	97	94	86	104	107	123	129	131
Church of England, and now of Ireland,	106	118	125	134	142	131	130	116	96	101
Presbyterians, . . .	7	7	12	8	12	10	8	9	8	7
Other Denomi- nations, . . .	9	11	10	16	10	8	5	2	10	11
Not recorded, . . .	—	—	—	—	—	—	2	—	7	—
Total, . . .	230	247	244	252	250	253	252	250	250	250

6. SCHOLARSHIPS, EXHIBITIONS, &c.

The examinations for Scholarships commenced on Thursday the 21st of October, and were continued on the days given in the table in the Appendix (A, No. I., p. 25). The subjects of examination prescribed by the Council, and published in the College Calendar, as well as the conditions under which the Scholarships are held, will also be found in the Appendix (A, No. I., p. 24; No. II., p. 35, &c.; No. III., p. 40; No. IV., p. 44; and No. V. p. 47). These examinations were conducted chiefly by printed papers, copies of which will be found in Appendix D. Of the 46 Junior Scholarships at the disposal of the Council, 10 in the Faculty of Arts, open to Students of one year's standing, are tenable for two years, so that in reality there are only 20 Junior Scholarships in Arts, or 36 in all the Faculties, at the disposal of the Council each year. Of these 22 were awarded, or adding the Scholarships awarded the previous Session, and tenable for two years, 28. Of the 8 Senior Scholarships 7 were awarded.

The following table shows the number of Scholarships in each Faculty, and the number awarded, or held from the previous year:—

Faculties.	Total No. of Scholarships.	No. of Scholarships awarded.
Faculty of Arts—		
Junior Scholarships—		
Open to Students at Entrance,	10	9
Open to Students of One Year's standing, or those entering on the Second Year,	10	3
Held by Students of Two Year's standing, or those of the Third Year,	10	6
Total,	30	18
Senior Scholarships,	7	7
Faculty of Law—		
Junior Scholarships,	3	1
Senior "	1	—
Faculty of Medicine,	8	8
School of Engineering,	5	1
Total,	54	35

Three Exhibitions were awarded to unsuccessful Candidates for Senior Scholarships whose answering was deemed worthy of a special prize, namely, one in mathematics, one in chemistry, and one in mental and economical science. Six Exhibitions were awarded to unsuccessful Candidates for second and third years' Scholarships in the Faculty of Medicine. The names of the holders of Scholarships and Exhibitions in the Session of 1875-76 will be found in the Appendix (B, No. VII., p. 50).

In my last Report I drew attention to the very imperfect preparation of Candidates for Scholarships at Entrance, owing to the want of good intermediate schools. During the past Session I have had occasion to notice the effect of the want of sound elementary teaching in the schools upon the work of the Students in the different Faculties. This College is, therefore, very much

interested in the improvement of the intermediate education of the South of Ireland; and I hope that something will soon be done in this direction.

7. LECTURES.

A list of the subjects in which instruction is given in the College, the total number of Students who attended classes in those subjects, and the number of lectures given in each subject, will be found in Appendix (B, No. X., p. 53). Under the head of each Faculty, detailed information as to the courses of studies, outlines of the lectures given by each Professor, &c., are also given in the Appendix (A, Nos. II., III., IV., and V., pp. 29, *et seq.*, 39, 42, and 46). Each Professor has also furnished a Special Report of his work for the Session. These Reports will be found in the Appendix (C, No. XI., p. 54, *et seq.*)

8. SESSIONAL EXAMINATIONS AND PRIZES.

The Examinations held at the end of the Session, or in the case of those subjects which only occupy one or two terms, at the end of the Course, were satisfactory, and very few failed to pass. Students of Medicine, unless holders of Scholarships or Exhibitions, are not bound to pass the Sessional Examinations, and do not require Academic Promotion. Examinations are, however, held in the Faculty of Medicine, for the purpose of awarding prizes, and last Session a very large number presented themselves, not so much for the sake of the prizes as for the benefit of the examination itself. Indeed several of those who presented themselves were not eligible for prizes however much they might have distinguished themselves. To Students thus circumstanced, and whose answering would have otherwise entitled them to a prize, "Certificates of Honor" were awarded.

The sessional examinations, except in the case of such subjects as Practical Chemistry and Practical Anatomy, are conducted chiefly by printed papers; but where necessary the students are examined orally also. In addition to the two subjects above mentioned, the examinations in which are necessarily conducted practically, the examination of specimens, the preparation of bodies, and toxicological experiments, formed part of the examinations in *Materia Medica* and *Medical Jurisprudence*. Copies of the papers set at the sessional examinations are given in the Appendix (D, No. XIV., pp. 67 to 89, 100-101, 102-108, 114-116), and the names of the students who were awarded prizes and certificates will also be found in the Appendix (B, No. VIII., p. 51).

9. UNIVERSITY EXAMINATIONS.

The following table gives the number of Students of Queen's College, Cork, who passed the examinations of their Standing and Faculty respectively, and obtained Degrees, &c., at the

June and October Commencements of the Queen's University in Ireland for the year 1875:—

Faculty of Arts, . . .	M.A. 1	B.A. 10	First Examination. 8		
Faculty of Medicine, .	M.D. 13	M.Ch. 13	Diploma in Midwifery. 9	Second Examination. 23	First Examination. 20
School of Engineering, .	B.E. 4	First Examination. 4			

In the Appendix (B, No. VI., p. 48) will be found the names of all the Graduates and Undergraduates who passed at these Examinations, distinguishing those who passed with Honors.

10. DISCIPLINE AND CONDUCT OF THE STUDENTS.

The discipline and conduct of the Students in the class-rooms was satisfactory (see Reports of Professors, Appendix C, No. XI., p. 54, *et seq.*). No breach of discipline or case of misconduct of sufficient gravity to call for the direct action of the Council occurred during the session.

11. RECEIPTS AND EXPENDITURE OF THE COLLEGE.

The Bursar's Annual Account of the Receipts and Expenditure of the College for the year ending 31st of March, 1876, and his account of the manner in which the Annual Parliamentary Grant for the maintenance of the College, and the College fees and fines for the year referred to have been expended, will be found in the Appendix (C, No. XIII., p. 66). These accounts have been signed and passed by the Auditor-General.

The portion of the unexpended balances from the college endowment for salaries and scholarships invested, with the sanction of His Grace the Lord Lieutenant, in the purchase of £1,089 13s. 7d. new three per cent. stock, and referred to in my Reports for the Sessions 1873-4 and 1874-5, has yielded dividends for the year amounting to the sum of £32 8s. 4d., which has been included in our receipts. A small loss on account of the Library Deposits having taken place in former years, and there being no fund from which the deficiency could be legitimately supplied under the system of account adopted up to 1874-5, part of the amount held as Library Deposits was placed in the Bank on Deposit Account with the view of making the fund itself earn as interest the loss in question. This is the explanation of the item "Interest on Deposit Account," amounting to £2 16s. 4d., which appears in our receipts.

Another item which appears for the first time in the public accounts of this College is "Professors' Class Fees." Heretofore the class fees received by the Bursar were immediately paid over by him to the several professors, and were not brought under public audit. The whole arrangement was practically a private one between the Bursar and the Professors. Henceforward, though each

Professor will receive his fees as before, they will be brought into the college accounts and subjected to public audit. In this way the Bursar's annual account of the receipts and expenditure of the College will be a complete statement of both.

12. LIBRARY.

The increase made in the Parliamentary Grant has enabled the Council to make considerable additions to the Library during the past year. Our first object has been to fill up gaps caused by the want of funds. It will take several years before we can hope to do this, and to procure even the standard works which ought to be in every collegiate Library, and which are absolutely indispensable in what is the only Library of reference in the South of Ireland.

The special Report of the Librarian will be found in the Appendix (C, No. XII., p. 65). The numbers given in that Report, and which have been carried on from the previous Report, are only to be regarded as approximate, for they include many duplicates, worn out text-books, and some pamphlets. The Library is, however, being now rearranged, and a complete catalogue is also being made; and as this involves the examination of every book in the Library, the Librarian will be able to make a correct report when this shall have been finished.

Allowing for all the space that has been gained by the rearrangement now being made, and doubling, as we have been obliged to do in some cases, long series of scientific journals, the available book-space in the Library will be fully taken up in two or, at furthest, three years.

As many donations of books are made from time to time to the Library, it is right that the donors should receive public acknowledgment of their gifts. I have therefore given in the Appendix (E, No. XV., p. 120) a list of the books so presented, and of the donors' names.

13. PHYSICAL CABINET, LABORATORIES, &c.

A great improvement was made before the commencement of last session in the Physical Cabinet, for which provision was made by Your Majesty's Government in the estimates voted by Parliament in the session of 1875, as I had the honour of stating in my last Report. Several additions were also made to the collection of apparatus during the session. The small Physical Laboratory for which provision was made at the same time has not yet been fitted up, owing to the failure of the contractor employed to carry out his contract. It will, however, be ready before the beginning of next session. This, with the further purchases of apparatus which are about to be made this summer, will give the Professor of Natural Philosophy the means of teaching experimental science practically, and of thoroughly illustrating his lectures by experiments.

When the Chemical Laboratory was fitted up the number of students was much less than what it is now. Thus, in the ten years from 1855 to 1865 the average number of students in Practical Chemistry was 26.5, but in the ten years from 1865 to

1875 it was 42·7, and last session there were 45 students. The laboratory, which is otherwise convenient and well fitted up, is too small, so that the Professor of Chemistry is obliged to divide his class into two. This greatly increases his work and that of his assistant, inconveniences all the students, and seriously interferes with those who may feel disposed to devote special attention to chemistry, either for the purposes of learning the method of scientific research, or applying it to practical purposes. I may also add that it impedes the researches of the Professor himself.

The dissecting-room also was constructed for a much smaller number of students than attend the classes in Practical Anatomy. Indeed to properly accommodate the present class, it should be doubled in size. I called attention to this want in my last Report, and both the present and the late Professors of Anatomy have drawn attention to it in their special Reports.

In my last Report I also called attention to the wants of the Professor of *Materia Medica*, who is likewise lecturer on Medical Jurisprudence, both subjects requiring to be taught practically. The room which he is obliged to use as a laboratory for his two classes, besides being separate from the lecture-room which he uses, is, in its present state, totally unfit for the purpose. The Professor has himself called attention to the disadvantages under which he labours in his Report. (*See Appendix C, No. XI., p. 62.*)

Owing to some difficulties connected with the construction, the preparation-room for the Professor of Natural History, for which provision was made by Parliament last year, has not been built. I hope that these difficulties may be overcome, and that this great want will be shortly supplied.

The Professor of Anatomy and Physiology proposes to get up a temporary Physiological Laboratory during the ensuing session, in anticipation of a permanent one which it is to be hoped will be provided when ever a proper Museum shall be built.

14. MUSEUMS.

I again take the liberty of representing the unsatisfactory character of our Anatomical and Pathological Museum. Dr. Charles, our new Professor of Anatomy, coincides in opinion with his predecessors, and says that "the room set apart for the Museum is entirely unfit for the purpose." (*Appendix C, No. XI., p. 61.*) Dr. O'Connor, Professor of Medicine, and who has repeatedly called attention to this want, says in his last Report (*App., p. 64*), that "there is a great want of a Pathological Museum." If a proper Museum building were erected, and some improvements made in the existing buildings of the Medical School, suitable accommodation could be found for the Professor of *Materia Medica* in the room now set apart for the Museum.

In my former Reports I represented the want of a curator. I take the liberty of repeating that representation. We want him not only to render our present collections really available for teaching purposes, but to develop and add to them.

Owing to the more pressing wants of the Library and Laboratories, not many purchases were made for the Museums during the past year. We received, however, some presents, among

which the fine collection, illustrative of the ethnology, &c., of New Guinea and the South Sea Islands, presented to the College by a former student, Dr. C. H. Haines, late Surgeon to H. M. Ship *Basilisk*, deserves special mention. A list of donations, and the donors' names, will be found in the Appendix (E, No. XV., p. 123).

15. BOTANIC GARDEN.

The want of permanent legible labels for the plants in the Botanic Garden has been long felt. This want is now being supplied by means of handsome metal tablets upon which the scientific names and habitats are printed. With the view of encouraging a taste in Botany among the public, the English name has also been printed upon the label, in the case of every plant which has a real English name. This will prove of great use to Art Students, many of whom make much use of the College garden. Here I may observe that the latter class of students labour under great disadvantages in this district in having no examples of tropical vegetation to study, so that the want of a glass-house which has so frequently been pointed out in previous Reports, affects not merely the teaching of science but also of art.

I have received offers of plants sufficient to nearly fill such a house, and which would go far to supply the typical examples which are required for teaching purposes.

16. TRIENNIAL VISITATION.

The ordinary Triennial Visitation of the College was held on the 20th of May. I annex to this Report a copy of the Minutes of the Proceedings of the Visitors.

Finally, I trust that the Report of the full inquiry instituted by the Commissioners appointed by Your Majesty's Government into the several wants of this College, as stated in Memorials addressed to your Majesty's Irish Government, such as increase of the endowment for salaries, the establishment of fellowships, assistants, a curator, the erection of new buildings for museums and laboratories, the erection of a glass-house for tropical plants, &c., may enable Your Majesty's Government to favourably consider those wants, and so recommend to Parliament next Session some measure which will put this College in a position to do its work thoroughly.

I beg to subscribe myself,

Your Majesty's most dutiful servant,

WILLIAM K. SULLIVAN,

President.

QUEEN'S COLLEGE, CORK,
28th July, 1876.

MINUTES OF THE PROCEEDINGS
AT THE
ORDINARY TRIENNIAL VISITATION
OF
QUEEN'S COLLEGE, CORK,
HELD ON THE 20TH MAY, 1876.

The ordinary Triennial Visitation of Queen's College, Cork, was held on Saturday the 20th May, 1876. The Visitors present were: the Right Honorable the Master of the Rolls, the Right Honorable Mr. Justice Fitzgerald, the President of the King and Queen's College of Physicians in Ireland, and the President of the Royal College of Surgeons, in Ireland.

The court opened at 11 o'clock, A.M.

The Visitors inquired of the President what report he had to make of the college since the last visitation.

The President in reply mentioned in detail the several changes which had taken place in the collegiate staff within the last three years; and added that as the first of those changes, the resignation of the first President, Sir Robert Kane, took place after the close of the session of 1872-73, he (the President) had presided over the college during the whole of the period to which this visitation applied. He stated the number of students attending the college, the localities from whence they came, and the proportions of them which belonged to the several religious denominations. He also referred to the condition of the several departments of the college, and to the urgent need for increased accommodation in the library, chemical laboratory and dissecting room, and of a materia medica laboratory, and a proper building for the anatomical museum.

The Visitors then inquired whether any of the Professors desired to make any observation. None of the Professors having any matter to bring under the notice of the Court, the Visitors next inquired if any of the Deans of Residences wished to be heard.

The Rev. Dr. Webster, Dean of Residences for students of the Church of Ireland, said, that this was now the seventh visitation he attended to urge his claim in connexion with the religious instruction of students of his communion. He referred to the decision of the Visitors at a previous visitation by which it was ruled that it was entirely within the discretion of the council whether they would assign him a lecture room within the walls of the college for the purpose of affording religious instruction to the students of the college. He stated that he accepted this decision of the Visitors as binding upon him; but that now he wished to call the attention of the court to a point of law which he submitted entitled him to be the religious instructor of all students of his communion in the college, and to call on the Council to enforce the attendance of the students for that purpose. He stated that in the year 1858, he was appointed by the Council Catechist of the students of the Church of England, and that his appointment was confirmed by the Lord Lieutenant. By virtue of this appointment he submitted he was bound to give religious instruction to all such students, and that under

the statutes they were bound to attend at whatever place should be fixed upon: if not within the walls of the college then elsewhere. He referred to the statute which provides that non-attendance on religious instruction shall be regarded as a serious offence, and having stated that only five students of the Church of Ireland had attended the instruction which he gave in his own house within the last year, he concluded by saying that it was with much regret that in order to have a decision arrived at on this question, he was now constrained to call upon the Visitors to compel the Council to take steps against all the students of his communion, but the five who had attended his instruction, by reason of their having transgressed the statute which directs attendance on religious instruction.

The President in reply said that the Council had very small legislative powers, which were moreover strictly confined to certain matters by the statutes. Therefore whatever might be the private opinion and sympathy of the members of council that body could not legislate upon matters not prescribed by the statutes, and their duty as the governing body of the college was to interpret the statutes as they found them in the most practical sense they could, and above all to avoid theoretical resolutions, and decisions which might afterwards create inconvenient precedents, or hamper the action of their successors. Hence they had come to a conclusion on the matter before the court entirely different from that of Rev. Dr. Webster. Among other objections to the case which the latter had stated to the court, the President called the attention of the Visitors to the fact that the appointment as Catechist of 1858, on which Dr. Webster relied, was under the old charter which was abrogated and superseded by that of 1863. And that as Dr. Webster had not been re-appointed under the new charter which continued still in force, he was not legally Catechist, as he assumed to be.

The Right Honorable the Master of the Rolls pronounced the judgment of the court against Dr. Webster's application, stating that at the visitation of 1870, the Visitors, of whom he was one, had very carefully considered Dr. Webster's claim and arrived at a conclusion adverse to it for the reasons then stated in the judgment of the Visitors. That it followed now that his present application could not be acceded to for the Visitors had distinctly held that the Council was not bound to assign rooms in the college for religious instruction. That being so, the students of the college were not bound by any rule of the college to attend to such instruction outside its walls, and it was plain that the council had no power to do what Dr. Webster required. Religious instruction given outside the college should be left to the good sense of the students and to their parents. The case of students actually residing within a licensed Boarding House might stand on a different footing, but no such question was before the Visitors. It was right to add that the Court felt satisfied that Dr. Webster in bringing forward this application had no motive but the conscientious discharge of his duty.

The Visitors next inquired whether any of the students desired to make any observation.

Mr. Denis Keogh, M.A., came forward and said that he desired to submit to the Visitors a grievance under which Graduates of the Queen's University who had been students of this college were placed with reference to obtaining books on loan from its library. He said that up to the year 1873 Graduates and students alike could procure books on loan by simply paying a deposit of £1 as a guarantee for the safe custody of the book. But that in 1873 a rule was adopted by the Council obliging a graduate who wished to avail himself of this privilege, in addition to

the deposit of £1, to pay the sum of 15s. a year. He regarded this as a hardship and had not since entered the library. He had applied to the Queen's Colleges of Belfast and Galway, and found that Graduates in each of these colleges could procure books on loan without any charge beyond that of the deposit. He read a letter from Professor D'Arcy W. Thompson of Galway to the effect that a graduate could obtain two books at a time on loan. He submitted that he should be reinstated in the right which he enjoyed prior to the act of the Council in 1873.

The President in reply, said he would not enter into the question of the right of the Council to charge graduates for the loan of books from the college library, for besides involving a legal point upon which it was desirable to have an authoritative decision of the Visitors, the order of council objected to by Mr. Keogh had been made before his (the President's) connexion with the college. He felt it to be his duty, however, to protest against Mr. Keogh's assumption that as a graduate or student he was entitled to get books on loan *as a right*. He contended that no such right existed, and that he had obtained books *as a privilege* which it was within the power of the Council to grant or withhold. If every student and graduate could claim the loan of the college books as a right, the Council could not be held responsible for the safety of the public property. The order of Council in question had been made in the interest of the students themselves, with the intention of checking a very great abuse which he was told existed. New books, and especially textbooks in constant demand were borrowed and carried to distant parts of the country and not returned for months, thus depriving all other students of the same subject of the use of those books. The Council were desirous of giving students and graduates the fullest and freest use of the library compatible with the due preservation and safety of the books. They were also desirous of extending the advantages of the library to all scientific and literary inquirers in the district—of making it a great library of reference for the south of Ireland.

The Right Hon. the Master of the Rolls said the question was an important one, and that with the exception of one or two strong epithets in Mr. Keogh's address the case had been very properly brought forward by him, and that his letter to the Council was a respectful and becoming remonstrance. His Honor said the Visitors were of opinion that the Council had not the power to impose the charge of fifteen shillings. The Council had the fullest authority under the Statutes to make any regulations which seemed to them to be judicious for the management of the library and the preservation of its books; but the Visitors were of opinion that the Council could not impose a pecuniary tax for the privilege which they had accorded to the graduates. The result therefore was that the charge complained of could not be maintained, and that all moneys paid in respect of it should be refunded.

The proceedings then terminated, and the Professors having retired to their several departments, the President conducted the Visitors through the college, every part of which they examined.

APPENDIX.

APPENDIX A.

No. I.

Appendix A.

No. I.
General
Regulations
of College,
&c.

ESTABLISHMENT of the COLLEGE and UNIVERSITY. COLLE-
GIATE STAFF. GENERAL REGULATIONS of the COLLEGE.
STUDENTS: MATRICULATION, RESIDENCES, FEES, LECTURE
HOURS, SCHOLARSHIPS, EXHIBITIONS, PRIZES, DEGREES.

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

ESTABLISHMENT OF THE COLLEGE AND UNIVERSITY.

The COLLEGE is a Corporation under the name and style of "THE PRESIDENT and PROFESSORS of QUEEN'S COLLEGE, CORK." It was founded under the provisions of the Act 8 & 9 Victoria, cap. 66, intituled "An Act to enable Her Majesty to endow new Colleges for the Advancement of Learning in Ireland." Under the powers given by this Act the three colleges of Belfast, Cork, and Galway were incorporated on the 30th day of December, 1845. The Statutes were drawn up, and the system of education to be pursued in them arranged by a Board called the "Board of Queen's Colleges," consisting of the Presidents and Vice-Presidents of the three colleges. The Professors were appointed on the 4th of August, 1849, and on the 30th of October of the same year the Colleges were opened for the reception of students. Letters Patent constituting the Statutes were issued on the 11th of December, 1849, and a further Charter was issued in the year 1863.

The UNIVERSITY was founded in 1850 under the name and style of the "QUEEN'S UNIVERSITY IN IRELAND," and its charter provides that the Senate should have power to confer upon the students of the Queen's Colleges of Belfast, Cork, and Galway such degrees and distinctions in the Faculties of Arts, Law, and Physic, as are granted and conferred in other Colleges and Universities of Great Britain and Ireland. The Charter further ordains that any of the students of the three Queen's Colleges who shall have obtained such Degrees in any of the several Faculties of Arts, Medicine, and Law as shall be conferred by the Chancellor and Senate of the Queen's University, shall be fully possessed of all such rights, privileges, and immunities, as belong to similar Degrees granted by other Universities or Colleges, and shall be entitled to whatever rank and precedence is derived from similar Degrees granted by other Universities.

The Professors of the three Queen's Colleges are entitled to style themselves "Professors of the Queen's University."

COLLEGIATE STAFF.

Appendix A.

No. I.
General
Regulations
of College,
&c.

President—WILLIAM K. SULLIVAN, PH.D., M.R.I.A.

Professors.

The Greek Language,	E. VAUGHAN BOULGER, M.A.
The Latin Language,	BUNNELL LEWIS, M.A., F.S.A.
Mathematics,	{ CHARLES NIVEN, M.A., FELLOW OF TRIN. COLL., CAMB.
Natural Philosophy,	JOHN ENGLAND, M.A.
History and English Literature,	GEORGE F. ARMSTRONG, M.A.
Logic and Metaphysics,	GEORGE SIDNEY READ, M.A.
Chemistry,	MAXWELL SIMPSON, B.A., M.D., F.R.S.
Natural History,	JOSEPH REAY GREENE, B.A., M.D., M.R.I.A.
Geology and Mineralogy,	ROBERT HARKNESS, F.R.S.S.L. & E., F.G.S.
Modern Languages,	RAYMOND DE VERICOUR, M.A.
Jurisprudence & Political Economy,	RICHARD HORNER MILLS, M.A.
English Law,	{ MARK S. O'SHAUGHNESSY, M.R.I.A., F.R.S.L.
Anatomy and Physiology,	J. J. CHARLES, M.A., M.D., M.CH.
Medicine,	DENIS C. O'CONNOR, B.A., M.D.
Surgery,	WM. K. TANNER, M.D., F. & L.R.C.S.I.
Materia Medica,	MATTHIAS O'KEEFFE, M.A., M.D.
Midwifery,	JOSHUA R. HARVEY, B.A., M.D.
Engineering,	ALEXANDER JACK, M.A.

Lecturers.

Medical Jurisprudence,	{ MARK O'SHAUGHNESSY, M.R.I.A., F.R.S.L. MATTHIAS O'KEEFFE, M.A., M.D.
Assistant to Professor of Chemistry,	CORNELIUS O'KEEFFE, County and City Analyst.
Demonstrators of Anatomy,	{ WILLIAM JENNINGS, M.D., M.CH. JAMES MAGILL, B.A., M.D., M.R.C.S.

Council of the College.

The PRESIDENT.

Professor TANNER.	Professor SIMPSON.
„ HARVEY.	„ NIVEN.
„ JACK.	„ ARMSTRONG.

Officers.

Registrar,	ROBERT JOHN KENNY, Esq.
Bursar,	JOHN ENGLAND, M.A.
Librarian,	RICHARD CAULFIELD, LL.D.

GENERAL REGULATIONS.

THE COLLEGE SESSION, 1875-76.—The *First Term* commenced on the 19th of October, 1875, and ended on the 18th of December.

The *Second Term* commenced on the 3rd of January, 1876, and ended on the 8th of April.

The *Third Term* commenced on the 24th of April, 1876, and ended with the Session, on the 10th of June.

N.B.—The Easter Recess for the Medical Faculty commenced on the Tuesday before Easter, and ended on Easter Monday.

LIBRARY AND MUSEUM.—The Library is open daily to Students between the hours of 9 A.M. and 4 P.M., except on Saturdays, when it is closed at 1 o'clock.

The Museum is open daily between the hours of 9 A.M. and 3 P.M., except on Saturdays, when it is closed at 12 o'clock.

STUDENTS.

Appendix A.

The Students of the College are either Matriculated or Non-Matriculated.

MATRICULATED STUDENTS.—To become a *Matriculated Student*, it is necessary to pass the General Matriculation Examination which commenced in the Session of 1875–76, on Tuesday, the 19th of October, 1875.

No. I.
General
Regulations
of College,
&c.

The following are the Subjects in which Candidates are examined:—

For the Faculties of Arts, Medicine, and Law.

Greek:

Grammar.

Any one of the following Authors which the Candidate may select:—

Homer—*Iliad*, Books I. and II.

Xenophon—*Anabasis*, Books I. and II.

Lucian—Walker's Selections.

Latin:

Any one of the following Authors which the Candidate may select:—

Virgil—*Æneid*, Books I. and II.

Sallust—*Conspiracy of Catiline*.

Cæsar—*Gallie War*, Book I.

History:

Outlines of Grecian History.

Outlines of Roman History.

Geography:

Outlines of Ancient and Modern Geography.

English:

Grammar—

(1.) The principles of Etymology and Orthography.

(2.) The leading Rules of Syntax.

Composition, and writing from dictation.

Mathematics:

Arithmetic—Principles of Notation. Vulgar and Decimal Fractions. Definition of the terms Ratio and Proportion. The Rule of Proportion, with its commercial applications, including Simple Interest.

Algebra—Explanation of the signs and meaning of an Index. Calculation of the values of Algebraical Expressions, when particular values are given to the letters which they involve.

Euclid—Book I., with the definitions and axioms.

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.

Candidates for Matriculation are requested to send their names to the Registrar, at least *three days* before the commencement of the Examination, stating at the same time the Faculty or Department which they propose to enter.

Before being admitted to Examination they are required to pay the *College Fees* for the year, amounting to Ten Shillings for each Faculty or Department. These will be returned, on application, to such as fail to pass the Examination.

No Student will receive a Certificate of Matriculation until he has paid the whole of the *Class Fees* for the Session.

Appendix A. NON-MATRICULATED STUDENTS.—Those who desire to attend any of the Lectures in the College may do so, without matriculating, or passing any of the College Examinations, on paying the Fees for those Lectures, together with a College Fee of Five Shillings.

No. I.
General
Regulations
of College,
&c.

They are entitled to the use of the Library, on subscribing the Library Regulations, and paying a further fee of Fifteen Shillings.

They are not eligible for Scholarships or Prizes, and do not enjoy any of the other privileges of Matriculated Students; but the Professors may recommend the Council to grant Certificates of Honour to the most distinguished.

STUDENTS FROM OTHER COLLEGES.—Students who have pursued part of their studies in one of the Queen's Colleges, or in any University capable of granting Degrees in the Faculties of Arts, Law, and Medicine, are permitted, on producing testimonials of their College standing and conduct, to take corresponding rank in this College, and to compete for Scholarships of the corresponding year; provided that they shall not hold at the same time a Scholarship, or any other office of emolument, in any other University or College.

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 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 Residences of their respective creeds.

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

The following are the Protestant Deans of Residences:—

<i>Church of Ireland,</i>	.	.	.	Rev. George Webster, D.D.
<i>General Assembly of the Presbyterian</i>				
<i>Church in Ireland,</i>	.	.	.	Rev. William Magill.
<i>Wesleyan Methodists,</i>	.	.	.	Rev. William G. Price.
<i>Non-Subscribing Presbyterian,</i>	.	.	.	Rev. W. Whitelegge, M.A.

The Deans are designated as they wish themselves to be called.

FEES.

The Fees paid by Students are of two kinds: Collegiate Fees and Class Fees. The following are the regulations concerning the payment of Fees:

1. All Fees are to be paid to the Bursar, at his Office in the College.
2. Candidates for Matriculation are required to pay their *College Fees* before being admitted to Examination.
3. Students must pay their Class Fees before being admitted to the Classes; and if Candidates for Scholarships, must do so on or before the day previous to the date of Examination.
4. Half the Class Fees are returned to Scholars; but this rule does not extend to Exhibitioners.

COLLEGIATE FEES.—For the First Year the College Fees are *Ten Shillings*; for the Second and subsequent years Five Shillings. Students who wish to borrow books from the Library are obliged to *deposit* One Pound with the Bursar.

CLASS FEES.—The ordinary fee paid for a course of Lectures is £2. For English and Logic the fee is only £1. For Practical Anatomy, Practical Chemistry, and the first course of Anatomy and Physiology, the fee is £3.

With reference to the Fee payable for repeated attendance on the same Course of Lectures, the following rule has been laid down in the Statutes:—

The Fees payable by Students, whether Matriculated or Non-matriculated, to the several Professors, for attendance on the several Pass Courses of Lectures or instruction, which are now or may be hereafter prescribed by the College Council, for any Degree or other University distinction, shall be £1 for each

Course extending over one Term only, and £2 for each Course extending over more than one Term of a Session, when attended for the first time, and £1 for each re-attendance on the same; except that the Fee payable for the Course of Anatomy and Physiology shall be £3 when attended for the first time, and £2 for every subsequent attendance; except also, that the Fee payable for Practical Anatomy or Practical Chemistry, shall be £3 for each attendance.

No. I.
General
Regulations
of College,
&c.

In the case of Students receiving special instructions, not prescribed as a qualification for a Degree or other University distinction, or attending Honor Courses of Lectures, the Council shall have power to fix the amount of the Fee to be paid by each Student; provided that the Fee to be paid for any Honor Course of Lectures which Students are entitled to substitute for a prescribed Pass Course, shall in no case be less than £2.

LECTURE HOURS.

Table of the Subjects and Hours of Lecture.

Name of the Class.	Mon- day.	Tues- day.	Wed- nesday.	Thurs- day.	Fri- day.	Satur- day.
Senior Greek,	9	9	10	—	9	—
Junior Greek,	10	—	9	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	—	10
English Literature,	10	—	10	—	10	—
History,	12	—	12	—	12	—
Medical French,	12	—	12	—	12	—
Senior French (<i>Arts and Engineering</i>),	1	—	1	—	1	—
Junior French (<i>Arts and Engineering</i>),	2	—	2	—	2	—
German or Italian,	—	2	—	2	—	2
Logic,	—	11	—	11	—	9
Metaphysics,	—	1	—	1	—	10
Political Economy and Jurisprudence,	—	11	11	11	11	—
Senior Mathematics,	1	—	1	—	1	—
Junior Mathematics,	12	—	12	—	12	—
Third Year's Mathematics,	2	—	2	—	2	—
Mathematical Physics,	—	—	12	—	12	—
Mathematical Physics (<i>Engineering</i>),	2	—	1	—	2	—
Experimental Physics, Senior,	11	—	11	—	11	—
Experimental Physics, Junior,	—	11	—	11	—	—
Engineering Physics,	—	2	—	2	—	—
Physics (Honor),	—	12	—	12	—	—
Chemistry,	11	—	11	—	11	—
Practical Chemistry,*	2	—	2	—	2	—
Zoology and Botany,	3	—	3	—	3	—
Geology and Mineralogy,	—	2	—	2	—	12
Senior Engineering,	12	—	12	—	12	—
Junior Engineering,	—	10	—	10	—	10
Geometrical Drawing,	10	—	10	—	10	—
Office Work (10 till 2),	—	10	—	10	—	10
Anatomy and Physiology,	1	1	1	1	1	—
Practical Anatomy,	12	12	12	12	12	—
Medicine,	3	—	3	—	3	—
Surgery,	—	4	—	4	—	1
Materia Medica,	—	3	—	3	—	12
Midwifery,	4	—	4	—	4	—
Medical Jurisprudence,	12	—	12	12	—	12
English Law (1st year),	1	1	—	1	1	—
English Law (2nd year),	2	—	—	2	2	—
English Law (3rd year),	—	11	11	—	11	11
Jurisprudence,	—	1	1	1	1	—
Civil Law,	—	4	4	4	4	—
Constitutional and International Law,	—	10	10	10	10	—

* Whenever it becomes necessary to divide the Practical Chemistry Class, the hours for the Second Class are at two on Tuesday and Thursday, and eleven on Saturday.

Appendix A.

COLLEGIATE SCHOLARSHIPS.

No. I.
General
Regulations
of College,
&c.

There are at the disposal of the Council Forty-six Junior and Eight Senior Scholarships.

The former are held by Students who have not yet taken the Degree of B.A.; the latter by Students who have obtained the Degree of B.A.

Of the Junior Scholarships—

Thirty,	of the value of £24 each,	are appropriated to the Faculty of Arts.	(See p. 35).
Five,	„ „ £20 „ „	School of Engineering.	(See p. 47).
Eight,	„ „ £25 „ „	Faculty of Medicine.	(See p. 44).
Three,	„ „ £20 „ „	Faculty of Law.	(See p. 40).

Of the Senior Scholarships—

Seven,	of the value of £40 each,	are appropriated to the Faculty of Arts.	(See p. 35).
One,	„ „ £40 „ „	Faculty of Law.	(See p. 40).

All these Scholarships are tenable for only one year, with the exception of the Scholarships of the Second Year in Arts, which are tenable for two years.

Conditions of Candidature and Tenure.

1. Candidates for Scholarships are required to pay on or before the day previous to the date of Examination, the College and Class Fees for the year in the corresponding Faculty. They must also procure a certificate to that effect from the Bursar, and be prepared to show it on their admission to Examination.
2. Scholarships of any year are tenable by Students who have duly completed the previous part of their Course by attending the requisite Courses of Lectures, and passing the ordinary College and University Examinations.
A Student, as a rule, cannot hold two Scholarships at once; but if he be a Candidate for both the Junior Scholarships in Arts of the same year, and stand first on each list, he may hold both the Scholarships.
4. Half the ordinary Class Fees are returned to Scholars.
5. Scholars must complete their attendance during the Session, pass the Sessional Examinations, and observe such rules as the Council may from time to time enact.
6. In the Faculty of Medicine, Scholars must attend the Classes recommended for their year of study, in the order of the Curriculum.
7. Scholars and Exhibitioners have certain statutory duties; such as taking charge of the Class-rolls, registering the attendance of the Students, assisting the Professors in the maintenance of discipline and good conduct in the Students, and for the general business of the College.

[TABLE:

TABLE OF THE TIMES AND SUBJECTS OF THE SCHOLARSHIP EXAMINATIONS FOR *Appendix A.*
THE SESSION 1875-76.

Examination Days.	From 9 to 12 o'clock.	From 2 to 5 o'clock.	No. I. General Regulations of College, &c.
Thursday, October 21st,	Geometrical Drawing.	Geology and Mineralogy.	
Friday, October 22nd, .	Surveying.	Surgery.	
	Latin.	Mathematics.	
	Chemistry.	Practical Chemistry.	
Saturday, October 23rd,	Modern Languages.	Midwifery.	
	Political Economy.	Pathology.	
	Mathematics (Geometry Paper)*.	Latin.	
Monday, October 25th,	Greek.	Greek.	
	Materia Medica.	Zoology and Botany.	
	Therapeutics.	Practical Anatomy.	
		History and English Lit. (<i>Senior Scholarship.</i>)	
Tuesday, October 26th,	English Language, History and Geography (1st year).	Anatomy and Physiology.	
	English Language, &c. (2nd and 3rd year.)	Logic and Metaphysics.	
	Natural Philosophy.		
Saturday, Nov. 27th, .	English Law.	Civil Law.	

* The University Prizes in Geometry were decided on this paper, which was also taken into account in deciding the first year's Mathematical Scholarships.

COLLEGIATE EXHIBITIONS AND PRIZES.

The Council are authorized to grant in certain cases Exhibitions to Candidates who may have failed to obtain Scholarships at the Scholarship Examination.

In May and June are held General Examinations in the subjects lectured upon during the Session; and Prizes of Books are awarded by the Council to the most distinguished Students in each Class.

UNIVERSITY EXHIBITIONS AND PRIZES.

Exhibitions and Prizes are also given by the Senate of the University to Students, in the Faculties of Arts and Medicine, and in the School of Engineering, who shall most distinguish themselves at the various University Examinations.

FACULTY OF ARTS.—The following are to be competed for immediately after General Matriculation:—

Two Prizes for English Prose Composition and two for Geometry, given annually by the Senate of the University. The First Prize in each is £3 worth of Books; the second £2 worth of Books.

The subjects of Examination for the University Geometry Prizes are—

The first Four and Sixth Books of Euclid, with Definitions of the Fifth Book, and Geometrical deductions.

These Prizes are open to Students who have just passed the Matriculation Examination for the first time.

Three Exhibitions of £20 a year for three years, three Exhibitions of £15 a year for three years, and two Exhibitions of £10 a year for three years, will be competed for annually in the Faculty of Arts. The three £20 Exhibitions will be awarded to the Candidates who stand foremost in order of merit from each College, at the first University Examination in Arts; and the three £15 Exhibitions to the Candidates who stand second in order of merit from each College: provided that their names appear in the First Class of the Division List at that Examination. Of the two £10 Exhibitions, one will be awarded to the best answerer in Mathematical Science, and the other to the best answerer in the Ancient Classics, at the first University Examination. The £10 Exhibitions are open to the competition of Candidates from all the Colleges, and may be held along with one of the larger Exhibitions.

Each Candidate will be deemed a Student of that College in which he shall have attended the Lectures of the second Session; and no Student will be ad-

Appendix A. mitted to the competition who shall have allowed more than one academic year to intervene between the time that he entered upon the studies of the second Session and the time of competition.

No. I.
General
Regulations
of College,
&c

The first instalment of each Exhibition will be paid at the time of competition; the second when the Exhibitioner takes the Degree of B.A. in the Queen's University, provided he graduate with honors, and within two academic years; and the third when he takes the Degree of M.A. in the Queen's University, provided he obtain it within three academic years from the time of competition.

University Prizes in Composition, open to the Competition of Graduates and Undergraduates.

Two Prizes for English Prose Composition, one of £10 worth of Books, and the other of £5 worth of Books, have been founded, and are open to the competition of all members of the University who shall not have been graduates for more than three years at the time of competition, and who shall not have already twice obtained one or other of these Prizes.

University Prizes in Composition, open to the Competition of all Undergraduates.

Two Prizes in Composition, one for English Prose, the other for Greek or Latin Prose, and each consisting of £5 worth of Books, have been founded, and are open to the competition of all undergraduates, provided that neither the English nor the Classical Prize be awarded oftener than twice to any Student.

FACULTY OF MEDICINE.—Two exhibitions, one consisting of two instalments of £20 each, and the other of two instalments of £15 each, will be competed for annually in the Faculty of Medicine. These exhibitions will be awarded for proficiency in the non-professional part of the first University Examination in Medicine: the £20 exhibition to the best answerer absolutely, in whichever of the Colleges he may have been educated; and the £15 exhibition to the candidate who is first in order of merit of the competitors from the other two colleges; provided that their names appear in the First Class of the Division List at that examination.

Each Candidate will be deemed a student of that College in which he shall have attended the Lectures of the second session; and no student will be admitted to the competition who shall have allowed more than a year to intervene between the time that he entered on the studies of the second year and the time of competition.

The exhibitions in Medicine will be paid in two equal instalments: one at the time of competition; the other when the exhibitioner takes the Degree of M.D. in the Queen's University, provided that he graduate with honors, and within three academic years from the time of competition.

Prize in Composition, limited to the Competition of Undergraduates in Medicine.

A prize of £5 worth of books has been founded, for a thesis on a subject to be prescribed, and is limited to the competition of the Undergraduates in Medicine who shall not have already twice received the prize.

The subjects on which the competitors for composition prizes are to write, will be announced on or before the first of June in each year; the compositions, with fictitious signatures, are to be sent in to the Secretary of the University, on or before the first of the following September, and the successful competitors will be declared at the next Public Meeting of the University.

SCHOOL OF ENGINEERING.—Two Exhibitions, one of £20 a year for two years, and the other of £15 a year for two years, will be competed for annually in the School of Engineering. These Exhibitions will be awarded at the first University Examination in Engineering: the £20 Exhibition to the best answerer absolutely, in whichever of the Colleges he may have been educated, and the £15 Exhibition to the Candidate who is first in order of merit of the competitors from the other two Colleges: provided that their names appear in the First Class of the Division List at that Examination.

Each Candidate will be deemed a Student of that College in which he shall have attended the Lectures of the second Session; and no Student will be admitted to the competition who shall have allowed more than a year to intervene between the time that he entered on the studies of the second year and the time of competition.

The first instalment of each Exhibition will be paid at the time of competition;

the other when the Exhibitioner takes the Diploma in Engineering of the Queen's University, provided that he take honors with it, and obtain it within two academic years from the time of competition.

Appendix A.
No. I.
General
Regulations
of College
&c.

OTHER PRIZES.

The Early English Text Society's Prizes.

With a view to the encouragement of the study of Early English, the Early English Text Society has kindly offered for the competition of the Students of Queen's College, Cork, valuable prizes consisting of the rare works in Early English published under its auspices.

An examination for these prizes was held on the 24th of April, 1876, and was open to all Matriculated Students of the College who were not Graduates at that date, the following being the course appointed:—

1. Outlines of the History of the English People, to the accession of Henry IV.
2. The History of English Literature, to the death of Chaucer.
3. Outlines of Anglo-Saxon Grammar (Rask recommended).
4. Morris—English Accidence, Caps. III., IV., and V.
5. Chaucer—The Prologue to the Canterbury Tales.

The New Shakspeare Society's Prizes.

The New Shakspeare Society in order to encourage the study of Shakspeare's works, and of the English Drama, has also offered copies of the works published by it as Prizes for competition among Students of the College.

An examination for these prizes was held on the 24th April, 1876, and was open to all Matriculated Students of the College who were not Graduates at that date. The following was the course appointed:—

1. The Study of the English Drama (in outline).
2. The Literary History of the Elizabethan Age.
3. A critical knowledge of the Merchant of Venice, King John, Macbeth, and Julius Cæsar.

See Appendix E., pp. 118–119, for the Examination Papers set to Candidates for these Prizes at the last Examination.

DEGREES.

The Certificates, Diplomas, and Degrees granted by the Senate of the Queen's University are as follows:—

In the Faculty of Arts—

- The Diploma of Licentiate.
- „ Degree of Bachelor (B.A.)
- „ „ Master (M.A.)

In the Faculty of Law—

- Certificate of the Law Professors.
- The Diploma in Elementary Law.
- „ Degree of Bachelor (LL.B.)
- „ „ Doctor (LL.D.)

In the Faculty of Medicine—

- The Degree of Doctor (M.D.)
- „ „ Master in Surgery (M.Ch.)
- „ „ Diploma of Midwifery.

In the School of Civil Engineering—

- The Degree of Bachelor (B.E.)

NO. II.—FACULTY OF ARTS.

No. II
Faculty of
Arts.

DEGREES.

1. DEGREE OF B.A.*

Students intending to proceed to this degree in the Queen's University must

* Degrees in Arts, conferred by the Queen's University in Ireland, are recognised by the University of Durham, by St. Bee's College, Whitehaven, and by St. Aidan's College, Birkenhead, in the case of Theological Students preparing for Holy Orders in the Established Church.

His Royal Highness the Commander-in-Chief has approved of Graduates of the Queen's University being in future exempted from the usual Examination for direct Commissions; and also of the First University Examination being accepted in lieu of that for the Royal Military College, Sandhurst.

Appendix A. matriculate in one of the Queen's Colleges, and complete the course of study prescribed by the University Senate, by attending the College Lectures in each Session, and passing the Sessional Examinations.

No. II.
Faculty of
Arts.

The B.A. Examination takes place in the September after the close of the third Session, and Candidates must have previously passed the "First Examination in Arts," a preliminary examination which takes place at the commencement of the Third Session.

Course for the Degree of Bachelor in Arts.

Candidates for the Degree of Bachelor in Arts are required—

1. To have been admitted Matriculated Students of the Queen's University in the Faculty of Arts.
2. To have subsequently studied in one of the Colleges of the Queen's University the Course herein prescribed.
3. To have passed the University Examinations herein prescribed.

The Course for the Degree of Bachelor in Arts shall extend over three Sessions, and shall comprise attendance on the following curriculum:—

FIRST SESSION.

English (One Term).
Greek.
Latin.
A Modern Continental Language.
Mathematics (First Course).

SECOND SESSION.

Logic (One Term).
Natural Philosophy.

Along with any two of the following:—

Greek (Second Course).
Latin (Second Course).
Modern Continental Languages (Second Course).
Mathematics (Second Course).

THIRD SESSION.

English Language and Literature.
Metaphysics, or History, or Political Economy (Two Terms).
Chemistry.
Zoology, or Botany.

Attendance on these Courses shall, in all cases, be understood to include passing such examinations as may be appointed by the College Council, and the catechetical parts of the Courses of Lectures.

Candidates for the Degree of Bachelor of Arts shall reside at their respective Colleges during at least the first two terms of each Session, but may be exempted from residence during the third term by a special grace of the College Council.

Third year's Students may substitute attendance on one or on two Courses of Honor Lectures, for a like number of the Courses above set down for study in the third Session.

Candidates for the Degree of Bachelor in Arts shall pass two University Examinations—a Preliminary and a Degree Examination.

The Course for the Preliminary Examination shall include Greek, Latin, a Modern Continental Language, and Mathematical Science. Students who have completed their second Session must pass this Examination before rising to the third year, unless prevented by illness or other inevitable accident, in which case the Senate may admit them to a Supplementary Examination.

Candidates who have completed the Undergraduate Course, may offer themselves at the Degree Examination for graduation either with Honors or without Honors.

If they seek to graduate with Honors, they may select for their Examination any one of the following groups:—

Greek and Latin.
Modern Continental Languages.
Mathematical Science.

Experimental Science.
Natural Science.

Or any three of the following:—

English Language and Literature.
Metaphysics.
History.

Political Economy.
Logic.

Candidates who seek the Degree without Honors, may select for their Examination any group of the subjects from the following lists, provided the sum of the numbers attached in this list to the selected subjects be at least four:—

English Language and Literature,	2	Latin,	1
Mathematical Science,	2	Each Modern Continental Language,	1
Experimental Physics,	2	Logic,	1
Chemistry,	2	Metaphysics,	1
Zoology,	1	History,	1
Botany,	1	Political Economy,	1
Greek,	1		

Appendix A.
No. II.
Faculty of
Arts.

English Composition will form a part of all University Examinations.

2. DEGREE OF M.A.

Candidates for the Degree of M.A. are admitted to the University Examinations for that Degree one year after having taken the Degree of B.A.

Course for the Degree of Master in Arts.

Bachelors in Arts of one year's standing, may offer themselves for Examination for the Degree of Master in Arts, and may select for their Examination any one of the following groups:—

Greek and Latin.
Modern Continental Languages.
Mathematical Science.
Experimental Science.
Natural Science.

Or any three of the following:—

English Language and Literature.
Metaphysics.
History.
Political Economy.
Logic.

This Ordinance supersedes former Ordinances prescribing the curriculum for the Degree of Master in Arts.

LECTURES.

The Lectures in this Faculty for the Session 1875-76, commenced on *Monday, the 26th October, 1874.*

The following Table shows the days, hours of Lectures and fees for the ordinary course. In accordance, however, with the regulations of the University for the Degree of B.A., Students may substitute for one or two Courses in the third year a like number of Honor Courses:—

	CLASS.	Terms.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Fees.
First Session.	{ English,	2	—	11	—	11	—	10	£ s. d.
	{ Greek,	1, 2, 3	10	—	9	9	10	—	1 0 0
	{ Latin,	1, 2, 3	9	10	10	10	—	—	2 0 0
	{ Modern Languages,	1, 2, 3	2	—	2	—	2	—	2 0 0
	{ Mathematics (1st Course)	1, 2, 3	12	—	12	—	12	—	2 0 0
	{ College Fee,	—	—	—	—	—	—	—	0 10 0
Second Session.	{ Logic,	2	—	11	—	11	—	9	£ s. d.
	{ Natural Philosophy,	1, 2, 3	11	—	11	—	11	—	1 0 0
	{ Greek (2nd Course),	1, 2, 3	9	9	10	—	9	—	2 0 0
	{ Latin,	1, 2, 3	10	—	9	—	10	—	2 0 0
	{ Modern Languages,	1, 2, 3	1	—	1	—	1	—	1 0 0
	{ Mathematics,	1, 2, 3	1	—	1	—	1	—	2 0 0
	{ College Fee,	—	—	—	—	—	—	—	0 5 0
Third Session.	{ English Language and Literature,	1, 2	10	—	10	—	10	—	£ s. d.
	{ Chemistry,	1, 2, 3	11	—	11	—	11	—	2 0 0
	{ Metaphysics, or	1, 2	—	1	—	1	—	10	2 0 0
	{ History, or	1, 2	12	—	12	—	12	—	2 0 0
	{ Political Economy,	1, 2	—	11	11	11	11	—	2 0 0
	{ Zoology or Botany,	—	3	—	3	—	3	—	2 0 0
	{ College Fee,	—	—	—	—	—	—	—	0 5 0

Appendix A.

HONOR COURSES.

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By the regulations of the University Senate, a Student of the third year may substitute for two courses in the ordinary curriculum the same number of honor courses.

Under this Regulation Candidates are at liberty to substitute one or two of the following courses for a like number of the courses set down in the above table for study in the Third Session, viz. :—

Greek,	Geology & Physical Geography,
Latin,	French,
Pure Mathematics,	German,
Mathematical Physics,	Italian,
Experimental Physics,	Logic;

provided that the Rules of the College Council admit of their making this substitution, and provided further that the courses substituted are courses specially preparing Students for one or more of the Honor Examinations for the degree of B.A.

Candidates are allowed under the same conditions to attend Honor Courses on two of the subjects, Metaphysics, History, and Political Economy, as two of the courses of the Third Session. Candidates who avail themselves of this permission are at liberty to attend the third of these subjects as another course of the Third Session.

A similar interpretation applies to the courses of Botany and Zoology, which will count as two courses of the Third Session, provided that one of them be an Honor Course, attended under the conditions stated above.

OUTLINES OF THE COURSES OF LECTURES DELIVERED BY THE PROFESSORS OF THE FACULTY OF ARTS.

LITERARY DIVISION OF THE FACULTY OF ARTS.

The Greek Language.

Professor, E. VAUGHAN BOULGER, M.A.

Junior Class: Monday, Wednesday, Thursday, and Friday.

Xenophon—Memorabilia, Book I. Euripides—Alcestis.

Second Year: Monday, Tuesday, Wednesday, and Friday.

Homer—Odyssey, Book XXI, XXIV. Euripides—Hippolytus.

Demosthenes—Phillipic Orations.

Third Year: Tuesday, Thursday.

Aristophanes—Ranæ. Plato—Phædon. Thucydides, Book III.

Exercises in Prose and Verse, according to the proficiency of the Students.

The Latin Language.

Professor, BUNNELL LEWIS, M.A., F.S.A.

Senior Class, Monday, Wednesday, and Friday:

Tacitus—Germania.

Terence—Adelphi.

Junior Class, Monday, Tuesday, Wednesday, and Thursday:

Horace—Epistles.

Cicero—Ad Familiares, I, II.

Exercises in both Classes chiefly from Arnold's Introductions to Latin Composition.

Extra and Third Year's Class, Tuesday and Thursday:

Cicero—Academica.

Plautus—Mostellaria.

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

History, the English Language and English Literature.

Professor, GEORGE FRANCIS ARMSTRONG, M.A.

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- 1st and 2nd } History—Monday, Wednesday, and Friday.
Term.
2nd Term—The English Language—Tuesday, Thursday, and Saturday.
1st and 2nd } English Literature—Tuesday, Thursday, Saturday.
Term.

History :

European History—From the Decline of the Roman Empire to the present time.

THE ENGLISH LANGUAGE.

The History of its development.

Books recommended:—

- Morris—Historical Outlines of English Accidence.
Trench—Study of Words; English, Past and Present.
Marsh—Lectures on the English Language.
Rask—Anglo-Saxon Grammar (edited by Thorpe); or Vernon—Anglo-Saxon Guide.
Thorpe—Analecta Anglo-Saxonica.
Morris and Skeat—Specimens of Early English.
Morris—The Prologue to Chaucer's Canterbury Tales, and the Editor's Introduction.
Skeat—Specimens of English Literature.
Rushton—Rules and Cautions in English Grammar.
Max Müller—Science of Language.
Whately—Elements of Rhetoric.
Campbell—Philosophy of Rhetoric.

Essays and Translations will be required of the Students from time to time.

ENGLISH LITERATURE.

History and Criticism of the Literature of England from the earliest period to the present day.

The Lives of the Great English Writers.

The Epochs of Foreign Literature which have most affected the form and spirit of the Literature of England.

Books recommended:—

- Morley—A First Sketch of English Literature.
Shaw—Manual of English Literature (edited by Dr. Smith).
Craik—History of English Literature.
Chambers—Cyclopædia of English Literature.
Hallam—Introduction to the Literature of Europe.
Taine—History of English Literature, translated by H. Van Laun.

Critical Essays on subjects treated of in the Lectures will be required of the Students at set times.

Modern Languages.

Professor, R. DE VERICOUR, M.A.

French Class (Medical), Mondays, Wednesdays, and Fridays, at 12 o'clock.
Senior French (Arts and Engineering), Mondays, Wednesdays, and Fridays, at 1 o'clock.

Junior French Class (Arts and Engineering), Mondays, Wednesdays, and Fridays, at 2 o'clock.

German or Italian, Tuesdays and Fridays, at 2 o'clock.

Medical French—L'Année Scientifique pour 1874, par Louis Figuier (Hachette, King William Street, London.) Extracts from Bichat, Andral, Lallemand, and Chomel. Weekly Lectures on the Grammar and Idioms.

Senior and Junior French—Textes classiques de la Littérature Française par S. Demogeot. Fables de La Fontaine. Histoire de la Revolution Française, par Mignet. Histoire de la Littérature Française, par Demogeot. Weekly Lectures on the Grammar and Idioms.

Italian—Silvio Pellico. Tasso. Extracts from Macchiavelli, Guicciardini, Manzoni. Weekly Lectures.

German—Goethe's Ballads and Iphigenie. Schiller's Wilhelm Tell. National Literatur, von A. F. Villmar. Weekly Lectures.

Appendix A.

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Faculty of
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SCIENCE DIVISION OF THE FACULTY OF ARTS.

Mathematics.

Professor, CHARLES NIVEN, M.A.

Junior Class, Monday, Wednesday, and Friday.

Subjects—Arithmetic, Algebra, Geometry, and Plane Trigonometry.

Second Year's Class, Monday, Wednesday, and Friday.

Subjects—Analytical Geometry, Trigonometry, Differential and Integral Calculus.

Third Year's Class:

Subjects—Geometry of three dimensions, Differential Equations, &c.

Exercises are regularly set in each of the Classes.

Logic and Metaphysics.

Professor, GEORGE SIDNEY READ, M.A.

2nd Term, . Logic, . Tuesday, Thursday, and Saturday.

1st & 2nd Terms, Metaphysics, Do. do. do.

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 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.

METAPHYSICS.

This Course will embrace:—

I.—The Philosophy of the Inductive Sciences, illustrated by reference to Lord Bacon, 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 School.

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

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

Political Economy.

Professor, RICHARD HORNER MILLS, M.A.

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.

Books recommended:—

Adam Smith—Wealth of Nations.

Senior—Political Economy.

Fawcett's Manual of Political Economy.

John Stuart Mill—Political Economy.

Richard H. Mills—Lectures on Currency and Banking (Second Edition).

McCulloch—Taxation and Funding (Third Edition).

Goschen on Foreign Exchanges.

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, MAXWELL SIMPSON, B.A., M.D., F.R.S.

Monday, Wednesday, and Friday.

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, Metamorphosis 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 Manufactures, Building Materials, Soils, Manures.

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

Text Books recommended—Roscoe, Williamson, Fownes, Miller, Regnault, Galloway's Qualitative Analysis, Naquet's Chemistry, Armstrong's Organic Chemistry, Schorlemmer's Chemistry of Carbon Compounds.

Analytical Chemistry :

The Chemical Laboratory is open daily, except on Saturdays, from 10 to 4 o'clock, under the superintendence of the Professor, to 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.

Natural Philosophy.

Professor, JOHN ENGLAND, M.A.

Experimental Physics (Senior) :

Text Books—Newth's Mechanics; Galbraith and Haughton's Manuals of Astronomy and Optics; Deschanel's Natural Philosophy.

Experimental Physics (Junior) :

Text Books—Ganot, *Traité de Physique*.

Mathematical Physics :

Text Books—Duhamel's *Mecanique*. Parkinson's *Optics*. Brinkley's *Astronomy*.

Engineering Physics :

Text Books—Tate's *Exercises in Mechanics*; selections from the works of Mosly, De Pambour, Weisbach; Twisden's *Practical Mechanics*, &c.

Natural History.

Professor, JOSEPH REAY GREENE, B.A., M.D.

Monday, Wednesday, and Friday.

The Professor of Natural History delivers a course of Lectures on Zoology and Botany.

Students may obtain Certificates of Attendance on either or both of these subjects. The Zoological part of the course will extend from the first Lecture-day in November to the end of February. The Botanical Lectures will occupy the remainder of the Session.

Under Zoology will be discussed the Principles of Biology.

ZOOLOGY.

GENERAL ZOOLOGY.—Advantages, data, methods, definition and divisions of the science. Animal morphology and physiology. Systematic zoology.

GENERAL ANATOMY.—The tissues of animals; simple and compound tissues; systems of simple tissues; inner and outer tissues; lower and higher tissues. Indifferent tissues; epithelial tissues; connective tissues; contractile tissues; nervous tissues.

Appendix A.

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Arts.

PHYSIOLOGICAL ANATOMY AND SPECIAL PHYSIOLOGY.—The organism, its apparatus, organs (compound, simple, and elementary), and physiological units. Structure and function; modes of function. The organism, as dependent on supplies of matter from without and the action of incident forces; transmutations of energy effected by the organism; internal and external work. Organs of nutrition; metamorphosis of tissue. Organs of assimilation:—the blood; organs of circulation and sanguification; organs of respiration; organs of alimentation; organs of secretion. The nervous system and organs of sense. Organs of motion and support. Electric organs. Organs of generation.

HOMOLOGIES OF ANIMALS.—Type or plan of structure; the relative position of parts. Morphological units. Antimeres. Metameris and parts of metameris. Layers of the germ and their derivatives. Outgrowths and other processes. Anterior and posterior, right and left, dorsal and ventral, neural and hæmal, actinal and abactinal regions.

SYNTHETIC MORPHOLOGY.—Forms of simple animals, as resulting from their (a) symmetry, (b) predominant directions of growth, and (c) the production of external processes. Asymmetrical animals. The principal modes of animal symmetry:—symmetry of the point, of the line, and of the plane; intermediate forms; doubly symmetrical animals. The various forms of compound animals.

DEVELOPMENT OF ANIMALS (ONTOGENY).—Embryogenesis and metagenesis. Direct development. Development with metamorphosis. Fission. Gemination. Alternation of generations. Pædogenesis. Other modes of development. Ontogeny in relation to animal morphology.

THE HIGHER PHYSIOLOGY.—Law of inheritance. Variation of animals. Distribution. Animal Palæontology:—appearance, succession, extinction, and persistence of animal groups. Origin of species; phyllogeny; relation of phyllogeny to ontogeny.

ZOOLOGICAL CLASSIFICATION.—Its object, data, difficulties, methods, and results. Characters of animals. Groups of animals. Zoological nomenclature. Definition of animal groups. Verification of zoological systems.

INVERTEBRATE ANIMALS.—Protozoa and Metazoa (Cœlentera and the higher Invertebrata). Classes of Invertebrata:—Rhizopoda, Gregarina, Infusoria, Spongia, Hydrozoa, Anthozoa, Ctenophora, Echinoderma, Enteropneustæ, Gephyriæ, Nemathelminthes, Rotatoria, Platyelminthes, Annulata, Crustacea, Insecta, Cephalopoda, Cephalophora (Heteropoda, Gasteropoda, Pteropoda and Scaphopoda), Lamellibranchiata, Brachionopoda, and Bryozoa. The provinces of the higher Invertebrata:—Echinoderma, Helminthes, Annulata, Arthropoda, and Mollusca.

VERTEBRATE ANIMALS.—Comparison with invertebrates. Doubtful position of Tunicata. Classes of Vertebrates:—Fishes, Batrachians, Reptiles, Birds, and Mammals. Provinces of Vertebrata:—Branchiata (or Ichthyopsida), Monocondyla (or Sauropsida), and Vivipara.

BOTANY.

GENERAL BOTANY.—The parts of plants; Protoplasm and vegetable cells; Tissues of plants. Life of plants. Classification of plants. Distribution of plants.

CRYPTOGAMIC BOTANY.—Cryptogams: Algæ; Mycetes; Mosses and allied plants; Vascular Cryptogams. Homologies of Cryptogams.

GENERAL MORPHOLOGY OF PHÆNOGAMS.—The Stem. Buds and Branches. Roots. Leaves. Flowers. The Fruit and Seed. Homologies and development of Phænogams.

SPECIAL MORPHOLOGY OF PHÆNOGAMS.—Gymnosperms and Angiosperms. Dicotyledons—Thalamiflorals; Disciflorals; Calyciflorals; Gamopetals; Apetals. Monocotyledons—Epigynous Monocotyledons; Apogynous Monocotyledons.

Those who wish fully to profit by the above Lectures would do well to read, before attending them, Huxley's *Lessons in Elementary Physiology*; Mivart's *Lessons in Elementary Anatomy*; and Oliver's *Lessons in Elementary Botany*.

Geology and Mineralogy.

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

Tuesday, Thursday, and Saturday.

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 and Mining.

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

Text Books—Lyell's Students Elements of Geology—Herschell's Physical Geography—Nicol's Manual of Mineralogy.

SCHOLARSHIPS.

In the Faculty of Arts, there are Thirty Junior and Seven Senior Scholarships. Of the former there are awarded—

To Students of the first year, 5 in Literature and 5 in Science.

„ second „ 5 „ 5 „

The Scholarships of the second year are held for two years under certain conditions.

The Senior Scholarships in Arts are tenable only by Graduates of less than two years' standing from the time of taking the Degree of B.A. They are thus appropriated:—

One in the Languages, Literature, and History of Ancient Greece and Rome.

One to Modern Languages, Literature, and History, viz., English Language, Literature, and Composition; European and English History; the French Language, with German or Italian.

One to Mental and Social Science, viz., Logic, Metaphysics, and Political Economy.

One to Mathematics, viz., Pure Mathematics.

One to Natural Philosophy, viz., Experimental Physics, and Mixed Mathematics.

One to Chemistry, viz., Theoretical and Practical Chemistry.

One to Natural History, viz., Zoology and Botany, Geology, and Physical Geography.

Subjects of Examination for Literary Scholarships of the First Year.

The Greek Language:

Homer—The Iliad, Books I., II., III., IV., V., and VI.

Euripides—Phœnissæ.

Xenophon—The Anabasis, Books I., II., III., IV.,

Lucian—Walker's Selections.

Greek Prose—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, De Amicitia.

Sallust—Conspiracy of Catiline, and Jugurthine War.

Cæsar—The Gallic War, Books V., VI.

Latin Prose—Re-translations from English into Latin, of portions of Cicero.

N.B.—The Examination in Greek and Latin was conducted partly *vivâ voce*, and partly by printed questions.

The English Language:

English Grammar (Bain's English Grammar recommended). History of the English Language—Crail's Outlines. Composition—A theme will be proposed by the Examiner.

History and Geography:

Grecian History to the Death of Alexander the Great (Smith's History of Greece recommended).

Roman History to the Accession of Augustus (Liddell's History of Rome recommended).

Outlines of Ancient and Modern Geography.

Modern Geography (Clyde's School Geography recommended).

Appendix A.

No. II.
Faculty of
Arts.

*Subjects of Examination for Literary Scholarships of the
Second and Third Years.*

The Greek Language:

Euripides—Hippolytus.
Plato—Phaedon.

Herodotus—Book I., cc. 1 to 100 inclusive.

Prose Composition.

The Latin Language:

Virgil—Eclogues and Æneid.
Horace.

Juvenal—Satires I., III., VIII., X., XIII., XIV.

Terence—Heauton Timorumenos.

Livy, Book IV.

Cicero—Tusculan Disputations.

Tacitus—Histories, Book I.

Composition in prose and verse.

The English Language:

Morris—Historical outlines of English Accidence, Chaps. I., II., III., IV., V.
Rask—Anglo-Saxon Grammar, edited by Thorpe.

The English of Chaucer, as illustrated by the Prologue to the Canterbury Tales. Morris's Edition, with the Editor's Introduction.

The History of the English People, to the accession of Henry IV.

English Composition.

The French Language:

Molière—L'Avare; Le Misanthrope.

Lafontaine—Fables.

Histoire de la Littérature Française, par Demogeot.

Translation from English into French.

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 quantities. 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 formulae. The Solution of Plane Triangles, with demonstrations. Nature and Use of the Tables.

*Subjects of Examination for Science Scholarships of the
Second and Third Years.*

The Higher Arithmetic, with Mensuration.

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:

Wilson's Elementary Geometry; Euclid, Book VI.; Definitions of Book V., and first 21 Propositions of Book XI., with deductions. Analytical Geometry.

Trigonometry:

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

*For the Senior Scholarships in the Greek and Latin Languages, and Ancient History.**

The Greek Language:

Æschylus—Septem contra Thebas.

Together with the subjects for the B.A. Honor Examination at the University.

* Where more than one subject enters into the examination for Senior Scholarships, a competent knowledge of all these subjects is required from the successful candidate.

Composition in Attic Prose.
Greek Literature and History.

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The Latin Language:

Virgil.
Horace.
Lucretius, Books I., II.
Ovid—Fasti, Book I.
Persius.
Terence—Andria.
Plautus—Capteivei.

Cicero—De Oratore.
„ Tusculan Disputations.
„ Ad Atticum, Books I., II.
„ Actiones Verrinae.
Livy—Books IV. and XXII.
Tacitus—The Annals, Books I. to IV.
inclusive.

Composition in prose and verse.

For Senior Scholarships in Modern Languages, Literature, and History.

The French Language:

Lavallée—Histoire des Français.
Histoire de la Littérature Française, par Demogeot ou Nisard.

The German Language:

Nationalliteratur, von A. F. Vilmar.
Schiller's Maria Stuart.
Goethe's Iphigenie.

The Italian Language:

Tasso—La Gerusalemme Liberata—first five Cantos.
Dante's Inferno—Italian Literature, published by Messrs. Chambers.

Translation from English into French, German, or Italian.

English:

THE ENGLISH LANGUAGE.

The History of the English Language.

ENGLISH LITERATURE.

Chaucer—The Man of Lawe's Tale.
Spenser—The Faerie Queene, Book I.
Shakspeare—Macbeth. King Lear.
Milton—Paradise Lost, Books I., II.
Dryden—Mac Flecknoe.
Pope—Essay on Man.
Wordsworth—Poems of the Imagination, to the end of the stanzas on the
Power of Sound.
History:
The History of Europe during the Middle Ages.

For the Senior Scholarship in Mathematics.

The subjects of previous Examinations (for which see page 34), with the following additions:—

Analytical Geometry of Three Dimensions.
Differential Equations.

For the Senior Scholarship in Natural Philosophy.

Todhunter's Statics, Tait and Steel's Dynamics.
Brinkley—Elements of Astronomy, including the Appendix.
Parkinson's Optics.
Everett's Translation of Deschanel's Natural Philosophy.

For the Senior Scholarship in Mental and Social Sciences.

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

Metaphysics and Logic:

Sir William Hamilton's Philosophical Essays and Notes on Reid.
Mill—System of Logic, Book III. to the end of Volume I.

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Political Economy :

Principles of Political Economy, by John Stuart Mill.

Senior's Political Economy.

Goschen on Foreign Exchanges.

R. H. Mills—Lectures on Currency and Banking—second edition.

The value attached to the subjects will be in the following proportions, viz.:—

Metaphysics and Logic, . . . 60

Political Economy, . . . 40

For the Senior Scholarship in Chemistry.

Chemical Physics (in Miller's Chemistry).

Inorganic Chemistry :

General principles of Chemical Philosophy. Modern views of Chemistry.

Crystallography.

Chemistry of the Metals. Constitution of Salts. Metallurgy.

Organic Chemistry :

Ultimate analysis of Organic Bodies. Recent views of the constitution of Organic Bodies. Empirical and Rational formulæ. Determination of the density of Vapours. Law of Substitution. Homologous Series. Chemical Types. Preparation and Properties of the Alcohol Series and their Derivatives. Cyanogen, its Compounds and Derivatives. Organic Bases of Artificial Origin.

Practical Chemistry :

The Analysis of Mixtures, containing two or more Acids and Bases.

For the Senior Scholarship in Natural History.

The Lectures of the Professors.

Henfrey—Elementary Course of Botany. (Second Edition, by Dr. Masters). Parts I. and III.

Hooker, J. D.—The Students' Flora of the British Islands (The Characters of the Orders and Tribes).

Huxley, T.—Lessons in Elementary Physiology.

Mivart, St. J.—Lessons in Elementary Anatomy.

Rolleston—Forms of Animal Life.

Lyell—Students' Elements of Geology.

See Appendix No. I., p. 23, for the University Exhibitions and Prizes in the Faculty of Arts.

No. III.—FACULTY OF LAW.

DEGREES.

Candidates for the Diploma of Elementary Law must have passed a Matriculation Examination, and pursued the following

Course of Study for the Diploma of Elementary Law.

FIRST SESSION.

Law of Real Property, Principles of Conveyancing; Jurisprudence.

The Course of the Professor of English Law for the First Year's Class comprises Elementary Instruction in the Law of Real Property, and in practical Conveyancing. The text-book read is "Williams on Real Property."

The following works are recommended for perusal:—

Blackstone's Commentaries, by Stephen, Vol. I., and Vol. II. of Kerr's edition of the same work.

SECOND SESSION.

Law of Personal Property, Equity, and Bankruptcy; Civil Law.

The Course of the Professor of English Law for the Second Year's Class comprises instruction in the Law of Personal Property, Equity,

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Faculty of
Law.

Bankruptcy, and the practice relating to those branches of Law. The text-books read are, "Smith on Contracts," "Williams on Personal Property," and "Snell's Principles of Equity."

The following are recommended for perusal:—

Blackstone's Commentaries, by Stephen, Vol. II., same, by Kerr, Vol. II., Smith's "Mercantile Law," Smith's "Manual of Equity," Story's "Equity Jurisprudence," Vol. I.; Kisbey on the Bankruptcy Acts, 1857 and 1872; the Debtors' Act, 1872.

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Law.

THIRD SESSION.

Common and Criminal Law.

The Course of the Professor of English Law for the Third Year's Class comprises the History, Constitution, and Jurisdiction of the several Courts of Justice, and their Procedure. The text-books are the third and fourth volumes of Blackstone's Commentaries, editions by Stephen and Kerr.

The following works are recommended for perusal:—

"Broom's Common Law," "Broom's Legal Maxims," "Smith's Leading Cases," "Copinger's County Courts," by Johnstone, Common Law Procedure Acts, 1853 and 1856, &c., by Bewley and Nash; Woolrych's Criminal Law, or Russell on Crimes.

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 Diploma of Elementary Law.

Students who have obtained the Degree of LL.B. will, at the expiration of two years after they have obtained the Degree, be admitted to the Examination for the Degree of LL.D. They are examined in the Laws of the Admiralty and Ecclesiastical Courts of England and Ireland, and in International Law, for which Examination the following Books are suggested:—

Lord Hale's Treatise, De Jure Maris.

Dr. FitzHenry Townsend's statement of the differences in Jurisdiction and Practice between the English and Irish Courts of Admiralty, annexed to the Report of the Royal Commission of Inquiry, 1864.

Rogers' Ecclesiastical Law.

Wheaton's International Law.

"Historicus," Letters of, on International Law.

LECTURES.

The complete Course for each Class consists of Twenty-four Lectures, by the Professor of English Law, in each Collegiate Session of three years, and of Twenty-four Lectures by the Professor of Jurisprudence, in each course of the first two years. The Lectures are delivered after Michaelmas Law Term, in the month of December, and after Hilary Law Term, in the months of February and March. Five-sixths of the Lectures in each Course must be attended.

Students proceeding to the Irish Bar, if they be Graduates in Arts of the Queen's University, and have attended for one year the Lectures, and passed the Examinations of the Professors of Law in any of the Queen's Colleges, will under the rules made by the Benchers of the King's Inns in Trinity Term, 1876, be required to attend but for one year at the Lectures, and on two only of the Professors of the King's Inns.

Students proceeding to the Irish Bar, who are not Graduates in Arts of the Queen's University, but have for one year attended the Lectures of the Professors of Law in any of the Queen's Colleges, will be required to attend for two years at the Lectures of the Professors of the King's Inns.

Graduates, or Undergraduates, are excepted from the operation of the Benchers' rule requiring Law Students to pass an examination in the English Language and Literature, and the Latin Language.

With respect to Students for the English Bar, the Council of Legal Education may accept a Degree in Law granted by the Queen's University, as an equivalent for the Examination to be passed in any of the following subjects,

Appendix A. viz.:—Roman Civil Law; the Law of Real and Personal Property; provided the Council is satisfied that the Student, before he obtained his Degree, passed a sufficient Examination in such subject or subjects.

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Law.

Students preparing for the profession of Attorney or Solicitor in Ireland, can save two years of their apprenticeship by taking the Degree of B.A. or of LL.B., in the Queen's University.

Students intending to proceed, so as to entitle themselves to serve an apprenticeship of four years instead of five, under the Attorneys' and Solicitors' Act, Ireland, 1866, must enter their names with one of the Registrars of the Queen's Colleges of Cork, Belfast, or Galway, and pay the necessary College and Class Fees to the Bursar before the commencement of the Law Lectures in each Session. Such Students need not pass the Matriculation Examination, but must attend the Lectures, and pass the College Examinations prescribed for the first and second years, of the course of study for Candidates for the Diploma in Elementary Law.

SCHOLARSHIPS.

Subjects of Examination.

FIRST YEAR.

Examination by the Professor of Jurisprudence:—

Reddie's Inquiries in the Science of Law.

Adam Smith's Wealth of Nations—Book III.

Hallam's Middle Ages—Chap. 2 and 8.

* Examination by the Professor of English Law:—

Williams—Principles of the Law of Real Property.

SECOND YEAR.

By Professor of Jurisprudence.

The Lectures of the Professor in the First Year.

Ancient Law, by H. S. Maine.

The Chapters on Social Science in J. S. Mill's Logic—Book VI., Chap. 6, to end of the Book.

Austin's Jurisprudence, Vol. 1, 3rd Edition.

By Professor of English Law.

The Lectures of the Professor for the preceding year.

Smith—Manual of Equity Jurisprudence.

Williams—Principles of the Law of Personal Property.

Smith—On Contracts.

THIRD YEAR.

By Professor of Jurisprudence.

Austin's Jurisprudence, Vol. 2, 3rd Edition.

Sandar's Justinian, and the Lectures of the Professor, in the first and second year.

NOTE.—The following works, in addition to the text-books mentioned, should be referred to in connexion with the principal subjects discussed in the Lectures on Jurisprudence:—

Dumont's Bentham (translation by Hildreth), "Principles of Legislation," and 1st and 2nd parts of the "Principles of the Civil Code."

Stephens' "Criminal Law."

Spence's Equity Jurisprudence. Vol. I., Part I.

Mackenzie's Roman Law.

By Professor of English Law.

The Lectures of the Professor for the preceding years.

Smith—Leading cases on branches of the Law.

Storey—Equity Jurisprudence.

The Senior Law Scholarship will be awarded, by Examination, 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. in the Queen's University in Ireland.

Examination for the Senior Scholarship in Law.

The Lectures of the Professors and subjects appointed for Scholarship Examination in the preceding years.

Sugden—The 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.
Stephen—Commentaries, Books V., VI.
Hallam—Constitutional History.
Broom's Constitutional Law.
Spence's Equity Jurisprudence, Vol. I., Part 1.

Appendix A.

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Faculty of
Law.

No. IV.—FACULTY OF MEDICINE.

DEGREES OF M.D. AND M.CH.*

No. IV.
Faculty of
Medicine.

Students who wish to obtain the Degree of M.D., or of M.Ch. in the Queen's University, must be matriculated Students of one of the Queen's Colleges, and must pursue the courses of study prescribed by the Senate of the University.

Medical Students may matriculate either at the General Matriculation Examination (held in 1874, on the 20th of October), or at the Supplementary Examination held in the second or third week of November.

The following are the Regulations of the Senate concerning those Degrees:—

Each Candidate for the Degree of Doctor in Medicine or Master in Surgery is required—

1st—To have passed in one of the Colleges of the Queen's University the Entrance Examination in Arts, and to have been admitted a Matriculated Student of the University.

2nd—To have attended in one of the Queen's Colleges, Lectures on one Modern Continental Language for six months, and Lectures on Natural Philosophy for six months.

3rd—To have also attended, in some one of the Queen's Colleges, at least two of the courses of Lectures marked with an asterisk. For the remainder of the courses, 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.

4th—To pass two University Examinations—the First University Examination, and the Degree Examination.

The Curriculum shall extend over at least four years, and shall be divided into periods of at least two years each.

Candidates are recommended to pass the Matriculation Examination prior to entering on the second period.

It is recommended that the first period shall comprise attendance on the following Courses of Medical Lectures:—

- * Chemistry.
- * Botany, with Herborizations for practical study, and Zoology.
- * Anatomy and Physiology.
- * Practical Anatomy.
- * Materia Medica and Pharmacy.

And that the second period shall comprise attendance on the following Courses of Medical Lectures:—

- Anatomy and Physiology (Second Course).
- Practical Anatomy (Second Course).
- * Theory and Practice of Surgery.
- * Midwifery.
- * Theory and Practice of Medicine.
- * Medical Jurisprudence.

* The regulations under which degrees in Surgery will be conferred on Candidates who graduated in Medicine before the year 1865, may be learned on application to the Secretary of the Queen's University.

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Medicine.

In addition to the above Courses of Lectures, Candidates shall have attended during either the first or second period—

A Modern Continental Language (in one of the Colleges of the University).
Experimental Physics (in one of the Colleges of the University).

Also, during the first period—

Practical Chemistry (in a recognised Laboratory).

Medico-Chirurgical Hospital (recognised by the Senate) containing at least sixty beds, together with the Clinical Lectures therein delivered, at least Two each Week—a Winter Session of Six Months.

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 Thirty beds; or six Months, in an Hospital containing not less than Fifteen beds.

Medico-Chirurgical Hospital (recognised by the Senate) containing at least sixty beds, together with the Clinical Lectures therein delivered—Eighteen Months; including either three Winter Sessions of Six Months each, or two Winter Sessions of Six Months each, and two Summer Sessions of Three Months each.

Medical Examinations are held in June, and in September and October.

The June Examinations are Pass Examinations, and commence on the Tuesday following the Second Saturday in June.

The Honor Examinations commence on the last Tuesday in September, and are followed by Pass Examinations.

Each Candidate for Examination in June must forward to the Secretary, on or before the first of June, notice of his intention to offer himself as a Candidate along with his Certificates; and each Candidate for Examination in September or October must forward similar notice, along with his certificates.

LECTURES.

The Medical Session was opened on Tuesday, 2nd November, 1875, and the Courses of Lectures commenced as under:—

Anatomy and Physiology.

Tuesday, 2nd of November, at One o'clock, and continued daily, except on Saturdays, at the same hour.

Practice of Medicine.

Wednesday, 3rd of November, at Three o'clock, and continued on Mondays, Wednesdays, and Fridays, at the same hour.

Practice of Surgery.

Tuesday, 2nd November, at Four o'clock, and continued on Tuesdays and Thursdays, at Four o'clock, and Saturdays, at One o'clock.

Materia Medica.

Tuesday, 2nd November, at Three o'clock, and continued on Tuesdays and Thursdays, at Three o'clock; and on Saturdays, at Twelve o'clock.

Medical Jurisprudence.

Tuesdays, Thursdays, and Saturdays, at Two o'clock, concurrently with Law Course.

Midwifery.

Wednesday, 3rd November, at Four o'clock, and continued on Mondays, Wednesdays, and Fridays, at the same hour.

The Anatomical Demonstrations

Commenced on 2nd of November, and were continued daily at Twelve o'clock, except Saturdays.

The Course of PRACTICAL ANATOMY was conducted by the Professor of Anatomy and Physiology, assisted by Demonstrators.

Chemistry.

Monday, Wednesday, and Friday, at Eleven o'clock.

Practical Chemistry.

Monday, Wednesday, and Friday, at Two o'clock. (See note, p. 23.)

Zoology and Botany.

Monday, Wednesday, and Friday, at Three o'clock.

Natural Philosophy.

Tuesdays and Thursdays.

Modern Languages.

Monday, Wednesday, and Friday.

Appendix A.

No. IV
Faculty of
Medicine.

The following Curriculum is recommended for all Medical Students:—

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.

FOURTH YEAR.
Practice of Medicine.
Medical Jurisprudence.

NOTE.—The 16th of November will be the last day for 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.

TABLE OF FEES.

FIRST YEAR.			THIRD YEAR.		
	£	s. d.		£	s. d.
Anatomy and Physiology, .	3	0 0	Practical Anatomy, .	3	0 0
French, .	2	0 0	Midwifery, .	2	0 0
Natural Philosophy, .	2	0 0	Surgery, .	2	0 0
Natural History, .	2	0 0	College Fee, .	0	5 0
Chemistry, .	2	0 0			
College Fee, .	0	10 0			
SECOND YEAR.			FOURTH YEAR.		
Anatomy and Physiology, if a Second Course, .	2	0 0	Medical Jurisprudence, .	2	0 0
Practical Anatomy, .	3	0 0	Medicine, .	2	0 0
Practical Chemistry, .	3	0 0	College Fee, .	0	5 0
Materia Medica, .	2	0 0			
College Fee, .	0	5 0			

HOSPITAL ATTENDANCE.

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

	£	s. d.
Fee for twelve months, .	8	8 0
Fee for six months, .	5	5 0
Practical Pharmacy at the same Infirmaries:		
Fee for three months, .	3	3 0
Clinical Midwifery at the Lying-in Hospital, with Prac- tical 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.

SCHOLARSHIPS.

No. IV. Faculty of Medicine. There are Eight Scholarships in the Faculty of Medicine, which are thus allotted:—

To the First Year—Two—One for Literature and one for Science.
 „ Second do. Two.
 „ Third do. Two.
 „ Fourth do. Two.

SUBJECTS OF EXAMINATION.

Scholarships of First Year.

I. LITERARY SCHOLARSHIP.

The Greek Language :

Homer—The Iliad, Books I., II., III., IV., V., and VI.

Euripides—Phœnissæ.

Xenophon—The Anabasis, Books I., II., III., IV.

Lucian—Walker's Selections.

Greek Prose—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 ; De Amicitia.

Sallust—Conspiracy of Catiline and Jugurthine War.

Cæsar—The Gallic War, Books V., VI.

Latin Prose—Re-translations from English into Latin of portions of Cicero.

N.B.—The Examination in Greek and Latin was conducted partly *vivâ voce*, and partly by printed questions.

The English Language :

English Grammar. (Bain's English Grammar recommended).

History of the English Language—Craik's Outlines.

Composition—A theme will be proposed by the Examiner.

History and Geography :

Grecian History to the Death of Alexander the Great (Smith's History of Greece recommended).

Roman History to the Accession of Augustus (Liddell's History of Rome recommended).

Outlines of Ancient Geography.

Modern Geography (Clyde's School Geography recommended).

2. SCIENCE SCHOLARSHIP.

Arithmetic :

Mensuration of Rectilineal Figures and of the Circle :

Algebra :

The Solution of Simple and Quadratic Equations, with one or more unknown quantities. 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.

Scholarship of the Second Year.

Anatomy and Physiology.

Chemistry.

General Physics.

Zoology and Botany.

The French Language.

Scholarship of the Third Year.

Anatomy and Physiology.

Practical Anatomy.

Materia Medica.

Practical Chemistry.

Scholarship of the Fourth Year.

Anatomy and Physiology.

Practical Anatomy.

Pathology and Morbid Anatomy.

Therapeutics.

Surgery.

Midwifery.

See Appendix No. I., p. 26, for the University Exhibitions and Prizes in the Faculty of Medicine.

No. V.—SCHOOL OF ENGINEERING.

Appendix A.

No. V.
School of
Engineering.

DEGREE IN ENGINEERING.

To obtain the Degree in Civil Engineering, Students must matriculate in Engineering, complete the prescribed course in one of the Queen's Colleges, and pass the University Examinations. Of these there are two; the Preliminary Examinations at the commencement of the third Session, and the Final Examination in the following September.

Each Candidate for the Degree in Civil Engineering is required—

1. To have been admitted a Matriculated Student of the Queen's University in the Department of Civil Engineering.
2. To have studied in the Colleges of the Queen's University the Course herein prescribed.
3. To have passed the University Examinations herein prescribed.

The Course for the Degree in Civil Engineering

Shall usually extend over Three Sessions, and shall comprise attendance on the following Curriculum :—

FIRST SESSION.

Mathematics (First Course).
Chemistry.
Modern Languages.
Geometrical Drawing.
Office Work.
Mineralogy, Geology, and Physical Geography.

SECOND SESSION.

Mathematics (Second Course).
Experimental Physics.
Civil Engineering.
Office Work.
Field Work.

THIRD SESSION.

Natural Philosophy, applied.
Mathematical Physics.
Civil and Mechanical Engineering.
Office Work.
Field Work.
Engineering Excursions.

Attendance on these Courses shall in all cases be understood to include passing such Examinations as may be appointed by the College Council, as well as the catechetical parts of the Courses of the Lecture.

Engineering Students shall reside at their respective Colleges during at least the first two Terms of each Session, and can be exempted from residence during the third Term also, only by a special grace of the College Council.

The study of the Engineering Curriculum may be extended over more than three Sessions, on the recommendation of the College Council, and under such regulations as the Council shall impose. Some relaxation of the order in which the subjects shall be studied will also be admitted, on the recommendation of the Council.

Candidates will, on the special recommendation of the College Council, be admitted to the Degree after two years' residence instead of three, if their previous acquaintance with a sufficient group of the subjects above set down for study in the First and Second Session is deemed by the Council satisfactory. In such cases the Certificate of the Council will be accepted in lieu of attendances upon these Courses, but will not exempt Candidates from the University Examinations in them.

In order to obtain this Certificate, Students must have attended previously at least one Session in Arts, or one year in an Engineer's office. On making application to the Council, such Students will be allowed to present themselves, at the time of Matriculation, for examination in the subjects of any four of the eight Courses of Lectures of the first two years. On passing this Examination, they will be allowed to take rank at once as Students of the second year, and will then be required to attend those other four Courses of Lectures only, in the subjects of which they have not passed; but they will not be eligible for the Scholarship of that year.

Appendix A.

No. V.
School of
Engineering.

The application to be admitted to this Examination must be lodged with the Registrar before the first day of the Session, and must state what are the four subjects in which the Students propose to offer themselves for Examination, and must be accompanied by a Certificate of the required attendance of one or more years in Arts or an Engineer's Office.

On passing the Sessional Examinations in the subjects of these four Courses of Lectures which they shall have attended as Students of the second year, they will be promoted to the rank of Students of the third year; and, on completing the regular Course of that year, will be furnished with the Certificate required by the Senate of the University.

The University Examinations shall extend to all the subjects of the above Curriculum. French will, in all cases, be required.

Candidates must present themselves before the close of their Collegiate Course for Examination in the following subjects, viz.:—Mathematics (*First Course*); Experimental Physics; Modern Languages; Geometrical Drawing (including Orthographic projection, Isometric projection, Descriptive Geometry, and Linear Perspective); Mathematics (*Second Course*); Mensuration, Levelling, and Mapping.

The final Examination shall extend to all the subjects of the Engineering Course, in which the Candidate shall not have previously passed. English Composition will form a part of each University Examination.

This Ordinance shall take effect from the first day of January, 1860; Students who shall have entered the Engineering Schools of the Colleges of Queen's University previously, may proceed either under the present Ordinance, or under that hitherto in force.

LECTURES.

The Lectures in Engineering commenced on Monday, 26th October, 1874.

The following Table shows the various Classes which are to be attended in each year, with the corresponding days and hours of Lecture, and the College and Class Fee payable by Engineering Students:—

CLASS.		Terms.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Fees.
1st Session.	Mathematics (1st Course), .	1, 2, 3	12	—	12	—	12	—	£ s. d.
	Chemistry,	1, 2, 3	11	—	11	—	11	—	2 0 0
	Modern Languages, . . .	1, 2, 3	2	—	2	—	2	—	2 0 0
	Geometrical Drawing, . .	1, 2, 3	10	—	10	—	10	—	2 0 0
	Office Work (10 A.M. to 2 P.M.)	1, 2, 3	—	10	—	10	—	10	2 0 0
	Mineralogy, Geology, and Physical Geography, . . }	1, 2, 3	—	2	—	2	—	12	2 0 0
	College Fee,	—	—	—	—	—	—	—	0 10 0
2nd Session.	Mathematics (2nd Course), .	1, 2, 3	1	—	1	—	1	—	2 0 0
	Experimental Physics, . .	1, 2, 3	—	—	—	—	—	—	2 0 0
	Civil Engineering, . . .	1, 2, 3	—	10	—	10	—	10	2 0 0
	*Office Work (10 A.M. to 2 P.M.)	1, 2, 3	—	10	—	10	—	10	2 0 0
	College Fee,	—	—	—	—	—	—	—	0 5 0
3rd Session.	Natural Philosophy, applied, .	1, 2, 3	—	2	—	2	—	—	2 0 0
	Mathematical Physics, . .	1, 2, 3	1	—	1	1	1	—	2 0 0
	Civil and Mechanical Engi- neering, }	1, 2, 3	12	—	12	—	12	—	2 0 0
	*Office Work (10 A.M. to 2 P.M.)	1, 2, 3	—	10	—	10	—	10	2 0 0
	College Fee,	—	—	—	—	—	—	—	0 5 0

* For Students who have attended this Course in their first year, the Fee is £1.

OUTLINE OF THE COURSE OF LECTURES ON CIVIL ENGINEERING.

Professor, ALEXANDER JACK, M.A.

FIRST YEAR.

Monday, Wednesday, and Friday.

Subject of Lectures.—Orthographic Projection; Descriptive Geometry; Shadows; Isometric Projection; Perspective; Geometry of the Oblique Bridge; Principles of Architecture.

Text Books—Hall's Descriptive Geometry; Engineer and Machinist's Drawing Book; Rickman's Architecture; Buck on Oblique Bridges. *Appendix A.*

SECOND YEAR.

Tuesday, Thursday, and Saturday.

Subject of Lectures—Surveying and Levelling.

Text Books—Rankine's Civil Engineering; Cotton's Manual of Railway Engineering; Williams' Geodesy.

THIRD YEAR.

Monday, Wednesday, and Friday.

Materials used in Construction; Principles of Construction of Bridges, Roads, Railways, Canals; Hydraulic Engineering; Strength of Materials; Principles of the Construction of the different Machines employed by the Engineer.

DRAWING OFFICE.

Attended by all the Classes—Tuesday, Thursday, and Saturday.

The First Year's Class are chiefly employed in drawing the problems given at lectures, and a few easy examples of their applications. The Second and Third Years' Classes, in making working drawings of examples of the subjects of lectures, and in Mapping.

Practical Instruction in the Field in the use of Surveying Instruments is given during the Session.

For an outline of the other courses of lectures in the above table to be attended by Engineering Students, see Appendix No. II., p. 32, et seq.

SCHOLARSHIPS.

In the School of Engineering there are five Scholarships, two of which are appropriated to Students of the first year, two to those of the second, and one to those of the third. (See also p. 24.)

SUBJECTS OF EXAMINATION.

The Subjects of Examination for the Engineering Scholarships are as follows:—

Subjects of Examination for Engineering 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 quantities. 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:

Definition 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 Engineering Scholarships of the Second Year.

Mathematics:

The same as for Science Scholarships in Arts of the Second Year, except that Spherical Trigonometry will be substituted for Analytical Geometry.

French:

Demogeot—Histoire de la Littérature Française.

Translation from English into French.

Chemistry:

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

Geometrical Drawing:

Descriptive Geometry. Orthographic Projection. Isometric Projection. Perspective. Geometry of Oblique Bridge.

No. V.
School of
Engineering.

Appendix A. Subjects of Examination for Engineering Scholarships of the Third Year.

No. V.
School of
Engineering.

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, and Geometrical Conic Sections.
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 coefficient. Taylor's and Maclaurin's Theorems. Maxima and Minima. Criteria of the same, with proofs, Equation 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.

Natural Philosophy :

Newth's Mechanics.

Ganot—*Traité de Physique*—Books VI., VII., VIII., IX.

Geology and Mineralogy :**Civil Engineering :**

Instruments used by the Civil Engineer. Their adjustments and use. Surveying. Levelling.

See Appendix No. I. p. 24, for the University Exhibitions in Engineering.

APPENDIX B.

Appendix B.

List of
Successful
Candidates
for Degrees,
&c.

No. VI.—UNIVERSITY DEGREES, DIPLOMAS, AND HONORS
OBTAINED BY STUDENTS OF QUEEN'S COLLEGE, CORK, AT
THE COMMENCEMENTS IN JUNE AND OCTOBER, 1875.

FACULTY OF ARTS.

DEGREE OF M.A.

Edward Horan, Second Class in Ancient Classics.

DEGREE OF B.A.

Thomas M. Corker, First Class in Biological Science.
Annesley A. Somerville, Second Class in Mathematical Science.
Robt. N. T. Belcher, Upper Pass Division.
O'Byrne Crowe, Upper Pass Division.
Denis F. Hannigan, Upper Pass Division.
John Ryan, Upper Pass Division.

Passed.

Richard Belton.	William Hennessy.
Joseph J. Healy.	Horace Townsend.

FIRST UNIVERSITY EXAMINATION IN ARTS.

Thomas Farrington, Second Honor Class.
Michael Keating, Second Honor Class.
John C. Crowe, Upper Pass Division.

Passed.

Edwin S. Donovan.	Edward A. Warren.
Morgan M'Sweeny.	Samuel Townsend.
John Philip Sullivan.	

FACULTY OF MEDICINE.

DEGREE OF M.D.

Richard F. Starkie, Second Honor Class.
Thomas G. L. Walker, Second Honor Class.
Daniel Wilson, M.A., Second Honor Class.
Thomas D. Popham, Upper Pass Division.

Passed.

William A. Burgess.	Edward S. Kennedy.
William F. Carmody.	Michael Roderick O'Connor.
Edward Foley.	Joseph O'Sullivan.
Frederick C. Gresham.	Christopher Pearson, M.A.
Percy H. Johnston, B.A.	

Appendix B.

List of
successful
Candidates
for Degrees,
&c.

DEGREE OF MASTER IN SURGERY (M.Ch.)

John J. Blackhall.	Joseph O'Sullivan.
William A. Burgess.	Christopher Pearson, M.A.
William F. Carmody.	Thomas D. Popham.
Gerald H. Fitzgerald.	Richard F. Starkie.
Percy H. Johnston, B.A.	Thomas G. L. Walker.
Edward John Kennedy.	Daniel Wilson, M.A.
Michael Roderick O'Connor.	

DIPLOMA IN MIDWIFERY.

William A. Burgess.	Thomas D. Popham.
Percy H. Johnston, B.A.	Richard F. Starkie.
Thomas Lumsden.	Thomas G. L. Walker.
Michael Roderick O'Connor.	Daniel Wilson, M.A.
Christopher Pearson, M.A.	

SECOND UNIVERSITY EXAMINATION IN MEDICINE.

John P. Carmody,	Upper Pass Division.
Thomas H. Croly,	Upper Pass Division.
Robert D. Donaldson, B.A.	Upper Pass Division.
Richard P. Long,	Upper Pass Division.
Alfred H. Miller,	Upper Pass Division.
Daniel O'Connor,	Upper Pass Division.
John O'G. Sandiford,	Upper Pass Division.

Passed.

Robert Black, B.A.	Jeremiah Mullane.
Archibald Blaine.	William D. O'Brien.
Ulick J. Bourke.	Jerome E. O'Sullivan.
Ralf A. Bull.	Richard Reid.
Michael Collins.	Thomas F. Riordan.
Charles F. Knight.	James Shorten.
Francis W. Lindsay.	John Studdert.
Michael J. M'Carthy.	John E. Walsh.

FIRST UNIVERSITY EXAMINATION IN MEDICINE.

Robert E. Hadden,	Second Honor Class.
Hamilton Benson,	Upper Pass Division.
George R. O'Donovan,	Upper Pass Division.
James Wigmore,	Upper Pass Division.

Passed.

John L. Aherne, B.A.	Adam G. Mitchell.
Thomas G. Atkins, B.A.	Thomas J. Moynahan.
Alfred C. Bennett.	William O'Donnell.
John Chestnut, B.A.	Manus O'Keeffe.
William Crofts.	Charles Y. Pearson.
Humphrey Haines.	Joseph M. Roche.
A. E. S. Saunders Hart.	Thomas Shipsey.
Samuel G. Levis.	John Spring.

SCHOOL OF CIVIL ENGINEERING.

DEGREE OF BACHELOR OF ENGINEERING (B.E.)

Daniel Connery,	First Honor Class.
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Passed.

George F. Miles.	John J. O'Sullivan.
Christopher F. O'Sullivan.	

D

Appendix B.

List of
successful
Candidates
for Degrees,
&c.

FIRST UNIVERSITY EXAMINATION IN ENGINEERING.

John S. Molony, B.A.,	.	.	.	.	.	Second Class.
Henry V. L. Morony,	.	.	.	.	.	Upper Pass Division.
<i>Passed.</i>						
Richard Campion.						Michael M'Mullen.

University Prizes at Entrance :

GEOMETRY,	Robert J. Sullivan,	First.
	John P. Dalton,	Second.
ENGLISH COMPOSITION,	David Gamble Lockhart,	First.
	Michael H. Feeny,	Second.

No. VII.—SCHOLARSHIP EXAMINATIONS.

FACULTY OF ARTS.

Senior Scholarships.

ANCIENT CLASSICS,	William Anderson, B.A.,	(Scholarship.)
MODERN LANGUAGES,	Denis Hannigan, B.A.,	(Scholarship.)
MATHEMATICS,	{ Annesley Somerville, B.A.,	(Scholarship.)
	{ Robert N. F. Belcher, B.A.,	(Exhibition.)
NATURAL PHILOSOPHY,	William Stoops, B.A.,	(Scholarship.)
CHEMISTRY,	{ Thomas G. Atkin, B.A.,	(Scholarship.)
	{ Robert Black, B.A.,	(Exhibition.)
NATURAL HISTORY,	Thomas M. Corker, B.A.,	(Scholarship.)
MENTAL SCIENCE,	{ Joseph J. Healy, B.A.,	(Scholarship.)
	{ James Mullin, B.A.,	(Exhibition.)

Third Year's Scholarships.

LITERATURE.	SCIENCE.
Thomas Farrington.	John C. Crowe.
Edwin S. Donovan.	Edward A. Warren.
	John P. Sullivan.
	Morgan M'Swiney.

Second Year's Scholarships.

LITERATURE.	SCIENCE.
Clarke Irwin.	John E. Laffan.
James J. Rearden.	

First Year's Scholarships.

LITERATURE.	SCIENCE.
James Keating.	Matthew Steen.
David Gamble Lockhart.	Robert J. Sullivan.
William D. Russell.	John P. Dalton.
	Edward Gibbings.
	George Atkins.
	George Rountree.

FACULTY OF LAW.

Second Year's Scholarship.

John Ryan.

FACULTY OF MEDICINE.

Fourth Year's Scholarships.

John Welpy.		Jephson J. Connell.
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Third Year's Scholarships and Exhibitions.

Jeremiah Mullane,	{ (Scholarships.)	Edward Walsh,	{ (Exhibitions.)
John O'G. Sandiford,		Alfred Miller,	
		Richard P. Long,	

Second Year's Scholarships and Exhibitions.

Charles Y. Pearson, Robert E. Hadden,	} (Scholarships.)	Edmond Wall, John J. Dinnis, William A. Cummins,	} (Exhibitions.)	Scholarship Examina- tions.
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Appendix B.

First Year's Scholarships.

Edward Horan, B.A.		James Hickman, B.A.
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SCHOOL OF ENGINEERING.

Third Year's Scholarship.

John Duggan, M.A.

No. VIII.—SESSIONAL EXAMINATIONS.

PRIZES AND CERTIFICATES AWARDED FOR THE SESSION 1875-6.

FACULTY OF ARTS.

Third Year.

GREEK,	Edwin S. Donovan,	Prize.
LATIN,	1. Edwin S. Donovan, 2. Thomas Farrington,	" Certificate.
ENGLISH LITERATURE, . . .	1. Edwin S. Donovan, 2. { Thomas Farrington, { John C. Crowe,	Prize. " "
HISTORY,	1. Edwin S. Donovan, 2. John C. Crowe, 3. { Thomas Farrington, { Michael Keating,	" " " "
METAPHYSICS,	1. Michael Keating,	"
POLITICAL ECONOMY, . . .	Michael Keating,	"
CHEMISTRY,	John Philip Sullivan,	"
GEOLOGY AND MINERALOGY, .	1. Hamilton Benson, 2. John C. Crowe,	" "

List of the
Students
who ob-
tained
Honors or
Prizes at
the Ses-
sional Ex-
aminations.

Second Year.

GREEK,	1. Clarke Irwin, 2. James J. Riordan, 3. David Gamble Lockhart,	Prize. " "
LATIN,	1. David Gamble Lockhart, 2. Clarke Irwin,	" "
LOGIC,	1. James J. Rearden,	"
MATHEMATICS,	1. John Laffan,	"

First Year.

GREEK,	1. John P. Dalton, 2. Robert J. Sullivan, 3. Richard Manning,	Prize. " "
LATIN,	John P. Dalton, Matthew Steen, Michael Feeny, { Richard Manning, { Edward Gibbings, { Robert J. Sullivan,	" Certificate. " " " "
ENGLISH LANGUAGE, . . .	1. { Matthew Steen, { David Gamble Lockhart, 2. Edward Gibbings,	Prize. " "
MATHEMATICS,	1. Matthew Steen, 2. { John P. Dalton, { Robert J. Sullivan, { Edward Gibbings, { William D. Russell,	" " " Certificate. "

List of the Students who obtained Honors or Prizes at the Sessional Examinations.	FRENCH (Junior),	1. William D. Russell,	Prize.
		2. Micheal Feeny,	Certificate.
	„ (Senior),	2. Walter Ronan,	Prize.
		3. {John P. Dalton, Robert J. Sullivan,	Certificate. „

FACULTY OF LAW.

Second Year.

CIVIL LAW,	John Ryan,	Prize.
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FACULTY OF MEDICINE.

Fourth Year.

MEDICINE,	1. {Francis H. S. Murphy, John J. Welpy,	Prize.
	2. Jephson J. Connell,	„
MEDICAL JURISPRUDENCE,	1. {Francis H. S. Murphy, John J. Welpy,	„
	2. Hugh L. Donovan,	„
	3. Jephson J. Connell,	Certificate.

Third Year.

PRACTICAL ANATOMY,	1. Jeremiah Mullane,	Prize.
	2. James P. Hanrahan,	„
	3. {Daniel F. Barry, John O'G. Sandiford,	„
MIDWIFERY,	1. John E. Walshe,	„
	2. James P. Hanrahan,	„
	3. Jeremiah Mullane,	„
	4. John O'G. Sandiford,	Certificate.
SURGERY,	1. Jeremiah Mullane,	Prize.
	2. John E. Walshe,	„
	3. John O'G. Sandiford,	„

Second Year.

PRACTICAL CHEMISTRY,	1. Charles Y. Pearson,	Prize.
	2. Robert E. Hadden,	„
	3. John Chestnut,	„
	{John P. Sullivan, Wm. Harrington, }	Certificates of Honor.
MATERIA MEDICA,	1. Charles Y. Pearson,	Prize.
	2. Robert E. Hadden,	„
	3. John Chestnut,	„
	4. Thomas G. Atkin,	Certificate
	5. John J. Hartnet,	„
PRACTICAL ANATOMY,	1. Charles Y. Pearson,	Prize.
	2. Robert E. Hadden,	„
	3. Alfred C. Bennett,	„
	4. Thomas G. Atkins,	Certificate.
	{Hamilton Benson, Joseph Crowley, }	Certificate of Honor.
ANATOMY AND PHYSIOLOGY,	1. Charles Y. Pearson,	Prize.
	2. Robert E. Hadden,	„
	3. {John Chestnut, Thomas G. Atkins,	„
	4. Daniel F. Barry,	Certificate of Honor.
		„

First Year.

FRENCH,	1. Stanley Harrington,	Prize.
	2. Richard C. Daly,	„
	3. {John J. Dinis, David L. Williams,	Certificate.
NATURAL PHILOSOPHY,	1. {James Hickman, Richard C. Daly,	„
	2. David L. Williams,	Prize.

CHEMISTRY,	1. James Hickman,	Prize.	<i>Appendix B.</i> List of the Students who obtained Honors or Prizes at the Sessional Examinations.
	2. Patrick Mullane,	"	
ANATOMY AND PHYSIOLOGY,	1. { John Lane,	"	
	{ James Hickman,	"	
	2. { Patrick Mullane,	"	
	{ William D. Sexton,	"	

SCHOOL OF ENGINEERING.

Third Year.

MATHEMATICAL PHYSICS,	John Duggan, M.A.,	Prize.
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Second Year.

ENGINEERING,	1. Robert N. T. Belcher,	Prize.
	2. Robert Day,	"

First Year.

ENGINEERING,	Robert N. T. Belcher, Certificate of Honor.
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NO. IX.—EARLY ENGLISH TEXT SOCIETY'S PRIZES; AND NEW SHAKSPEARE SOCIETY'S PRIZES.

EARLY ENGLISH TEXT SOCIETY'S PRIZES,	1. Matthew Steen.
	2. Edward Gibbings.
NEW SHAKSPEARE SOCIETY'S PRIZES,	1. Edwin S. Donovan.
	2. Thomas Farrington.
	3. J. C. Crowe.

NO. X.

TABLE CONTAINING THE NAMES OF THE SEVERAL SUBJECTS LECTURED UPON DURING THE SESSION 1875-76, THE NUMBER OF LECTURES GIVEN ON EACH SUBJECT, AND THE TOTAL NUMBER OF STUDENTS ATTENDING THE CLASSES IN EACH SUBJECT.

	No. of Lectures on each Subject.	Total No. of Students attending the Classes in each Subject.
Greek,	196	28
Latin,	210	27
English Language,	32	20
„ Literature,	51	8
History,	53	8
French,	225	86
Logic,	35	7
Metaphysics,	55	3
Political Economy,	35	1
Mathematics,	150	37
Natural Philosophy,	226	82
Chemistry, Theoretical,	77	72
„ Practical,	39	44
Geology and Mineralogy,	61	10
Natural History,	70	64
English Law,	72	3
Civil Law,	48	2
Anatomy and Physiology,	120	107
„ Practical,	110	98
Medicine,	60	27
Midwifery,	59	43
Surgery,	64	47
Medical Jurisprudence,	36	30
Materia Medica,	62	41
Engineering,	282	20

APPENDIX C.

No. XI.

REPORTS OF PROFESSORS FOR THE SESSION, 1875-1876.

FORM OF CIRCULAR SENT TO EACH PROFESSOR.

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 _____, being for the Collegiate Session

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 purpose 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.

Signed, by order of the President,

R. J. KENNY, Registrar.

FACULTY OF ARTS.

REPORT OF the PROFESSOR OF GREEK.

A.—1. The course extended over three terms.

2. The first term contained seven weeks of lecture; the second term eleven; the third term six.

3. Ten lectures given weekly between the hours of 9 and 11 o'clock, A.M., on every day of the week except Saturday.

B.—The course of Greek Language and Literature. The students received instruction in Greek Grammar, Prose Composition, and Translation from Greek into English. Curtius' Greek Grammar and Arnold's Prose Composition were used as manuals. The authors

studied in the several classes were Homer, Thukydides, Xenophon, *Appendix C.*
Euripides, Aristophanes, and Demosthenes.

C.—The lectures were occasionally illustrated by maps and casts.

Reports
of the
Professors.

D.—The students prepared at home portions of the authors and text-books appointed for study, in which they were examined by the Professor.

E.—Faculty of Arts.

F.—Twenty-eight; all matriculated.

G.—Quite satisfactory.

H.—Quite satisfactory.

VAUGHAN BOULGER.

REPORT of the PROFESSOR of LATIN.

A.—The course extended through three terms. First term, seven weeks; Second term, thirteen weeks; third term, four weeks. Junior class, four lectures weekly. Senior class, three lectures weekly. Extra and third year's class, two lectures weekly.

B.—The Latin Language. Junior class: Horace, Epistles, Book I., 1-10; Cicero, Ad Familiares, Book II., 1-12. Senior class: Tacitus, Germania, chapters 1-27; Terence, part of the Adelphi. Third year's class: Cicero, Academica, chapters 1-13; Plautus, part of the Mostellaria. Some instruction in Classical Archaeology was also given to the more advanced students.

C.—The lectures were illustrated by references to the art collections belonging to the College.

D.—The students prepared a portion of the text-book for each lecture. They also wrote Latin exercises in prose and verse.

E.—Students in Arts.

F.—Twenty-seven, all matriculated. The attendance was, on the whole, satisfactory.

G.—Conduct good.

H.—Satisfactory.

B. LEWIS.

RETURN of PROFESSOR of HISTORY and ENGLISH LITERATURE.

A. I.—HISTORY. (1st.) Two terms. (2nd.) *First term*, seven weeks; *second term*, between eleven and twelve weeks. (3rd.) *Ordinary course*, three lectures weekly, Mondays, Wednesdays, and Fridays, from 12 to 1 o'clock. *Extra course for Candidates for Honors*—*Second term*, two lectures weekly, days and hours irregular, to suit the convenience of the students attending. II. ENGLISH LITERATURE. (1st.) Two terms. (2nd.) *First term*, seven weeks; *second term*, between eleven and twelve weeks. (3rd.) *Ordinary course*, three lectures weekly, Mondays, Wednesdays, and Fridays, from 10 to 11 o'clock. *Extra course for Candidates for Honors*—*Second term*, two lectures weekly, days and hours irregular, to suit the convenience of the students attending. III. THE ENGLISH LANGUAGE. (1st.) One term. (2nd.) Seven weeks. (3rd.) Three lectures weekly, Tuesdays and Thursdays, from 11 to 12 o'clock; Saturdays, from 10 to 11 o'clock.

N.B.—The total number of lectures delivered during the two terms and in the three subjects was about 170.

B. I.—HISTORY. *Ordinary course*, the History of Great Britain and Ireland from 1589 to 1815. *Extra course for Honormen*, the History of France from 1589 to 1815. II. ENGLISH LITERATURE.

Appendix C. *Ordinary course*, the History of English Literature from Chaucer to the present day, with special critical studies of Shakespere (*Hamlet*), Milton (*Paradise Lost*, Books I. and II.), Dryden (*Absalom and Achitophel*), Burke (*Thoughts on Present Discontents*), Scott (*Feveril of the Peak*), Byron (*Childe Harold*, Books III. and IV.) *Extra course for Candidates for Honors*, the subjects appointed for the University examination of 1876 for the degree of B.A. with Honors. III. THE ENGLISH LANGUAGE. The course embraced the history of the English Language, with special studies of Anglo-Saxon Grammar, and of the English of Chaucer. Text-books used:—Morris's *Historical Outlines of English Accidence*; Rask's *Anglo-Saxon Grammar*; Morris's edition of the Prologue to the *Canterbury Tales*.

C.—It has been customary to illustrate the lectures in History by reference to maps when available.

D.—The tutorial method of instruction as well as the professorial is adopted in all the courses. The students are catechised from time to time in the portions of the courses previously gone over. The English Literature and English Language classes are exercised in essay writing, in literary criticism, and in the paraphrasing of Early English, &c.

E.—Arts.

F.—HISTORY. *Ordinary course*, eight; *Honor course*, three. ENGLISH LITERATURE. *Ordinary course*, eight; *Honor course*, three. THE ENGLISH LANGUAGE. *Ordinary course*, twenty. (All the students attending were matriculated students.) General character of attendance, good.

G.—The general conduct of students at the Professor's lectures, and the general state of discipline as regards the Professor's classes, were quite satisfactory.

H.—Additional accommodation is much needed, not on account of the number of students, but on account of the number of different classes meeting at different hours.

G. F. ARMSTRONG.

REPORT of the PROFESSOR of MODERN LANGUAGES.

A.—There were three courses of lectures given during the session.

1. Each course extended over the whole session, namely, three terms.
2. The first comprised nine weeks; the second, fourteen weeks; and the third, five weeks.
3. The number of lectures in each course was 75, given three times a week, Mondays, Wednesdays, and Fridays, at 12-1 and 2.

B.—The course of instruction consisted of lectures on the syntax, comparative grammar, and literature, once a week—the other days being engaged in reading text-books—besides weekly translations or compositions, the text-books being, in the senior French class as well as the junior: "Textes Classiques," par Demogeot; "Histoire de la Littérature française," par Demogeot; and, in the medical class, "L'Année scientifique," par Figuier.

C.—The lectures are not illustrated by maps or diagrams.

D.—The method of instruction is chiefly tutorial, the purely lecturing instruction being given once a week, the other days being taken up, as stated above, in exercises, translations, &c.

E.—The students belonged to the Faculties of Medicine, of Arts, and the Engineering Department.

F.—The number of students in the medical class was 57; in the senior French, 24; and the junior French, 5.

G.—The general conduct of the students during the session has been excellent.

H.—The general condition of the rooms, cleanliness, and accommodation, most satisfactory.

Appendix C.
Reports
of the
Professors.

R. DE VERICOUR.

REPORT of the PROFESSOR of LOGIC and METAPHYSICS.

A.—On Logic and Metaphysics.—1. Logic, one term; Metaphysics, two terms. 2. First term, eight weeks; second term, fourteen. 3. Logic, Tuesdays, Thursdays, and Saturdays, at eleven o'clock. Metaphysics, Tuesdays and Thursdays, at one o'clock, and on Saturdays, at ten o'clock.

B.—Logic, Deductive and Inductive—Fowler and Jevons, parts of Thompson, Mill, and Bain. Metaphysics—History of Philosophy and Psychology; Sir W. Hamilton's Lectures.

C.—No illustrations are used except such as are drawn or written on the board during the course of the lectures.

D.—Both the professorial and tutorial systems are used.

E.—Logic, second year's students in Arts; Metaphysics, third year's students in Arts.

G.—Conduct of students in class-room very good.

H.—Satisfactory.

G. S. READ.

REPORT of the PROFESSOR of MATHEMATICS.

A.—1. The courses were two in number, and extended over the three terms of the session. There were 75 lectures in each course.

2. In the first term there were eight weeks of lecture; in the second, thirteen weeks; and in the third, four weeks.

3. Three lectures were given each week to the first year's class, on Monday, Wednesday, and Friday, at 12–1 o'clock, and three to the second year, on the same days, at from 1–2 o'clock.

Two lectures each week were given by the senior scholar to students of the first year. There was no third year's class this year.

B.—The lectures to the students of the first year were upon Arithmetic, Algebra, Geometry, and Plane Trigonometry; to those of the second year the lectures treated of Analytical and Spherical Trigonometry, Elementary Solid Figures, Theory of Equations, Differential and Integral Calculus, and Analytical Geometry of two dimensions.

As far as possible, the lectures were rendered independent of text-books, but when such were necessary or desirable, the following books were recommended:—

Euclid, Wilson's "Elementary Geometry," Todhunter's "Higher and Lower Algebras," Gross' "Algebra," Todhunter's "Trigonometry" and "Trigonometry for Beginners," Todhunter's "Spherical Trigonometry," Todhunter's "Plane Co-ordinate Geometry," Salmon's "Conic Sections," Todhunter's "Theory of Equations," Williamson's "Differential Calculus," Williamson's or Todhunter's "Integral Calculus."

C.—No illustrations were used beyond the figures drawn on the black board.

Appendix C.

Reports
of the
Professors.

D.—The method of tuition adopted was, to combine lectures with oral examinations on previous lectures or upon passages set from text-books. Exercises were also set regularly, consisting, in general, of problems. Class examinations in writing were also held at such times as the natural division of the subjects suggested.

E.—The students attending these classes were either Arts or Engineering students.

F.—In the first year's class there were 25 matriculated and 1 non-matriculated student; in the second year's class there were 11 matriculated students.

The attendance was fairly regular.

G.—Discipline satisfactory, and the general conduct of students excellent.

H.—The department requires a book-case to hold books which are used daily for reference in the lectures; and it will be necessary to procure models to illustrate the properties of solid figures. Otherwise the condition of the department is satisfactory.

C. NIVEN.

REPORT of the PROFESSOR of NATURAL PHILOSOPHY.

A.—Five courses of lectures, each three terms; six weeks in the first, thirteen in the second, four in the third. In the senior class, three lectures were delivered in each week; in each of the other classes, two lectures weekly.

B.—In the senior class the subjects were:—The Elements of Mechanics, Optics, Astronomy, and Heat. In Mathematical Physics—Mechanics, Optics, and Astronomy. In Engineering Physics—Practical Mechanics, Thermodynamics. In Experimental Physics—Hydrostatics, Heat, Light, Acoustics, Magnetism, and Electricity. Text-books:—In Mathematical Physics—Todhunter's "Statics," Tait and Steele's "Dynamics," Godfrey's "Astronomy," Parkinson's "Optics;" in Experimental Physics—Everett's Translation of Deschanel's "Physics," Ganôt's "Traité de Physique;" in Honor Physics—Maxwell's "Treatise of Heat," Jenkin's "Electricity."

C.—The lectures were illustrated by experiments.

D.—In Mathematical and Engineering Physics the tutorial method of instruction was chiefly adopted.

E.—The honor course in Experimental Physics was attended by third year's students in Arts; the ordinary course of Experimental Physics by students of the first year in Medicine, Mathematics and Physics, and Engineering students of the third year; the senior class by students of second year in Arts and Engineering.

F.—Honor Physics, 2; senior class, 16; junior class, 62; Mathematical and Engineering Physics, 2. The attendance was regular.

G.—The conduct of the students was excellent.

H.—Much inconvenience has been caused during the past session by the dilatoriness of the contractor in making the required alterations in the physical cabinet and laboratory.

JOHN ENGLAND.

REPORT of the PROFESSOR of CHEMISTRY.

A.—Two courses, one on Theoretical and the other on Practical Chemistry. The former extended over three, and the latter over two terms. Theoretical Course, three lectures weekly, at 11 o'clock.

Practical course, six lectures weekly, five at 2 and one at 11 o'clock (Saturday). Appendix C.

B.—The Theoretical course embraced both Inorganic and Organic Chemistry. In the Practical course, Qualitative Analysis was taught. Text-books recommended—Fownes, Roscoe and Naquet, Galloway's Qualitative Analysis, and Schorlemmer and Armstrong's Organic Chemistry. Reports
of the
Professors.

C.—The lectures were illustrated by diagrams, experiments, and specimens.

D.—Both the tutorial and professorial methods were employed.

E.—The lectures were attended by Arts, Engineering, and Medical students.

F.—The Theoretical Course was attended by 63 matriculated and 9 non-matriculated students, and the Practical Course by 34 matriculated and 9 non-matriculated students. Attendance very good.

G.—The conduct of the students was most satisfactory.

H.—The arrangements for carrying on the business of the department are excellent.

MAXWELL SIMPSON.

REPORT of the PROFESSOR of NATURAL HISTORY.

A.—1. Seventy-two lectures; three terms. 2. In the first term 7, in the second 14, in the third 4 weeks of lectures. 3. Three, on Mondays, Wednesdays, and Fridays, from 3 to 4, P.M.

B.—Zoology and Botany, especially the structure and classification of organisms. In Zoology the text-books of Mivart, Rolleston, and Huxley were recommended; in Botany, those of Henfrey, Hooker, and Oliver.

C.—Specimens and diagrams were used.

D.—Tutorial instruction was rarely employed. There were field exercises in the third term.

E.—Arts (third year) and Medicine (first year).

F.—In Arts, 4 students; in Medicine, 50 (2 of whom were Bachelors of Arts). Also, 10 non-matriculated students. The total number of students was, therefore, 64. They attended with tolerable regularity, but 2 were disqualified for insufficient attendance.

G.—Good.

H.—Additional diagrams and specimens are required. There is much need of a glass-house for the growth of tropical plants, also of a biological laboratory. The lecture-room is not well constructed. In other respects the state of the department is satisfactory.

J. REAY GREENE.

REPORT of the PROFESSOR of GEOLOGY and MINERALOGY.

A.—The course of lectures extended over the first and second terms of the session, being, in the first term, 8 weeks, and in the second 13 weeks; the number of lectures in each week being 3; the days and hours of lectures being Tuesdays and Thursdays, from 2 to 3, P.M., and Saturdays from 12 to 1. The total number of lectures was 61.

B.—The course of lectures included Mineralogy, Physical Geography, Geology, and Palæontology. The text-books recommended were—Lyell's Student's Elements of Geology, Lyell's Principles of Geology, Jukes' Manual of Geology, Nicholson's Palæontology, Herschell's Physical

Appendix C. Geography, Somerville's Physical Geography, Rutley's Manual of Mineralogy, and Nicol's Elements of Mineralogy.

Reports of
of the
Professors. C.—The illustrations used were maps, diagrams, lectures, specimens, and models.

D.—The mode of instruction was professorial. Excursions for field instruction were made at the end of the second term.

E.—The students attending the course consisted of third year's Arts and first year's Engineering students.

F.—The number of students attending the course was 10, all matriculated. Their attendance was good.

G.—The conduct of the students in the class-room was good.

H.—As to supplies, fitments, cleanliness, and accommodation, the department is in a satisfactory condition.

ROBERT HARKNESS.

FACULTY OF LAW.

REPORT of the PROFESSOR of JURISPRUDENCE and POLITICAL ECONOMY.

A.—1. Political Economy ; Civil Law ; Jurisprudence, 2 terms each.

2. In first term 3 weeks ; in second term 3 weeks for each Law class, and 6 weeks for Political Economy.

3. Four lectures weekly in each of the three classes.

B.—Political Economy ; text-books recommended—J. S. Mill, Goschen, A. Smith, Mills ; Civil Law—Sandar's ; Jurisprudence—Maine, Austin, Stephen.

C.—None.

D.—The method almost wholly tutorial ; portions of text-books constantly set out for lessons ; almost daily examinations.

E.—In Political Economy, third year's Arts ; in Jurisprudence and Civil Law, first and second year's Law respectively.

F.—In Political Economy, 1 ; in Civil Law, 1 ; in Jurisprudence, 1 non-matriculated.

G.—Very good.

H.—Sufficient.

R. H. MILLS.

REPORT of the PROFESSOR of ENGLISH LAW.

A.—Lectures commenced on the 29th November, and were continued to the 18th December in the first term ; in the second term they were commenced on the 14th February, and concluded on the 14th March ; not more than four lectures were delivered in any week.

B.—The subjects are (1) Real Property ; (2) Equity and Personal Property ; (3) Common and Criminal Law. The text-books are the works of (1) Mr. Joshua Williams ; (2) Snell, Williams, and Smith (Contracts) ; (3) Stephen's Commentaries.

C.—The subjects are illustrated by reported cases, and other matter in books of authority.

D.—Questions are asked and difficulties explained ; passages in particular works are suggested for study.

E.—Law.

F.—Three. To each class 25 lectures were delivered for six ; the attendance was very regular.

G.—Conduct excellent.

H.—I have no requirement to make. I have suggested to the President that the occasion of the Judicature Act coming into operation should be availed of to substitute the authorized Reports for those of the *Law Journal*. Appendix C.
Reports
of the
Professors.

MARK S. O'SHAUGHNESSY.

FACULTY OF MEDICINE.

REPORT of the PROFESSOR of ANATOMY and PHYSIOLOGY.

A.—Two courses, five and sometimes six days weekly, during the first, second, and part of the third term. Anatomy and Physiology at one o'clock; Practical Anatomy at twelve o'clock. Anatomy and Physiology, 120 lectures and examinations; Practical Anatomy, 110 demonstrations.

B.—*First Course.* Anatomy and Physiology; Histology; the Anatomy and Physiology of the organs of digestion, respiration, circulation, excretion, and reproduction, embryology. The lymphoid organs, organs of sense and voice, spinal cord, and brain. *Text-books*—Quain's "Anatomy," Fay's "Histology," Stricker's "Histology," Carpenter's "Human Physiology," Kirke's "Physiology," Hermann's "Physiology."

Second Course. Practical Anatomy; descriptive anatomy of the bones and ligaments; and the topographical anatomy of the limbs, head, and neck, and the thoracic and abdominal cavities, with the exception of the viscera. *Text-books*—Ellis's "Demonstrations," Quain's "Anatomy," Halden's or Wagstaffe's "Osteology," Gray's "Anatomy." The dissecting-room was open almost the entire day, and the dissections of the students superintended by the Professor and Demonstrators of Anatomy.

C.—Lectures illustrated by recent dissections, diagrams, plates, models, specimens from the museum, microscopic preparations, and experiments.

D.—In Anatomy and Physiology an oral examination was held once a week for the greater part of the session. In Practical Anatomy, there were also weekly examinations.

E.—Faculty of Medicine.

F.—In Anatomy and Physiology, matriculated students, 97; non-matriculated, 12. In Practical Anatomy, matriculated students, 90; non-matriculated, 8.

G.—Excellent.

H.—Many of the anatomical preparations could not be surpassed, but there is a great deficiency in diagrams, osteological specimens, and physiological apparatus. Indeed it will be impossible to conduct a class of Practical Physiology, as has been proposed, unless apparatus and accommodation be provided. The dissecting-room also is too small, and insufficiently lighted. The room set apart for the museum is entirely unfit for that purpose.

J. J. CHARLES.

REPORT of the PROFESSOR of MATERIA MEDICA.

A.—Six months. Sixty-two lectures. Three lectures weekly, Tuesdays and Thursdays, from 3 to 4 o'clock, P.M., and Saturdays from 12 o'clock, A.M., to 1 o'clock, P.M.

B.—Pharmacology. (The action of Medicines on the healthy animal.) Therapeutics. (Their action in disease.) Materia Medica.

Appendix C. A systematic description of drugs, including their physical and chemical characters. Classification of Medicines—Posology—Formulation. No particular text-books are adopted.

Reports
of the
Professors.

C.—Lectures are illustrated by chemical experiments. Specimens of the drugs named in B. P., and of other non-official drugs. Dry specimens of medical plants. Recent specimens, when obtainable. Verification of the purity of the drugs in the museum by the application of the tests given in the B. P., and of other tests. The application of the microscope for similar purposes, with occasional experiments on living animals.

D.—Class examinations (written and oral) were held once a week.

E.—Faculty of Medicine.

F.—Forty-two students, all matriculated. Attendance regular.

G.—Conduct of students and general state of discipline excellent.

H.—The department requires some additional microscopes. It is very defective in the requisite supplies.

The want of a proper lecture-room, museum, and laboratory, makes it extremely difficult, if not impossible, for me to conduct the course as I would wish. The room in which I lecture is used by four other lecturers. It is at my disposal for one hour only. In this time I have not only to deliver the lecture, but to convey into the lecture-room the specimens from the museum and chemical apparatus, gas fittings, &c., &c., from the laboratory, and have them conveyed away again, so that the room may be ready for my successor.

The proper conduct of the work of this department requires that the professor should have a special lecture-room, with a museum and small laboratory attached.

M. O'KEEFE.

REPORT of the LECTURERS on MEDICAL JURISPRUDENCE.

Medical portion.

A.—Twenty-four lectures. Three weekly, on Monday, Wednesday, and Friday, at 3 o'clock, P.M.

B.—Medical Jurisprudence. Thanatology. Examination of the dead body—Forms of violent death—Signs of—Wounds—Stains—Hair, &c. Disputed sexual relations. Disputed mental aberration. Toxicology.

C.—Specimens of the various poisons. Recent specimens of the most important indigenous poisonous plants—Experiments on animals—Chemical analysis of poisoned articles of food, and of the viscera and their contents in animals poisoned.

D.—Not considered necessary in this subject.

E.—Faculty of Medicine.

F.—Thirty students; twenty-eight matriculated, two non-matriculated.

G.—Most excellent.

H.—The difficulties of properly conducting this course are even greater than those stated in my report on *Materia Medica*. The conveying of chemical apparatus on the occasion of each lecture from a laboratory to a distant lecture-room, not even in the same building, has been during the past session a source of great loss to the college in property, to me in time and labour, not to mention the loss to the class, who, in consequence, had then their time of lecture considerably abridged.

M. O'KEEFE.

Legal portion.

Appendix C.

- A.—1. Twelve lectures were delivered in the first term of the session. Reports of the Professors.
 2. The first lecture was delivered on 17th November, the last on 17th December.
 3. Not more than four lectures in any week.

B.—The subject was treated of under the heads of—(1) Questions affecting the civil rights or social duties of individuals; (2) Injuries to property; (3) Injuries to the person; and as to Medical police the subject was treated of as to—(1) What affects the preservation of individuals; and (2) What relates to men collected into communities. The works referred to were those of Taylor, Beck, Paris and Fonblanque, Casper, Winslow, &c.; Russell on Crimes, Woolrych's Criminal Law, Stephen's Commentaries, Howell's State Trials, and other legal authorities.

C.—Illustrative cases are referred to.

D.—Sources of information are pointed out.

E.—Medicine.

F.—Thirty students attended.

G.—Conduct good.

H.—I have no requirement to make.

MARK S. O'SHAUGHNESSY.

REPORT of PROFESSOR of MIDWIFERY.

A.—Courses of lectures on Midwifery. 1. Six months, November to April. 2. Sixty lectures in the course. 3. Three lectures weekly, Monday, Wednesday, and Friday, at four o'clock.

B.—Midwifery. Physiology of reproduction and gestation. Parturition in its various bearings, theoretical and practical. Diseases of child-bed. Management of infants.

C.—Diagrams, models, casts, anatomical and other preparations, &c.

E.—Students of the Faculty of Medicine.

F.—Matriculated students, 34

Non-matriculated, 9

Total attending the course, 43

G.—General conduct of the students by no means as good as in former years; several honourable exceptions.

H.—Supply of preparations, &c., for the illustration of the lectures very poor.

J. (R.) HARVEY.

REPORT of the PROFESSOR of SURGERY.

A.—Theory and Practice of Surgery. 1st. Three terms. 3rd. Three lectures weekly, on Tuesday and Thursday from four o'clock till five, on Saturday from one to two o'clock.

B.—Theory and Practice of Surgery, Operative Surgery, Histology. Bryant, Erichsen, Ferguson.

C.—Diagrams, morbid preparations, the subject.

D.—Occasional class examinations.

E.—Faculty of Medicine.

F.—Forty-seven, of whom two were non-matriculated.

G.—Conduct and discipline unexceptionably good.

H.—The department is much in want of the necessary preparations and fitments to illustrate the lectures.

W. K. TANNER.

Appendix C.

REPORT of the PROFESSOR of the PRACTICE of PHYSIC.

Reports
of the
Professors.

A.—Lectures on the Practice of Physic during a period of six months, with recess at Easter and Christmas; 3 lectures weekly, Monday, Wednesday, and Friday at eleven o'clock.

B.—1st. Fevers. 2nd. Diseases of brain and nervous system. 3rd. Of the lungs. 4th. Of the organs contained in the abdominal cavity. Text-books—Flint, Niemeyer, Watson.

C.—Illustrated by engravings and morbid specimens.

D.—The class are frequently examined on the subject of lectures previously delivered.

E.—Students of the Medical Faculty.

F.—Thirty-two students, of whom 3 were non-matriculated.

G.—The general conduct of the students is very good. I have occasionally to censure a few.

H.—There is a great want of a pathological museum.

DENIS C. O'CONNOR.

SCHOOL OF ENGINEERING.

REPORT of the PROFESSOR of CIVIL ENGINEERING.

A.—1. Each course extends through three terms. 2. First term, 8 weeks; second term, 14 weeks; third term, 4 weeks. 3. Three lectures per week in each course. Students of first year, Monday, Wednesday, Friday, 10, A.M.; second year, Tuesday, Thursday, Saturday, 10, A.M.; third year, Monday, Wednesday, Friday, 12, noon. Students of first, second, and third years in the Office. Office open Tuesday, Thursday, Saturday, from 10, A.M. to 2, P.M.

Total number of lectures :—

To students of first year,	.	.	.	70
„ second year,	.	.	.	71
„ third year,	.	.	.	71
Office, .	.	.	.	70
Total,	.	.	.	282

B.—*First year*.—Descriptive Geometry; Orthographic Projection; Shadows; Isometric Projection; Perspective; Elements of Ornamental Architecture. Text-books: Hall's "Descriptive Geometry"; "Engineer and Machinist's Drawing Book"; Rickman's "Architecture." *Second year*.—Surveying, Levelling, and Mensuration. Text-books: Rankine's "Civil Engineering"; Cotton's "Manual of Railway Engineering." Oblique Bridges; Text-book: Buck's Treatise. Hydraulics; Text-books: Downing's "Hydraulics"; Neville's "Hydraulic Formulæ." *Third year*.—Materials used in Construction; Strength of Materials; Stresses in Structures; Principles of Construction of Bridges, Roads, Railways; Supply of Towns with Water. Text-books: Rankine's "Civil Engineering"; Stoney's "Theory of Strains in Girders"; Fairbairn's "Iron Manufacture"; Shelley's "Workshop Companion"; references to many of the books in the Library. *Drawing Office*.—First year students are employed in drawing the problems given at lectures, and easy examples of their application, and in shading simple bodies; those of the second and third year in making working drawings of examples of the subjects of lectures, and in mapping.

C.—Illustrated by reference to maps, drawings, and instruments.
 D.—Both the tutorial and professorial methods of instruction are employed, according to the subject of lecture. Instruction in the field is given. (See class-roll.)

Appendix C.
 Reports of the Professors.

E.—Students in the department of Civil Engineering.

F.—Students of first year, Matriculated,	12	Non-matriculated,	0
" second year, "	10	" "	2
" third year, "	3	" "	0
	—		—
	25		2
	2		
	—		
	27		

Subtract 7 second year students attending first year class, 7

Total, 20

The majority of the students have attended well.

G.—Conduct of students generally good.

H.—The condition of the department has undergone little change during the last few years.

ALEXANDER JACK.

No. XII.—REPORT OF LIBRARIAN FOR SESSION 1875–76.

Report of the Librarian.

The number of volumes in the Library at the date of this Report is 21,653. They may be classified as follows:—

Mathematics, {Pure, 819	European Language, &c., 1,720
{Mixed, 740	Celtic do. 78
Chemistry, 1,040	History, Antiquities, &c., 2,927
Botany and Zoology, 1,733	Biography, 581
Medical Sciences, 2,776	Geography, Voyages, &c., 614
Theology, &c., 332	Engineering, 549
Logic and Metaphysics, 456	Agriculture, 224
Jurisprudence, &c., 622	Fine Arts, 202
Education, 225	Bibliography, 101
Law, 939	Encyclopædias, 634
Ancient Classical Literature, 2,007	
Sanscrit, &c., 102	Total, 21,653
Geology, 720	
English Language, &c., 1,512	Increase over last year, 517

Of these 517 volumes, 151 were presented, the remainder purchased by the Council of the College.

The Library has suffered no loss in any description of property since date of last report.

Discipline is excellent. There was no complaint of any kind during the session.

Heat and ventilation satisfactory.

One hundred and eighty volumes have been bound during the year.

I am requested by some gentlemen engaged in historical inquiries to express their gratitude for the privilege accorded them of access to the Library.

The completion of a series of historical documents published under the direction of the Master of the Rolls, with other books of similar nature lately added to the Library, has been a valuable acquisition.

RICHARD CAULFIELD, LL.D., Librarian.

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Appendix C. NO. XIII.—BURSAR'S ANNUAL ACCOUNT OF THE RECEIPTS
AND EXPENDITURE OF QUEEN'S COLLEGE, CORK.

*General Abstract of the Receipts and Expenditure of the College, from the
1st April, 1875, to the 31st March, 1876.*

DR.		£	s.	d.
To Balance on 1st April, 1875, General Account,	£332 19 11½			
Library Deposits due to Students,	106 0 0			
" Amounts received from Paymaster-General—				
Endowment (less Income Tax),	6,957 15 0			
Special Parliamentary Grant in aid of Professors' Salaries,	378 4 3			
Additional Parliamentary Grant for maintenance of College,	1,600 0 0			
" College Fees and Fines,	82 5 6			
" Professors' Class Fees,	1,935 10 0			
Library Deposits,	38 0 0			
" Dividend on £1,089 15s. 7d., Three Per Cent. Stock,	32 8 4			
" Interest on Deposit Account,	2 16 4			
Total,	£11,465 19 4½			

CR.		£	s.	d.
By Amount paid for Salaries—				
President, Professors, and Officers,	4,851 2 5			
Scholarships, Exhibitions, and Prizes,	1,220 18 4			
Minor Officers, Porters, and Servants,	482 17 0			
" Payments on account of Special Grant,	416 7 10			
" Payments on account of Additional Grant, Fees and Fines,	1,667 11 8			
" Payments on account of Professors' Class Fees,	1,935 10 0			
Library Deposits repaid,	54 0 0			
" Balance on 31st March, 1876—				
On General Account,	£747 12 1½			
On Library Deposits,	90 0 0			
Total,	£11,465 19 4½			

In addition to the Cash Balance there is standing at the credit of the College £1,089 15s. 7d., Government New Three Per Cent. Stock.

ACCOUNT of the EXPENDITURE of the ADDITIONAL PARLIAMENTARY GRANT of
£1,600 for MAINTENANCE of the COLLEGE, and of the COLLEGE FEES and FINES
for the YEAR ending 31st MARCH, 1876.

DR.		£	s.	d.
To Amount received from Paymaster-General,	1,600 0 0			
" " College Fees and Fines,	82 5 6			
Total,	£1,682 5 6			

CR.		£	s.	d.
By Amount expended on Library—				
Ancient and Modern Languages,	£114 7 4			
Mathematical and Physical Sciences,	121 0 11			
Natural Sciences,	128 7 4			
Engineering,	9 16 10			
Medical Sciences,	99 12 9			
Mental and Legal Sciences,	30 1 1			
General Library,	28 8 1			
Binding,	41 12 10			
By Amount expended for Apparatus, Diagrams, Ma- terials, Museums—				
Chemical Laboratory,	£101 15 1			
Physical Cabinet,	100 0 8			
Engineering,	1 5 0			
Medical Department,	140 6 1			
Museums,	49 17 0			
By Amount expended on Heating and Lighting,	304 10 10			
" " Botanic Garden and Grounds,	144 17 7			
" " Printing, Stationery, and Advertising,	123 6 4			
" Miscellaneous Expenditure—				
Travelling Expenses,	£20 14 9			
Porter's Clothing,	51 2 6			
Water Supply,	11 11 0			
Postage,	4 10 4½			
Incidentals,	40 7 3			
By Balance,	14 13 11			
	£1,682 5 6			

(Signed), JOHN ENGLAND, M.A., *Bursar.*

The account of the College for the year ending the 31st of March, 1876, of which the above is an abstract
has been signed and passed by the Auditor-General.

APPENDIX D.

Appendix D.

Sessional
Examina-
tions.

No. XIV.

Faculty of Arts.

SESSIONAL EXAMINATIONS—FIRST YEAR.

GREEK.

Examiner—Professor BOULGER.

PASS PAPER.

1. Decline in full the following nouns:—*γλῶσσα, πολίτης, ἀνώγειον, μήτηρ, πόλις, βασιλεύς, κέρας, γυνή, οὖς, ναῦς.*

2. Compare the following adjectives:—*ταχύς, ἑχθρός, κοῦφος, σοφός, φίλος.*

3. Write out the cardinal and ordinal numbers up to 10. Express in Greek symbols 1876. Decline *εἷς*.

4. Give the aorist act., pass., and middle of *λύω*.

5. Parse the following words:—*θές, ἑσταθι, δείκνυσο, ποιεῖ, ποίει.*

Translate into Greek:—

1. If you were to do this you would confer upon me a great benefit.

2. Kleon said that it was necessary to kill all the citizens in Mitylene.

3. I have a pain in my head.

4. I will ask for three talents on the plea that I shall then conquer all my enemies.

5. I praise all whom I see acting well.

Translate into English:—

XENOPHON—*Memorabilia*, I., vi., 1-3.

ἄξιον δ' αὐτοῦ καὶ ἂ πρὸς Ἀντιφῶντα τὸν σοφιστὴν διελέχθη¹ μὴ παρα-
λιπεῖν.¹ ὁ γὰρ Ἀντιφῶν ποτὲ βουλόμενος τοὺς συνουσιαστὰς αὐτοῦ παρε-
λέσθαι¹ προσελθὼν τῷ Σωκράτει παρόντων αὐτῶν ἔλεξε τάδε· ὦ Σώκρατες,
ἐγὼ μὲν ᾧμην¹ τοὺς φιλοσοφοῦντας εὐδαιμονεστέρους χρῆναι γίγνεσθαι· σὺ
δέ μοι δοκεῖς τάναντία τῆς φιλοσοφίας ἀπολελαυκέναι.¹ ζῆς γοῦν οὕτως, ὡς
οὐδ' ἂν εἷς δούλος ὑπὸ δεσπότη διαιτῶμενος μέλινει.¹ σιτὰ τε σιτῇ καὶ ποτὰ
πίνεις τὰ φανότατα, καὶ ἱμάτιον ἡμφίεσαι¹ οὐ μόνον φαῦλον, ἀλλὰ τὸ αὐτὸ
θέρους τε καὶ χειμῶνος, ἀνυπόδηγός τε καὶ ἀχίτων διατελεῖς. καὶ μὴν χρή
ματὰ γε οὐ λαμβάνεις, ἃ καὶ κτωμένους εὐφραίνει καὶ κεκτημένους ἐλευθε-
ριώτερόν τε καὶ ἥδιον ποιεῖ ζῆν. εἰ οὖν ὥσπερ καὶ τῶν ἄλλων ἔργων οἱ
διδάσκαλοι τοὺς μαθητὰς μμητὰς ἑαυτῶν ἀποδεικνύουσιν, οὕτω καὶ σὺ τοὺς
συνόντας διαθήσεις, νόμιζε κακοδαιμονίας διδάσκαλος εἶναι.

EURIPIDES—*Alkestis*, 551-560.

XO. τί δρᾷς; τοιαύτης συμφορᾶς προκειμένης,

* Ἀδμητε, τολμᾷς ξενοδοχεῖν; τί μῶρος εἶ;

ΑΔ. ἀλλ' εἰ δόμων σφε καὶ πόλεως ἀπήλασα¹

ζέγον μολόντα,¹ μάλλον ἂν μ' ἐπήνεσας;

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Appendix D.

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tions.

οὐ δῆτ', ἐπεὶ μοι συμφορὰ μὲν οὐδὲν ἂν
μείων¹ ἐγίγνετ', ἀξενώτερος δ' ἐγώ.
καὶ πρὸς κακοῖσιν ἄλλο τοῦτ' ἂν ᾦν κακόν,
δόμους καλεῖσθαι τοὺς ἐμοὺς κακοζένοους.
αὐτὸς δ' ἀρίστου τοῦδε τυγχάνω ξένου,
ὅταν ποτ' Ἀργούς διψίαν ἔλθω¹ χθόνα.

Parse fully and accurately every word to which the figure 1 is attached in the above extracts.

PRIZE PAPER.

Translate :—

EURIPIDES—*Alkestis*.

- ΑΔ. " Ἀλὶε καὶ φάος ἡμέρας,
οὐράνιαί τε δῖναι νεφέλας δρομαίου, στρ.
ΑΔ. ὄρᾳ σέ κάμέ, δύο κακῶς πεπραγότας,¹
οὐδὲν θεοὺς δράσαντας ἀνθ' ὅτου θανεῖ.
ΑΔ. γαῖά τε καὶ μελάθρων στέγαι ἀντ.
νυμφίδιοι τε κοῖται πατρώας Ἰωλκοῦ.
ΑΔ. ἔπαιρε σαντήν, ὦ τάλαινα, μὴ προδῶς¹
λίσσου δὲ τοὺς κρατοῦντας οἰκτεῖραι θεοὺς.
ΑΔ. ὄρῳ δίκωπον ὄρῳ σκάφος ἐν λίμνῃ, στρ.
νεκῶν δὲ πορθμεὺς
ἔχων χέρ' ἐπὶ κοντῷ Χάρων μ' ἤδη καλεῖ· τί μέλλεις;
ἐπέργου· σὺ κατείργεις.
τάδε τοι με σπερχόμενος ταχύνει.
ΑΔ. οἴμοι, πικράν γε τήνδε μοι ναυκληρίαν
ἔλεξας. ὦ δύσδαιμον, οἷα πάσχομεν.
ΑΔ. ἄγει μ' ἄγει μέ τις, οὐχ ὄρᾳς;
νεκῶν ἐς αὐτὰν ἀντ.
ὑπ' ὀφρύσι κυαναυγέσι βλέπων πτερωτὸς Ἀΐδας.
τί πράξεις; μέθες.¹ οἷαν
ὁδὸν ἂ δειλαιότατα προβαίνω.
ΑΔ. οἰκτρὰν φίλοισιν, ἐκ δὲ τῶν μάλιστ' ἐμοὶ
καὶ παισίν, οἷς δὴ πένθος ἐν κοινῷ τόδε.
ΑΔ. μέθετε μέθετέ μ' ἤδη.
κλίνατ', οὐ σθένω ποσίν·
πλησίον Ἀΐδας·
σκοτία δ' ἐπ' ὕσσοις νυξὲς ἐφέρειπει.
τέκνα τεκν', οὐκέτι δὴ
οὐκέτι μάτηρ σφῶν ἔστιν.
χαίροντες, ὦ τέκνα, τόδε φάος ὀρῶτον.—(250–281.)

ὦ Πελίου θύγατερ, στρ.
χαίρουσά μοι εἰν Ἀΐδα δόμοισιν
τὸν ἀνάλιον οἶκον οἰκετεύοις.
ἴστω δ' Ἀΐδας ὁ μελαγχαίτας θεὸς ὅς τ' ἐπὶ κώπῃ

πηδαλίω τε γέρων
 νεκροπομπὸς ἕξει,
 πολὺ δὴ πολὺ δὴ γυναῖκ' ἀρίσταν
 λίμναν Ἀχερωντίαν πορεύ-
 σας ἐλάτῃ δικώπῳ.
 πολλὰ σε μουσοπόλοι
 μέλψουσι καθ' ἐπτάτονον τ' ὀρείαν
 χέλυν ἐν τ' ἁλύροις κλέοντες ὕμνοις,
 Σπάρτα κυκλὰς ἀνίκα Καρνείου περινίσσεται ὥρα
 μηνὸς ἀειρομένας
 παννύχου σελάνας,
 λιπαραῖσί τ' ἐν ὀλβίαις Ἀθάναις.
 τοίαν ἔλιπες θανοῦσα μολ-
 πὰν μελέων ἀοιδοῖς.
 εἴθ' ἐπ' ἐμοὶ μὲν εἴη,
 δυναίμαν δέ σε πέμψαι
 φάος ἐξ' Αἶδα τεράμνων
 Κωκυτοῦ τε ῥέεθρων
 ποταμῖα νερτέρῃ τε κώπῃ.
 σὺ γάρ, ὦ μόνα ὦ φίλα γυναικῶν,
 σὺ τὸν αὐτὰς
 ἔτλας πόσιν ἀντὶ σᾶς ἀμείψαι
 ψυχᾶς ἐξ Αἶδα, κούφα σοι
 χθῶν ἐπάνωθε πέσοι, γύναι. εἰ δέ τι
 καινὸν ἔλοιτο λέχος πόσις, ἢ μάλ' ἂν ἐμοιγ' ἂν εἴη
 στυγηθεὶς τέκνοις τε τοῖς σοῖς.
 ματέρος οὐ θελούσας
 πρὸ παιδὸς χθονὶ κρύψαι
 δέμας, οὐδὲ πατρὸς γεραιοῦ,
 * * * * *
 δν ἔτεκεν δ', οὐκ ἔτλαν ῥύεσθαι
 σχετλίῳ, πολὺν ἔχοντε χαίταν·
 σὺ δ' ἐν ἥβῃ
 νέα προθανοῦσα φωτὸς οἶχει.
 τοιαύτας εἴη μοι κῦρσαι
 συνδυάδος φιλίας ἀλόχον· τὸ γὰρ
 ἐν βιότῳ σπάνιον μέρος· ἢ γὰρ ἂν ἐμοιγ' ἄλντος
 δι' αἰῶνος ἂν ξυνεῖη.—(447-491.)

ἀντ.

στρ.

ἀντ.

ΧΕΚΟΡΗΘΗ—*Memorabilia*, I., iv., 6-12.

πρὸς δε τούτοις οὐ δοκεῖ σοι καὶ τὸδε προνοίας ἔργῳ εἰκέναι,¹ τό, ἐπεὶ
 ἀσθενὴς μὲν ἐστίν ἡ ὄψις, βλεφάροις αὐτὴν θυρῶσαι, ἃ, ὅταν μὲν αὐτῇ χρῆ-
 σθαί τι δέη, ἀναπετάννυται, ἐν δὲ τῷ ὕπνῳ συγκλείεται; ὥς δ' ἂν μηδὲ ἄνεμοι
 βλάπτωσιν, ἡθμὸν βλεφαρίδας ἐμψύσαι· ὁφρῦσι τε ἀπογειῶσαι τὰ ὑπὲρ τῶν
 ὀμμάτων, ὥς μηδ' ὁ ἐκ τῆς κεφαλῆς ἰδρὼς κακουργῇ· τὸ δὲ τὴν ἀκοὴν δέχεσθαι
 μὲν πάσας φωνάς, ἐμπίπλασθαι δὲ μήποτε· καὶ τοὺς μὲν πρόσθεν ὁδόντας
 πᾶσι ζῳίους οἴους τέμνειν εἶναι, τοὺς δὲ γομφίους οἴους παρὰ τούτων δεξα-

Appendix D. μένους λαίνειν· καὶ τὸ στόμα μέν, δι' οὗ ὧν ἐπιθυμεῖ τὰ ζῶα εἰσπύεται, Sessional πλησίον ὀφθαλμῶν καὶ ῥινῶν καταθεῖναι· ἐπεὶ δὲ τὰ ἀποχωροῦντα δυσχερῆ, Examinations. ἀποστρέψαι τοὺς τούτων ὄχτους καὶ ἀπενεγκεῖν ἢ δυνατόν προσωτάτω ἀπὸ τῶν αἰσθήσεων· ταῦτα οὕτω προνοητικῶς πεπραγμένα ἀπορεῖς πότερα τύχης ἢ γνώμης ἔργα ἐστίν; οὐ μὰ τὸν Δι', ἔφη, ἀλλ' οὕτω γε σκοπομένῳ πάννυ ἔοικε ταῦτα σοφοῦ τινος δημιουργοῦ καὶ φιλοζήσου τεχνήματι. τὸ δὲ ἐμφῦσαι μὲν ἔρωτα τῆς τεκνοποιίας, ἐμφῦσαι δὲ ταῖς γειναμέναις ἔρωτα τοῦ ἐκτρέφειν, τοῖς δὲ τραφεῖσι μέγιστον μὲν πόθον τοῦ ζῆν, μέγιστον δὲ φόβον τοῦ θανάτου; ἀμέλει καὶ ταῦτα ἔοικε μηχανήμασί τινος ζῶα εἶναι βουλευσαμένου. σὺ δὲ σαυτὸν φρόνιμόν τι δοκεῖς ἔχειν, ἄλλοθι δὲ οὐδαμῶς οὐδὲν οἶε φρόνιμον εἶναι; καὶ ταῦτα εἰδὼς ὅτι γῆς τε μικρὸν μέρος ἐν τῷ σώματι πολλῆς οὔσης ἔχεις καὶ ὕγρου βραχὺ πολλοῦ ὄντος καὶ τῶν ἄλλων δῆπου μεγάλων ὄντων ἐκάστον μικρὸν μέρος λαβόντι τὸ σῶμα συνήρμωσται σοι·

Parse fully and accurately every word to which the figure 1 is attached in the above extracts.

Translate :—

I often wondered by what kind of arguments the accusers of Sokrates persuaded the Athenians that he deserved to be put to death. The indictment runs somewhat in this way :—Sokrates is guilty of disbelieving in the gods which the state believes in, and of introducing strange gods. He is guilty, moreover, of corrupting the youth.

1. Classify verbs in ω according to their stems.
2. Classify the nouns of the consonantal declension according to their stems.

3. Translate :—

When I have taken the city I will kill all the citizens. He said that if anyone were to do this, he would do the greatest injury to the state. He spent half his life in a most disgraceful way.

LATIN.

Examiner—Professor LEWIS.

Translate :—

HORACE—*Epistles*, I., v., 1.

Si potes Archiacis conviva recumbere lectis
Nec modica coenare times olus omne patella,
Supremo te sole domi, Torquate, manebo.
Vina bibes iterum Tauro diffusa palustres
Inter Minturnas Sinuessanumque Petrinum.
Sin melius quid habes, arcesse, vel imperium fer:
Iamdudum splendet focus et tibi munda supellex.
Mitte leves spes et certamina divitiarum
Et Moschi causam: cras nato Caesare festus
Dat veniam somnumque dies, impune licebit
Aestivam sermone benigno tendere noctem.
Quo mihi fortunam, si non conceditur uti?
Parcus ob heredis curam nimiumque severus
Assidet insano: potare et spargere flores
Incipiam patiarque vel inconsultus haberi.

CICERO—*Ad Familiares*, II., 6.

Appendix D.

De ipso T. Annio tantum tibi polliceor, te maioris animi, gravitatis, constantiae, benevolentiae erga te, si complecti hominem volueris, habiturum esse neminem. Mihi vero tantum decoris, tantum dignitatis adiunxeris, ut eundem te facile agnoscam fuisse in laude mea, qui fueris in salute. Ego, ni te videre scirem, quum ad te scriberem, quantum officii sustinerem, quanto opere mihi esset in hac petitione Milonis omni non modo contentione, sed etiam dimicatione elaborandum, plura scriberem. Nunc tibi omnem rem atque causam meque totum commendo atque trado. Unum hoc sic habeto: si a te hanc rem impetraro, me paene plus tibi quam ipsi Miloni debitum: non enim mihi tam mea salus cara fuit, in qua praecipue sum ab illo adiutus, quam pietas erit in referenda gratia iucunda. Eam autem unius tuo studio me adsequi posse confido.

Sessional Examinations.

1. Describe accurately the situation of the following places:—Baiae, Teanum, Praeneste, Parma, Minturnae, and Cibra.

2. Explain the words *infestus*, *cerno*, *auspicium*, *subucula*, *foenus*, and *renabulum*.

3. Write the life of Horace, and illustrate your statements by quotations from his works.

4. Give some account of T. Annius Milo and of the younger Curio.

5. What is the peculiar use of the tenses in the epistolary style of the Latin authors?

6. Draw the character of Cicero.

Translate into Latin:—

I know that my father does not learn many things, but much.

I will live virtuously, that I may die the more courageously.

He lived virtuously, that he might leave life with the greater resignation.

The multitude of stars is such that they cannot be numbered.

There are some who promise to help me.

Translate into Latin elegiacs:—

Whether thou bendest the struggling neck of a spirited horse,
I admire thy feet turned in a small circle.

Or if thou whirlest a vast spear with strong arm,

Thy fierce arm has faces turned towards it.

Or if thou holdest cornel hunting-spears with broad iron:

Finally whatsoever thou doest delights my eyes.

THE ENGLISH LANGUAGE.

Examiner, Professor ARMSTRONG.

1. Exhibit in tabular form the various dialects of the Aryan family of languages.

2. State Grimm's law, and illustrate it in a tabular form.

3. Give examples of the declensions of A. S. nouns and adjectives, and of the conjugation of A. S. verbs.

4. Name the principal foreign dialects which have affected the language of the English people since their settlement in Britain, and explain the nature of their influence upon it.

5. Give a list of the principal words of Keltic origin which are found in the English language.

6. Give examples of the inflexions of the same pronouns and substan-

Appendix D. tives, as they appear in A. S. grammar, and as they appear in the language of the *Canterbury Tales*.

Sessional
Examina-
tions.

7. Give an account of the East Midland Dialect of English, and compare it with the other principal dialects of England which appear subsequent to the Norman conquest.

8. Give a list of the principal *Teutonic suffixes* which appear in our language, and exhibit them as portions of current words of foreign origin.

9. Explain and give examples of the operation known as *phonetic decay*.

10. Make a metrical analysis of the following passage; explain the metrical and grammatical rules which you adopt in making it; and paraphrase it accurately in Modern English prose :—

“The Reeve was a sklendre colerik man,
His berd was shave as neigh as evere he can.
His heer was by his eres round i-shorn.
His top was docked lyk a preest biforn.
Full longe wern his legges, and ful lene,
Y-lik a staf, ther was no calf y-sene.
Wel cowde he kepe a gerner and a bynne;
Ther was non auditour cowde on him wyne.
Wel wiste he by the droughte, and by the reyn,
The yeeldyng of his seed, and of his greyn.”

MODERN LANGUAGES.

Examiner, Professor DE VERICOUR.

N.B.—The following paper was common to students in Arts of first, second, and third years' standing, and to students of Medicine and Engineering of first year's standing. Question 6 was not given to Medical students.

1. Translate into French :—

The celebrity of the great classical writers is confined within no limits except those which separate civilized from savage man. Their works are the common property of every polished nation. They have furnished subjects for the painter, and models for the painter. In the minds of the educated classes throughout Europe, their names are indissolubly associated with the endearing recollections of childhood, the old school-room, the first prize, the tears so often shed and so quickly dried. So great is the veneration with which they are regarded, that even the editors and commentators, who perform the lowest menial offices to their memory, are considered, like the equerries and chamberlains of sovereign princes, as entitled to a high rank in the table of literary precedence.

MACAULAY.

2. London, the metropolis of the British empire, appears to have been founded between the reigns of Julius Cæsar and Nero; but by whom, is uncertain; for we are told by Tacitus that it was a great place of trade in Nero's time, and soon after became the capital of the island. The city is not, like Paris, enclosed within barriers, and tends every day to become larger. Most of the streets are broad and spacious; the houses are, in general, but of a moderate height. It possesses several monuments, more remarkable for their antiquity than architecture. Its population is now-a-days above two millions souls. London is the grand

part of the nation, to which all the active and industrious provincials send their commodities, whence they are diffused all over the world. The city is situated on the banks of the Thames, a river which is remarkably commodious for commerce, and is continually filled with vessels, sailing to or from the most remote climates. As London is about sixty miles from the sea, it enjoys, by means of its river, all the benefits of navigation, without the danger of being surprised by foreign fleets.

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tions.

GUTHRIE.

1. Give the principal rules of the use of the subjunctive mood, and illustrate them by examples.
2. How is the adverb *just*, followed by a participle, rendered in French?
3. What difference is there between *savoir* and *connaître*?
4. Explain the difference of meaning of the following English and French words: *avertir* and *to advertise*; *avertissement* and *advertisement*; *aviser* and *to advise*; *assister* and *to assist*; *accomplissement* and *accomplishment*; *pupille* and *pupil*; *tuteur* and *tutor*; *concussion* and *concussion*; *sanguin* and *sanguine*.
5. Explain the full meaning of *dès que* by tracing its etymology.
6. State what you know of the life and works of one of the following authors: Montesquieu, Boileau, Molière.

MATHEMATICS.

Examiner, Professor NIVEN.

N.B.—The following Paper was common to first year's students of Arts and Engineering.

1. Construct a parallelogram, with sides inclined at a given angle, equal to the triangle ABC.
2. In an obtuse-angled triangle the square on the side subtending the obtuse angle is greater than the squares on the sides containing that angle by twice the rectangle contained by either of these sides and the projection on it of the other side.
3. Two tangents, and only two, can be drawn to a circle from an external point.
The two tangents are equal and make equal angles with the line joining the external point to the centre of the circle.
4. If straight lines be drawn bisecting two angles of a regular polygon, the point in which the bisectors intersect is equidistant from all the vertices of the polygon.
5. If two triangles have the sides about the angles proportional, they are equiangular.
If the product of the perpendiculars drawn from a point P on two opposite sides of a quadrilateral inscribed in a circle be equal to the product of the perpendiculars on the other two sides, prove that P lies on the circle.

6. Prove that $(a+b+c)^3 = a^3 + b^3 + c^3 + 3(a+b)(b+c)(c+a)$, and divide $9x^{\frac{3n}{2}} + \frac{1}{3}x^{\frac{3n}{2}}$ by $x^{\frac{n}{2}} + \frac{1}{3}x^{\frac{n}{2}}$.

7. Find the G.C.M. and the L.C.M. of $x^3 - 3x - 2$ and $2x^3 + x^2 - 4x - 3$, and reduce to its simplest form $\left(\frac{a+2b}{a+b} + \frac{a}{b}\right) \div \left(\frac{a+2b}{b} - \frac{a}{a+b}\right)$.

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8. Solve the following equations :—

$$(1) \frac{2x+15}{x-5} + \frac{3x+10}{x+2} = \frac{5x+6}{x+3}.$$

$$(2) x - \frac{1}{2x} = 1\frac{1}{6}.$$

$$(3) \frac{x}{3} - \frac{2x-y}{5} = 1\frac{1}{2}, 1 - \frac{4-y}{3} = 6 - \frac{1}{2} \cdot \frac{x-1}{5}.$$

$$(4) xy + az = yz + ax = yz + zx + xy = b.$$

9. Define ratio and proportion.

If $a : b :: c : d$, then $a + b : c + d :: a : c$.Sum the series $\frac{3}{2} + 2 + \frac{5}{2} + \dots$ to 14 and to n terms.10. Define a logarithm and prove that $\log \frac{a}{b} = \log a - \log b$.Given $x = \left(\frac{225}{243}\right)^{\frac{1}{4}}$, $\log_{10} 2 = \cdot 3010300$, $\log_{10} 3 = \cdot 4771213$; find $\log_{10} x$.11. Find the number of grades in $13^{\circ} 17'$, and prove the result by reconvertng the angle into degrees, minutes.

12. Prove the formulæ—

$$(1) \sin 2A = 2 \sin A \cos A.$$

$$(2) \sin (A+B) \sin (A-B) = \sin^2 A - \sin^2 B.$$

Solve also the equation $\tan \theta + \cot \theta = \frac{4}{\sqrt{3}}$.

13. Prove that, in any triangle—

$$\sin \frac{A}{2} = \sqrt{\frac{s-b}{s} \cdot \frac{s-c}{s}} \text{ where } 2s = a + b + c.$$

Given $a = 3\cdot 75$, $b = 5\cdot 4$, $C = 90^{\circ}$, the data in (10), and

$$\left. \begin{aligned} L \tan 34^{\circ} 46' 40'' &= 9\cdot 841 \ 6366 \\ L \tan 34^{\circ} 46' 50'' &= 9\cdot 841 \ 6816 \end{aligned} \right\}, \text{ find } A, B.$$

14. If A, B, C be the angles of a triangle, prove that—

$$\sin \frac{3A-B}{2} + \sin \frac{3B-C}{2} + \sin \frac{3C-A}{2} = 4 \cos \frac{3A-B}{4} \cos \frac{3B-C}{4} \cos \frac{3C-A}{4}.$$

PRIZE PAPER.

1. If a straight line be drawn meeting the lines BC, CA, AB in the points D, E, F , prove that $BD \cdot CE \cdot AF = CD \cdot AE \cdot BF$; and conversely, that if this equality hold, D, E, F will lie in a straight line.2. AB is the diameter of a circle, and C is any point on the curve; AC, BC meet the tangents at B, A in E, D , respectively; prove that AB is a mean proportional between AD, BE .

3. If a circle be inscribed in a square any tangent to the circle cuts the sides of the square in points which form a harmonic range.

4. Reduce the surd $\frac{1 + \sqrt{2} + \sqrt{3} - \sqrt{6}}{1 + \sqrt{2} - \sqrt{3} + \sqrt{6}}$ to its simplest form.5. Solve the equations $x^2 - y^2 = 3$, $x^6 - y^6 = 63$, and show that—

$$\text{if } (1 - k^2 x^4)y = 2x\sqrt{(1-x^2)(1-k^2 x^2)},$$

$$\text{then } (1 - k^2 x^4)\sqrt{1-y^2} = 1 - 2x^2 + k^2 x^4,$$

$$\text{and } (1 - k^2 x^4)\sqrt{1-k^2 y^2} = 1 - 2k^2 x^2 + k^2 x^4.$$

6. State the principal properties of determinants.

Prove that the determinants—

$$\begin{vmatrix} a & a & a & 0 & 0 \\ b & b & 0 & b & 0 \\ c & 0 & c & c & 0 \\ 0 & d & 0 & 0 & d \\ 0 & 0 & e & 0 & e \end{vmatrix}, \quad \begin{vmatrix} \sin 2\alpha, \sin \overline{\alpha + \beta}, \sin \overline{\alpha + \gamma} \\ \sin \overline{\alpha + \beta}, \sin 2\beta, \sin \overline{\beta + \gamma} \\ \sin \overline{\alpha + \gamma}, \sin \overline{\beta + \gamma}, \sin 2\gamma \end{vmatrix}$$

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are each zero.

7. State and prove the exponential theorem, and show that the series is always convergent.

8. Sum the series—

$$1 + \frac{1}{2^2} + \frac{1 \cdot 4}{1 \cdot 2} \cdot \frac{1}{2^4} + \frac{1 \cdot 4 \cdot 7}{1 \cdot 2 \cdot 3} \cdot \frac{1}{2^6} + \dots \text{to } \infty.$$

$$\frac{1}{1 \cdot 3 \cdot 4} + \frac{1}{2 \cdot 4 \cdot 5} + \frac{1}{3 \cdot 5 \cdot 6} + \dots \text{to } n \text{ terms.}$$

9. At what rate per cent. (compound interest), must a perpetual annuity of £300 a-year, payable quarterly, be calculated, if it can be bought for £6,741 13s. 4d.?

10. Prove that the equation $\sin \alpha \sin \gamma + \sin \beta \sin \theta = \sin \overline{\alpha + \beta} \sin \overline{\alpha + \theta}$ is satisfied by $\alpha + \beta + \gamma + \theta = \pi$, and find the complete solution of the equation.

Solve also the equation $\tan 3\theta - \tan \theta = \tan 4\theta - \tan 2\theta$.

11. If $\Delta_1, \Delta_2, \Delta_3$ be the areas of the three triangles formed by joining the points where the escribed circles of the triangle ABC touch the sides, then $\Delta_1 : \Delta_2 : \Delta_3 :: \tan \frac{A}{2} : \tan \frac{B}{2} : \tan \frac{C}{2}$.

12. Prove the principle of proportional parts for tables of the logarithms of the series of angles, stating where it fails and how the defect in the tables in this case is remedied.

SECOND YEAR.

GREEK.

PASS PAPER.

Examiner, Professor BOULGER.

Translate:—

DEMOSTHENES—*Philippic* I., 51, 52.

τούτων, ὧ ἀνδρες Ἀθηναῖοι, τῶν ἀνεγνωσμένων¹ ἀληθὴ μὲν ἐστὶ τὰ πολλὰ, ὥς οὐκ ἔδει, οὐ μὴν ἀλλ' ἴσως οὐχ ἡδέα ἀκούειν. ἀλλ' εἰ μὲν, ὅσα ἂν τις ὑπερβῇ¹ τῷ λόγῳ, ἵνα μὴ λυπήσῃ, καὶ τὰ πράγματα ὑπερβήσεται, δεῖ πρὸς ἡδονὴν δημηγορεῖν· εἰ δ' ἡ τῶν λόγων χάρις, ἂν ᾗ μὴ προσήκουσα, ἔργῳ ζημία γίγνεται, αἰσχρὸν ἐστὶ φενακίζειν ἑαυτοὺς, καὶ ἅπαντ' ἀναβαλλομένους ἂ ἂν ᾗ δυσχερὴ πάντων ὑστερεῖν τῶν ἔργων, καὶ μηδὲ τοῦτο δύνασθαι μαθεῖν,¹ ὅτι δεῖ τοὺς ὀρθῶς πολέμῳ χρωμένους οὐκ ἀκολουθεῖν τοῖς πράγμασι ἀλλ' αὐτοὺς ἐμπροσθεν εἶναι τῶν πραγμάτων, καὶ τὸν αὐτὸν τρόπον, ὥσπερ τῶν στρατευμάτων ἀξιῶσαι¹ τις ἂν τὸν στρατηγὸν ἡγεῖσθαι, οὕτω καὶ τῶν πραγμάτων τοὺς βουλευομένους, ἵν' ἂ ἂν ἐκείνοις δοκῇ, ταῦτα πράττειται καὶ μὴ τὰ συμβάντα ἀναγκάζονται διώκειν. ὑμεῖς δ', ὧ ἀνδρες Ἀθηναῖοι, πλείστην δύναμιν ἀπάντων ἔχοντες, τριήρεις, ὀπλίτας, ἱππέας, χρημάτων πρόσδοτον, τούτων μὲν μέχρι τῆς τήμερον ἡμέρας οὐδενὶ πώποτε εἰς δέον τι

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κέχρησθε, οὐδὲν δ' ἀπολείπετε, ὥσπερ οἱ βάρβαροι πυκτεύουσιν, οὕτω πολεμεῖν Φιλίππῳ. καὶ γὰρ ἐκείνων ὁ πληγὴς αἰὲ τῆς πληγῆς ἔχεται, κἂν ἐτέρωσε πατάξῃς, ἐκείσέ εἰσιν αἱ χεῖρες· προβάλλεσθαι δ' ἡ βλέπειν ἐναντίον οὐτ' οἶδεν οὐτ' ἐθέλει.

HOMER—*Odyssey*, XX., 350–370.

τοῖσι δὲ καὶ μετέειπε Θεοκλύμενος θεοειδής
“ ἄ δειλοί, τί κακὸν τόδε πάσχετε ; νυκτὶ μὲν ὑμέων
εἰλύεται¹ κεφαλαί τε πρόσωπά τε νέρθε τε γούνα.
οἰμωγὴ δὲ δέδηκε, δεδάκρυνται δὲ παρειαί,
αἵματι δ' ἐρράδαται¹ τοῖχοι καλαί τε μεσόδμαι·
εἰδώλων δὲ πλέον πρόθυρον, πλείη δὲ καὶ αὐλή,
ιεμένων² Ἐρεβόσδε ὑπὸ ζόφον· ἥελιος δὲ
οὐρανοῦ ἐξαπόλωλε,¹ κακὴ δ' ἐπιδέδρομεν ἀχλύς.”
ὥς ἔφαθ', οἱ δ' ἄρα πάντες ἐπ' αὐτῷ ἡδὺν γέλασαν.
τοῖσιν δ' Εὐρύμαχος, Πόλυβον παῖς, ἦρχ' ἀγορεύειν·
“ ἀφραίνει ξείνος νέον ἄλλοθεν εἰληλουθώς.¹
ἀλλά μιν αἶψα, νέοι, δόμου ἐκπέμψασθε θύραζε
εἰς ἀγορὴν ἔρχεσθαι, ἐπεὶ τάδε νυκτὶ ἔϊσκει.”
τὸν δ' αὖτε προσέειπε Θεοκλύμενος θεοειδής
“ Εὐρύμαχ', οὔτι σ' ἄνωγα ἐμοὶ πομπῆας ὀπάζειν·
εἰσὶ μοι ὀφθαλμοὶ τε καὶ οὐατα καὶ πόδες¹ ἄμφω
καὶ νόος ἐν στήθεσσι τετυγμένος¹ οὐδὲν ἀεικής.
τοῖς ἔξιμι θύραζε, ἐπεὶ νόεω κακὸν ὕμιν
ἐρχόμενον, τό κεν οὔτις ὑπεκφύγοι¹ οὐδ' ἀλέαιτο
μνηστήρων, οἳ δῶμα κατ' ἀντιθέου Ὀδυσῆος
ἀνέρας ὑβρίζοντες ἀτάσθαλα μηχανάασθε.”

EURIPIDES—*Hippolytus*, 616–633.

ὦ Ζεῦ, τί δὴ κίβδηλον ἀνθρώποις κακὸν
γυναῖκας ἐς φῶς ἡλίου κατῴκισας ;
εἰ γὰρ βρότειον ἦθελες σπεῖραι γένος,
οὐκ ἐκ γυναικῶν χρὴν παρασχέσθαι¹ τόδε,
ἀλλ' ἀντιθέοντας¹ σοῖσιν ἐν ναοῖς βροτοῦς
ἢ χρυσὸν ἢ σίδηρον ἢ χαλκοῦ βάρος
παίδων πρίασθαι σπέρμα, τοῦ τιμήματος
τῆς ἀξίας ἕκαστον· ἐν δὲ δώμασι
ναῖειν ἐλευθέροισι θηλειῶν ἄτερ.
νῦν δ' ἐς δόμους μὲν πρῶτον ἄξεσθαι κακὸν
μέλλοντες ὄλβον δωμάτων ἐκτείνομεν.
τούτῳ δὲ δῆλον ὥς γυνὴ κακὸν μέγα·
προσθεῖς γὰρ ὁ σπείρας τε κἀκθρέψας πατήρ
φερνὰς ἀπώκισ', ὥς ἀπαλλαχθῇ¹ κακοῦ·
ὁ δ' αὖ λαβὼν ἀτηρὸν ἐς δόμους φυτὸν
γέγηθε κόσμον προστιθεῖς ἀγάλατι
καλὸν κακίστῳ καὶ πέπλοισιν ἐκπονεῖ
δύστηνος, ὄλβον δωμάτων ὑπεξελών.

I. Parse fully and accurately every word in the above extracts to *Appendix D.* which the figure 1 is attached.

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tions.

II. Translate :—

1. He told us that if this were so we ought to set about the task.
2. I asked the boy whether he thought life full of cares.
3. How much do you think the eagle will fetch, if offered for sale?

III.—1. Classify verbs in *ω* according to their stems.

2. Illustrate the three ways in which Homer inflects verbs whose stem ends in *α*.

PRIZE PAPER.

Translate :—

HOMER—*Odyssey*.

Χαῖρε, πάτερ ὦ ξεῖνε· γένοιτό τοι ἔς περ ὀπίσσω
 ὄλβος· ἀτὰρ μὲν νῦν γε κακοῖς ἔχειαι πολέεσσιν.
 Ζεῦ πάτερ, οὔτις σέϊο θεῶν ὀλοώτερος ἄλλος·
 οὐκ ἑλεαίρεις ἄνδρας, ἐπὴν δὴ γείνεαι αὐτός,
 μισγόμεναι κακότητι καὶ ἄλγεσι λευγαλίοισιν.
 ἴδιον, ὡς ἐνόησα, δεῖδάκρυνται δέ μοι ὅσσε
 μνησαμένῳ Ὀδυσῆος, ἐπεὶ καὶ κείνον ὁτὼ
 τοιάδε λαίφε' ἔχοντα κατ' ἀνθρώπους ἀλάλησθαι,
 εἴ που ἔτι ζῶει καὶ ὄρᾳ φάος ἡελίοιο.
 εἰ δ' ἦδη τέθνηκε καὶ εἰν Ἀΐδαο δόμοισιν,
 α μοι ἔπειτ' Ὀδυσῆος ἀμύμονος, ὅς μ' ἐπὶ βουσὶν
 εἶσ' ἔτι τυτθὸν ἰόντα Κεφαλλήγων ἐνὶ δῆμῳ.
 νῦν δ' αἱ μὲν γίγνονται ἀθέσφατοι, οὐδέ κεν ἄλλως
 ἀνδρὶ γ' ὑποσταχύσειτο βοῶν γένος εὐρυμετώπων·
 τὰς δ' ἄλλοι με κέλονται ἀγινέμεναί σφισιν αὐτοῖς
 ἔδμεναι· οὐδέ τι παιδὸς ἐνὶ μεγάροις ἀλέγουσιν,
 οὐδ' ὅπιδά τρομέουσι θεῶν· μεμῶασι γὰρ ἦδη
 κτήματα δάσσεσθαι δὴν οἰχομένοιο ἄνακτος.—(XX., 199–216.)

ἦ δ' ὅτε δὴ θάλαμον τὸν ἀφίκετο διὰ γυναικῶν
 οὐδὸν τε δρύϊνον προσεβήσετο, τὸν ποτε τέκτων
 ξέσσειν ἐπισταμένως καὶ ἐπὶ στάθμην ἴθυνεν,
 ἐν δὲ σταθμοῖς ἄρσε, θύρας δ' ἐπέθηκε φαεινὰς,
 αὐτίκ' ἄρ' ἦγ' ἱμάντα θοῶς ἀπέλυσε κορώνης,
 ἐν δὲ κληῖδ' ἦκε, θυρέων δ' ἀνέκοπτεν ὄχῃας
 ἅντα τιτυσκομένη· τὰ δ' ἀνέβραχεν ἥτε ταῦρος
 βοσκόμενος λειμῶνι· τόσ' ἔβραχε καλὰ θύρετρα
 πληγέντα κληῖδι, πετάσθησαν δὲ οἱ ὦκα.
 ἦ δ' ἄρ' ἐφ' ὑψηλῆς σανίδος βῆ· ἔνθα δὲ χηλοὶ
 ἔστασαν, ἐν δ' ἄρα τῇσι θυώδεα εἴματ' ἔκειτο.
 ἔνθεν ὀρεξαμένη ἀπὸ πασσάλου αἶνυτο τόξον
 αὐτῷ γυρωτῷ, ὅς οἱ περὶ κειτο φαεινός.—(XXI., 42–54.)

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tions.EURIPIDES—*Hippolytus*.

σὺ δ' ἀμφὶ τὰν πολύθηρον
 Δίκτυνναν ἀμπλακίαις
 ἀνίερος ἀθύτων πελάνων τρύχει.
 φοιτᾷ γὰρ καὶ διὰ λίμνας
 χέρσον θ' ὑπὲρ πελάγους
 δίναισιν νοτίας ἄλμας.
 ἦ πόσιν, τὸν Ἐρεχθεῖδαν
 ἀρχαγόν, τὸν εὐπατρίδαν,
 ποιμαίνει τις ἐν οἴκοις
 κρυπτὰ κοῖτα λεχέων σῶν ;
 ἦ ναυβάτας τις ἔπλευσεν
 Κρήτας ἔξορμος ἀνὴρ
 λιμένα τόνδ' εὐξεινότατον ναύταις
 φάμαν πέμπων βασιλείᾳ,
 λύπα δ' ὑπὲρ παθέων
 εὐναία δέδεται ψυχάν ;
 φιλεῖ δὲ τᾷ δυστρόπῳ γυναικῶν
 ἁρμονίᾳ κακὰ δύστανος
 ἁμαχανία συνοικεῖν
 ὠδίνων τε καὶ ἀφροσύνας.
 δι' ἐμᾶς ἤξέν ποτε νηδύος ἅδ' αὖρα
 τὰν δ' εὐλοχον οὐρανίαν
 τόξων μεδέουσιν ἀύτευν
 Ἄρτεμιν, καὶ μοι πολυζήλωτος αἰεὶ
 σὺν θεοῖσι φοιτᾷ.—(145–170.)

καὶ δεσπότης μὲν ἱππικοῖς ἐν ἡθεσι
 πολλὸς ξυνοικῶν ἤρπασ' ἡνίας χερσῶν,
 ἔλκει δὲ κώπην ὥστε ναυβάτης ἀνὴρ
 ἱμᾶσιν ἐς τοῦπισθεν ἀρτήσας δέμας.
 αἱ δ' ἐνδακοῦσαι στόμια πυριγενῇ γνάθοις
 βία φέρουσιν, οὔτε ναυκλήρου χερδὸς
 οὔθ' ἱποδέσμων οὔτε κολλητῶν ὄχων
 μεταστρέφουσαι. καὶ μὲν ἐς τὰ μαλθακὰ
 γαίας ἔχων οἶακας ἰθύνει δρόμον,
 προῦφαίνειτ' εἰς τοῦμπροσθεν, ὥστ' ἀναστρέφειν,
 ταῦρος, φόβῳ τέτρωρον ἐκμαίνων ὄχον·
 εἰ δ' ἐς πέτρας φέροντο μαργῶσαι φρένας,
 σιγῇ πελάζων ἀντυγὶ ξυνέιπετο,
 ἐς τοῦθ' ἔως ἔσφηλε κἀνεχαίτισεν,
 ἀψῖδα πέτρῳ προσβαλὼν ὀχήματος.
 σύμφυρτα δ' ἦν ἅπαντα· σύριγγές τ' ἄνω
 τροχῶν ἐπήδων ἀξόνων τ' ἐνήλατα.—(1219–1235.)

DEMOSTHENES—*Philippic I.*

πότ' οὖν, ὦ ἄνδρες Ἀθηναῖοι, πότε ἂ χρή πράξετε ; ἐπειδὰν τί γένηται ;
 ἐπειδὴν νῆ Δι' ἀνάγκη τις ᾗ. νῦν δὲ τί χρή τὰ γιγνόμενα ἡγεῖσθαι ; ἐγώ

μὲν γὰρ οἶομαι τοῖς ἐλευθεροῖς μεγίστην ἀνάγκην τὴν ὑπὲρ τῶν πραγμάτων *Appendix D.*
 αἰσχύνην εἶναι. ἡ βούλεσθε, εἰπέ μοι, περιούντες αὐτῶν πυνθάνεσθαι κατὰ *Sessional*
 τὴν ἀγοράν· λέγεται τι καινόν; γένοιτο γὰρ ἂν τι καινότερον ἢ Μακεδῶν *Examina-*
 ἀνὴρ Ἀθηναίους καταπολεμῶν καὶ τὰ τῶν Ἑλλήνων δικαῶν; τέθηκε *tions.*
 Φίλιππος; οὐ μὰ Δί', ἀλλ' ἀσθενεῖ. τί δ' ὑμῖν διαφέρει; καὶ γὰρ ἂν
 οὗτος τι πάθῃ, ταχέως ὑμεῖς ἕτερον Φίλιππον ποιήσετε, ἄνπερ οὕτω προσέ-
 χητε τοῖς πράγμασι τὸν νοῦν· οὐδὲ γὰρ οὗτος παρὰ τὴν αὐτοῦ ῥώμην τοσοῦτον
 ἐπηύξηται ὅσον παρὰ τὴν ἡμετέραν ἀμέλειαν. καίτοι καὶ τοῦτο· εἴ τι πάθῃ
 καὶ τὰ τῆς τύχης ἡμῖν ὑπάρξαι, ἤπερ αἰεὶ βέλτιον ἢ ἡμεῖς ἡμῶν αὐτῶν ἐπιμε-
 λούμεθα, καὶ τοῦτ' ἐξεργάσαιοτο ἴσθ' ὅτι πλησίον μὲν ὄντες, ἅπασιν ἂν τοῖς
 πράγμασι τεταραγμένοις ἐπιστάντες ὅπως βούλεσθε διοικήσασθε, ὥς δὲ νῦν
 ἔχετε οὐδὲ διδόντων τῶν καιρῶν Ἀμφίπολιν δέξασθαι δύναισθ' ἂν, ἀπηρη-
 μένοι καὶ ταῖς παρασκευαῖς καὶ ταῖς γνώμαις.

DEMOSTHENES—*Philippic III.*

καὶ μὴν κάκεῖνό γε ἴστε, ὅτι ὅσα μὲν ὑπὸ Λακεδαιμονίων, ἡ ὑφ' ἡμῶν
 ἐπασχον οἱ Ἕλληνες, ἀλλ' οὖν ὑπὸ γνησίων γ' ὄντων τῆς Ἑλλάδος ἡδι-
 κοῦντο, καὶ τὸν αὐτὸν τρόπον ἂν τις ὑπέλαβε τοῦθ', ὥσπερ ἂν εἰ υἱὸς ἐν
 οὐσίᾳ πολλῇ γεγωνῶς γήσιος δῶκει τι μὴ καλῶς μὴδ' ὀρθῶς, κατ' αὐτὸ μὲν
 τοῦτο ἄξιον μέμψεως εἶναι καὶ κατηγορίας, ὥς δ' οὐ προσήκων ἡ ὥς οὐ κληρο-
 νόμος τούτων ὦν ταῦτα ἐποίει, οὐκ ἐνεῖναι λέγειν. εἰ δέ γε δοῦλος ἢ ὑπο-
 βολιμαῖος τὰ μὴ προσήκοντα ἀπώλλυε καὶ ἐλυμαίνετο, Ἡράκλεις ὅσῳ μᾶλλον
 δευνὸν καὶ ὀργῆς ἄξιον πάντες ἂν ἔφασαν εἶναι. ἀλλ' οὐχ ὑπὲρ Φιλίππου
 καὶ ὧν ἐκεῖνος πράττει νῦν, οὐχ οὕτως ἔχουσιν, οὐ μόνον οὐχ Ἕλληνας ὄντος
 οὐδὲ προσήκοντος οὐδὲν τοῖς Ἕλλησιν, ἀλλ' οὐδὲ βαρβάρου ἐντεῦθεν ὅθεν
 καλὸν εἰπεῖν, ἀλλ' ὀλέθρου Μακεδόνας, ὅθεν οὐδ' ἀνδράποδον σπουδαῖον οὐδὲν
 ἦν πρότερον πρίσθαι.

1. What are the only consonants in which a Greek word can end? Classify the mute consonants according to the organ of utterance. What phonetic law is illustrated by the words *μεσημβρία*—*βροτός*?

2. What is peculiar in the accentuation of the following words:—*κανοῦν*—*ἐτησίῳ*—*ἄδελφε*—*τιμᾶν*? Distinguish *φῶς*, *φῶς*, *φῶς*, *ἀγών* and *ἄγων*, *δοκεῖ* and *δόκει*.

3. Give examples of elided stems. In the case of dental stems the nominative singular may be formed in two distinct ways:—what are they?

4. Give the Greek equivalents for *radicitus*, *foras*, *foris*, *domi*. Compare the Latin forms *ovis*, *vicus*, *sum*, *fera*, *solvunt*—with the Greek.

5. Translate into Attic prose:—

(α.) If any man is in the habit of performing just actions it is he.

(β.) Would that the physician were here!

(γ.) Would that the physician had been here!

(δ.) The king will not fight these ten days.

(ε.) As long as a boat, be it small or large, remains safe, then sailor, officer, everyone in his place must be zealous, and see that no one intentionally or unintentionally upsets her; but when the sea has overwhelmed her, all efforts are useless.

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tions.

LATIN.

Examiner, Professor LEWIS.

Translate :—

TACITUS—*Germania*, c. 13.

Nihil autem neque publicae neque privatae rei nisi armati agunt. Sed arma sumere non ante cuiquam moris quam civitas suffecturum probaverit. Tum in ipso concilio vel principum aliquis vel pater vel propinqui scuto frameaque iuvenem ornant. Haec apud illos toga, hic primus iuventutis honos; ante hoc domus pars videntur, mox rei publicae. Insignis nobilitas aut magna patrum merita principis dignationem etiam adulescentulis adsignant: ceteris robustioribus ac iam pridem probatis adgregantur; nec rubor inter comites aspici. Gradus quin etiam ipse comitatus habet, iudicio eius quem sectantur; magnaue et comitum aemulatio, quibus primus apud principem suum locus, et principum, cui plurimi et acerrimi comites. Haec dignitas, hae vires, magno semper electorum iuvenum globo circumdari; in pace decus, in bello praesidium. Nec solum in sua gente cuique, sed apud finitimas quoque civitates id nomen, ea gloria est, si numero ac virtute comitatus emineat: expectantur enim legationibus et muneribus ornantur et ipsa plerumque fama bella profligant.

TERENCE—*Adelphi*, Act II., sc. ii., 1.

Sy. Tace, egomet conueniam ipsum: cupide accipiat faxo atque etiam Bene dicat secum esse actum. Quid istuc, Sannio, est quod te audio Nescio quid concertasse cum ero? *Sa.* Numquam uidi iniquis Certationem comparatam, quam haec hodie inter nos fuit: Ego uapulando, ille uerberando, usque ambo defessi sumus. *Sy.* Tua culpa. *Sa.* Quid facerem? *Sy.* Adulescenti morem gestum oportuit. *Sa.* Qui potui melius, qui hodie usque os praebui? *Sy.* Age, scis quid loquar? Pecuniam in loco neglegere maxumum interdumst lucrum: hui, Metuisti, si nunc de tuo iure concessisses paululum Atque adulescenti morigerasses, hominum homo stultissime, Ne non tibi istuc faeneraret. *Sa.* Ego spem pretio non emo. *Sy.* Numquam rem facies: abi, inescare nescis homines, Sannio. *Sa.* Credo istuc melius esse: uerum ego numquam adeo astutus fui, Quin quidquid possem mallet auferre potius in praesentia. *Sy.* Age noui tuom animum: quasi iam usquam tibi sint uiginti minae, Dum huic obsequare. Praeterea autem te aiunt proficisci Cyprum. *Sa.* Hem.

1. Notice some passages in the *Germania*, where Tacitus indirectly refers to the manners and customs of his own countrymen.
2. Name the most celebrated contemporaries of Tacitus.
3. Derive the words *ebrietas*, *oblecto*, *serratus*, *caespes*, *torquis*, and *argentum*.
4. On what occasion was the *Adelphi* first acted?
5. From what source did Terence derive his comedies?
6. Explain the Cretic and Bacchiac metres.

Translate into Latin :—

How comes it that you are as dear to me as if you were my son?

How comes it that your son is as dear to me as you yourself?

These passages do not please me as much as if they had been translated word for word from the Greek originals.

Caius did everything according to his own will, as completely as you have always done.

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We have sent you as large a portion as we have taken for ourselves.

Lucilius prepares himself for his journey as cheerfully as if he were acting by his own will.

Translate into Latin elegiacs :—

Happy who hath grown callous by suffering,
And learnt by suffering much to suffer more.
Him the face of Fortune will not terrify :
The storm will strike him fearless.
And as the pilot, when the winds battle,
Has the means of learning his arts ;
So we learn by the wrath of Fortune,
To despise all Fortune's threats.

LOGIC.

Examiner, Professor READ.

1. How do you define logic, and what is its proper province?
2. Define abstract, collective, and contradictory terms.
3. If the predicate of a proposition in A be a common term, and the subject be the same, what relations may exist between them?
4. How would you classify definitions and descriptions?
5. What are the causes to which the most important ambiguities in terms are to be attributed?
6. What propositions are true, false, or uncertain, if A be false and I be true respectively?
7. Explain the difference between mediate and immediate inference.
8. Prove that two particular premisses prove nothing. How is this rule affected by the introduction of Sir W. Hamilton's new classes of propositions? Does it admit of exceptions?
9. Construct syllogisms in Camenes and Bokardo, and reduce them ostensively.
10. Special rules for the third figure with proofs.
11. Explain with illustrations prosyllogism and episyllogism.
12. What is a constructive conjunctive syllogism? When is it valid?
13. Explain "modus ponendo tollens."
14. What are the fallacies of composition and division, and of Ignoratio Elenchi?

MATHEMATICS.

Examiner, Professor NIVEN.

N.B.—The following Paper was common to second year's students of Arts and Engineering.

1. Obtain an expression for the volume of a pyramid.
2. Prove that, in a spherical triangle, $\cos a = \cos b \cos c + \sin b \sin c \cos A$, (1) when b and c are both less than quadrants, (2) when b is greater than a quadrant, and deduce the value of $\cos a$ in terms of the angles.

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tions.

If when a, b, A , are given, the value of c be given subject to ambiguity and if c_1, c_2 be its two values, prove that $\cot \frac{c_1}{2} \cot \frac{c_2}{2} = \cot \frac{a+b}{2} \cot \frac{a-b}{2}$.

3. Show how to solve a right angled spherical triangle when another angle is given and one of the sides.

4. Prove that—

$$\cos \frac{\theta}{n} + \sqrt{-1} \sin \frac{\theta}{n} \text{ is one of the values of } (\cos \theta + \sqrt{-1} \sin \theta)^{\frac{1}{n}}.$$

What are the other values?

Sum the series $\cos \alpha + \frac{1}{2} \cos 2\alpha + \frac{1}{4} \cos 3\alpha + \dots$ to ∞ .

5. Find the equation of a straight line passing through a given point and parallel to a given straight line.

Find the locus of each of the following equations—

$$(1) 2x - 3y = 1,$$

$$(2) \frac{\sqrt{2}}{r} = \cos(\theta + 135^\circ),$$

$$(3) (x-2)^2 - 3(x-2)y + 2y^2 = 0;$$

and find the length of the perpendicular from the point of intersection of the two members of (3) upon (1).

6. Obtain the equation of the tangent to a circle at any point.

Find the length of the chord of intersection of the circle—

$$x^2 + y^2 + x - 4y = \frac{3}{4} \text{ with the straight line } 2x + y = 1.$$

7. Find the equation and length of the normal to a parabola at any point.

Tangents are drawn to a parabola such that the line bisecting the angle between them is parallel to a fixed straight line, find the locus of their intersection.

8. Find the diameter of a series of parallel chords in an ellipse.

9. Prove that—

$$\frac{dy}{dx} = \frac{dy}{dz} \cdot \frac{dz}{dx}, \quad \frac{dy}{dx} \cdot \frac{dx}{dy} = 1,$$

explaining also the purposes for which the formulæ are used.

$$\text{Differentiate } \log x, \tan^{-1} \sqrt{\frac{1+x}{1-x}}, e^{\tan x}, \frac{2x+1}{\sqrt{3-x-x^2}}.$$

10. State and prove Maclaurin's theorem.

Expand $e^x \cos ax$ up to x^3 .

11. If $x = r \cos \theta$, $y = r \sin \theta$, and r, θ be functions of t , show that—

$$x \frac{d^2x}{dt^2} + y \frac{d^2y}{dt^2} = r \frac{d^2r}{dt^2} - \left(r \frac{d\theta}{dt} \right)^2.$$

12. If the tangent to a curve given by the polar equation make an angle ϕ with the radius vector, prove that $\tan \phi = r \frac{d\theta}{dr}$.

If p be the perpendicular from the focus on the tangent to an ellipse at the point (r, θ) prove that $p = b \sqrt{\frac{r}{2a-r}}$.

13. Prove that—

$$\int \phi(x) dx = \int \phi(x) \frac{dx}{d\theta} \cdot d\theta, \text{ and find these integrals—}$$

$$\int \frac{1}{\sqrt{x^2+a^2}} dx, \quad \int (x \log x)^2 dx, \quad \int_0^{2a} x(2ax-x^2)^{\frac{3}{2}} dx.$$

14. Find an expression for the area of a plane curve.

Find the area of the curve $y(2a-x) = a^2x$ between $x=0$ and $x=2a$.

NATURAL PHILOSOPHY.

Examiner, Professor ENGLAND.

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tions.

N.B.—The following paper was common to second year's students in Arts and Engineering, with the exception of Questions 10, 11, 12, which were for students in Arts only, and 13, 14, and 15, which were intended for Engineering students.

1. What is the condition of equilibrium in the ordinary screw press ; how can it be derived from the conditions in the inclined plane and lever ?

2. The co-efficient of friction being $\cdot 5$, what force would be necessary to move a body which weighs 100lbs. up an inclined plane the height of which is to its length as 3 : 5 ?

3. A particle is projected at an angle of 60° with the horizon, with a velocity of 500 feet per second, find its position at the end of three seconds.

4. A heavy particle is projected vertically upwards, prove that during its motion the sum of the kinetic and potential energies is the same.

5. Two equal isosceles triangles are just immersed vertically in a fluid, one with its base, the other with its vertex downward, compare the ratio of the pressure on each.

6. In a mixture of two fluids whose specific gravities are $\cdot 3 : \cdot 5$ a body whose specific gravity is $\cdot 8$ loses half its weight in immersion, compare the quantities in which the fluids are mixed.

7. The radii of the surfaces of a double convex lens are respectively 12 inches and 6 inches, its focal length being 8 inches ; what is the index of refraction of the material of which it is formed ?

8. Describe the construction of a reflecting telescope and how to estimate its magnifying power.

9. The specific heat of copper being $\cdot 095$, if a piece of copper weighing 5 ozs. heated to 100° cent. is introduced into a vessel containing 12 ozs. of water at 10° cent., what will be the resulting temperature ?

10. How is it known that the moon rotates on its axis in the same time as it rotates round the earth ?

11. How are the right ascension and declination of a star observed ?

12. What must be the sun's declination when twilight lasts all night in a given latitude.

13. How would you construct an electro magnet ?

14. How would you arrange a battery to produce the maximum heating power ?

15. Describe the method by which one clock may be made to control another through the intervention of an electrical current.

THIRD YEAR.

GREEK.

Examiner, Professor BOULGER.

Translate :—

THUCYDIDES.

τίς οὖν αὕτη ἡ φιλία ἐγίγνετο ἢ ἐλευθερία πιστή, ἐν ᾗ παρὰ γνώμην ἀλλήλους ὑπεδεχόμεθα, καὶ οἱ μὲν ἡμᾶς ἐν τῷ πολέμῳ δεδιότες ἐθεράπευον, ἡμεῖς δὲ ἐκείνους ἐν τῇ ἡσυχίᾳ τὸ αὐτὸ ἐποιούμεν ; ὃ τε τοῖς ἄλλοις μάλιστα εὐνοία πίστιν βεβαιαῖ, ἡμῖν τοῦτο ὁ φόβος ἐχρὸν παρεῖχε, δέει τε τὸ πλεόν ἡ φιλίᾳ κατεχόμενοι ξύμμαχοι ᾤμεν καὶ ὁποτέρους θάσσοι παράσχοι ἀσφάλεια θάρσος, οὗτοι πρότεροί τι καὶ παραβήσεσθαι ἐμελλον. ὥστε εἴ τῳ

Appendix D. δοκούμεν ἀδικεῖν προαποστάντες διὰ τὴν ἐκείνων μέλλῃσιν τῶν ἐς ἡμᾶς
Sessional δεινῶν, αὐτοὶ οὐκ ἀνταναμείναντες σαφῶς εἰδέναι εἴ τι αὐτῶν ἔσται, οὐκ
Examina- ὀρθῶς σκοπεῖ. εἰ γὰρ δυνατοὶ ἦμεν ἐκ τοῦ ἴσου καὶ ἀντεπιβουλεύσαι, καὶ
tions. ἀντιμελλῆσαι τι ἔδει ἡμᾶς ἐκ τοῦ ὁμοίου [ἐπ' ἐκείνοις εἶναι], ἐπ' ἐκείνοις δὲ
 ὄντος αἰεὶ τοῦ ἐπιχειρεῖν καὶ ἐφ' ἡμῖν εἶναι δεῖ τὸ προαμύνασθαι.—(III., 12.)

οἱ δ' ὑπερβαίνοντες τῶν Πλαταιῶν ἐν τούτῳ, ὥς οἱ πρῶτοι αὐτῶν ἀναβε-
 βήκεσαν καὶ τοῦ πύργου ἑκατέρου τοὺς φύλακας διαφθείραντες ἐκεκρατήκεσαν,
 τὰς τε διόδους τῶν πύργων ἐνστάντες αὐτοὶ ἐφύλασσαν μηδένα δι' αὐτῶν
 ἐπιβοηθεῖν, καὶ κλίμακας προσθέντες ἀπὸ τοῦ τείχους τοῖς πύργοις καὶ
 ἐπαναβιβάσαντες ἄνδρας πλείους, οἱ μὲν ἀπὸ τῶν πύργων τοὺς ἐπιβοηθοῦν-
 τας καὶ κάτωθεν καὶ ἄνωθεν εἴργον βάλλοντες, οἱ δ' ἐν τούτῳ οἱ πλείους
 πολλὰς προσθέντες κλίμακας ἅμα καὶ τὰς ἐπάλξεις ἀπώσαντες διὰ τοῦ μετα-
 πυργίου ὑπερέβαινον.—(III., 23.)

τοιαῦτα δὲ οἱ Θηβαῖοι εἶπον. οἱ δὲ Λακεδαιμόνιοι δικασταὶ νομίζοντες τὸ
 ἐπερώτημα σφίσιν ὀρθῶς ἔξειν, εἴ τι ἐν τῷ πολέμῳ ὑπ' αὐτῶν ἀγαθὸν πεπόν-
 θασι, διότι τὸν τε ἄλλον χρόνον ἤξιον δῆθεν αὐτοὺς κατὰ τὰς παλαιὰς
 Πανσανίου μετὰ τὸν Μῆδον σπονδὰς ἡσυχάζειν καὶ ὅτε ὕστερον ἂ πρὸ τοῦ
 περιτειχίζεσθαι προείχοντο αὐτοῖς, κοινούς εἶναι κατ' ἐκείνα, [ὥς] οὐκ ἐδέξαν-
 το, ἡγούμενοι τῇ ἑαυτῶν δικαίᾳ βουλήσει ἔκσπονδοι ἤδη ὑπ' αὐτῶν κακῶς
 πεπονθέναι, αὐθις τὸ αὐτὸ ἕνα ἕκαστον παραγαγόντες καὶ ἐρωτῶντες, εἴ τι
 Λακεδαιμόνιους καὶ τοὺς συμμαχοὺς ἀγαθὸν ἐν τῷ πολέμῳ δεδρακότες εἴσιν,
 ὅποτε μὴ φαῖεν, ἀπάγοντες ἀπέκτεινον καὶ ἐξαίρετον ἐποίησαντο οὐδένα.

(III., 68.)

ARISTOPHANES—*Ranae*, 394-424.

XOP. βούλεσθε δῆτα κοινῇ
 σκώψωμεν Ἀρχέδημον;
 ὃς ἐπτέτης ὢν οὐκ ἔφυνε φράτορας,
 νυνὶ δὲ δημαγωγεῖ
 ἐν τοῖς ἄνω νεκροῖσι,
 κάστιν τὰ πρῶτα τῆς ἐκεῖ μοχθηρίας.
 * * * * *

ΔΙΟ. ἔχοιτ' ἂν οὖν φράσαι νῦν
 Πλούτων' ὅπου νῦν ἂν οἰκεῖ;
 ξένω γὰρ ἔσμεν ἀρτίως ἀφιγμένω.

XOP. μηδὲν μακρὰν ἀπέλθης,
 μηδ' αὐθις ἐπανέρη με,
 ἀλλ' ἴσθ' ἐπ' αὐτὴν τὴν θύραν ἀφιγμένος.

ΔΙΟ. αἶροί' ἂν αὖθις, ὦ παῖ.

ΞΑΝ. τουτὶ τί ἦν τὸ πρᾶγμα;
 ἀλλ' ἦ Διὸς Κόρινθος ἐν τοῖς στρώμασιν;

XOP. χωρεῖτε
 νῦν ἱερὸν ἀνὰ κύκλον θεᾶς, ἀνθοφόρον ἂν' ἄλλος
 παίζοντες οἷς μετουσία θεοφιλοῦς ἑορτῆς.
 ἐγὼ δὲ σὺν ταῖσιν κόραις εἰμι καὶ γυναῖξιν,
 οὗ παννυχίζουσιν θεῶν, φέγγος ἱερὸν οἶσων.
 χωρῶμεν ἐς πολυρρόδους
 λειμῶνας ἀνθεμῶδεις,

τὸν ἡμέτερον τρόπον,
τὸν καλλιχορώτατον,
παίζοντες, ὃν ὀλβιαί
Μοῖραι ξυνάγουσιν.
μόνοις γὰρ ἡμῖν ἥλιος
καὶ φέγγος ἰλαρόν ἐστιν,
ὅσοι μεμνήμεθ' ἐν-
σεβῇ τε διήγομεν
τρόπον περὶ τοὺς ξένους
καὶ τοὺς ιδιώτας.

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tions.

Translate into Attic prose :—

The complete prostration of Ambrakia during the campaign of the preceding year had left Anaktorium without any defence against the Akarnanians and Athenian squadron from Naupaktus. They besieged and took it during the course of the present summer, expelling the Corinthian proprietors and re-peopling the town and its territory with Akarnanian settlers from all the townships in the country.

Translate into Greek verse :—

Whence and what art thou? execrable shape!
That dar'st, though grim and terrible, advance
Thy miscreated front athwart my way
To yonder gates; through them I mean to pass,
That be assured, without leave asked of thee.
Retire or taste thy folly, and learn by proof,
Hell-born, not to contend with spirits of heaven.

LATIN.

Examiner, Professor LEWIS.

Translate :—

CICERO—*Academica Priora*, ii., 12.

His satis cognitis, quae iam explicata sunt, nunc de adsensione atque approbatione, quam Graeci *συγκατάθεσιν* vocant, pauca dicemus, non quo non latus locus sit, sed paullo ante iacta sunt fundamenta. Nam quum vim, quae esset in sensibus, explicabamus, simul illud aperiebatur, comprehendi multa et percipi sensibus, quod fieri sine adsensione non potest. Deinde quum inter inanimum et animal hoc maxime intersit, quod inanimum nihil agit, animal agit aliquid—nihil enim agens ne cogitari quidem potest quale sit,—aut ei sensus adimendus est aut ea, quae est in nostra sita potestate, reddenda adsensio. At vero animus quodam modo eripitur iis, quos neque sentire neque adsentiri volunt. Ut enim necesse est lancem in libra ponderibus impositis deprimi, sic animum perspicuis cedere. Nam quo modo non potest animal ullum non appetere id, quod accommodatum ad naturam appareat—Graeci id *οικεῖον* appellant,—sic non potest obiectam rem perspicuam non approbare. Quamquam, si illa, de quibus disputatum est, vera sunt, nihil attinet de adsensione omnino loqui. Qui enim quid percipit, adsentitur statim. Sed haec etiam sequuntur, nec memoriam sine adsensione posse constare nec notitias rerum nec artes, idque, quod maximum est, ut sit aliquid in nostra potestate, in eo, qui rei nulli adsentietur, non erit.

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tionsPLAUTUS—*Mostellaria*, Act I., Sc. ii., 18.

Aedes quom extemplo sunt paratae, expolitae,
 Factae probe, examussim :
 Laudant fabrum atque aedis probant ; sibi quisque inde exemplum
 expetunt.
 Sibi quisque simile, suo usque sumtu ; operae ne parcunt suae.
 Atque ubi illo immigrat nequam homo indiligens
 Cum pigra familia, immundus, instrenuus :
 Hic iam aedibus vitium additur, bonae quum curantur male.
 Atque illud saepe fit : tempestas venit,
 Confringit tegulas imbricesque : ibi
 Dominus indiligens reddere alias nevolt.
 Ventat imber, lavit parietes : perpluunt
 Tigna ; putrefacit aër operam fabri :
 Nequior factus iam usus est aedium ;
 Atque ea haud est fabri culpa. Sed magna pars
 Moram hanc induxerunt : si quid numo sarciri potest,
 Usque dum mantant, neque id * * * faciunt, donicum
 Ruont parietes : aedificantur aedes totae denuo.
 Haec argumenta ego aedificiis dixi ; nunc etiam volo
 Docere, ut homines aedium esse similes arbitremini.
 Primumdum parentes fabri liberum sunt
 Et fundamentum substruunt liberorum ;
 Extollunt, parant sedulo in firmitatem, et
 Ut in usum boni sint et in speciem populo.
 Sibique aut materiae ne parcunt, nec sumtus
 Tbi sumtui esse ducunt :
 Expoliunt, docent literas, iura, leges ;
 Sumtu suo et labore
 Nituntur, ut alii sibi esse illorum similes expetant.
 Ad legionem
 Quom itum, adminiculum eis danunt tum iam aliquem cognatum
 suum.
 Eatenus abeunt a fabris. Unum emeritum est stipendium :
 Igitur tum specimen cernitur, quo eveniat aedificatio.

1. What was the chief difference between the Old and New Academy?
2. How does Cicero translate the words *ειρωνεία, κατάληψις, ενάργεια*
φαντασία, δόγμα?
3. Name the authorities for the history of ancient philosophy.
4. Write the life of Lucullus.
5. Mention some of the abbreviations which occur frequently in Roman
inscriptions.
6. Relate the plot of the *Mostellaria*.
7. Give instances of archaic forms of words in Plautus.
8. Explain the following verse from Ovid's *Tristia* :—

“Proque tribus resonant terna theatra foris.”
9. Give the meanings of the terms *diverbiū, canticum, and comoedia*
palliata.

ENGLISH LITERATURE.

Examiner, Professor ARMSTRONG.

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tions..

1. Sketch briefly the history of English Tragedy to the death of Marlowe.

2. Summarize the principal ascertained facts of Shakspeare's life.

3. Write a note on Hamlet's madness.

4. Explain the following passages; give the names of the characters in whose speeches they occur; and describe the circumstances under which they are spoken:—

(a.) "What might you

Or my dear majesty your queen here, think,

If I had played the desk or table-book,

Or given my heart a winking, mute and dumb,

Or look'd upon this love with idle sight";—

(b.) "To think, my lord, if you delight not in man, what lenten entertainment the players shall receive from you: we coted them on the way;"—

(c.) "He that plays the king shall be welcome; his majesty shall have tribute of me; the adventurous knight shall use his foil and target; the lover shall not sigh gratis; the humorous man shall end his part in peace; the clown shall make those laugh whose lungs are tickle o' the sere; and the lady shall say her mind freely, or the blank verse shall halt for 't."

(d.) "I do believe you think what now you speak;

But what we do determine oft we break.

Purpose is but the slave to memory,

Of violent birth, but poor validity:

Which now, like fruit unripe, sticks on the tree;

But fall unshaken when they mellow be."

5. Sketch the life of Milton, and name his principal poems in the order in which they were given to the world.

6. Compare Milton with Dryden, and explain the relations of the poets respectively to the events and spirit of the age in which they flourished.

7. Epitomize the events described in Book II. of *Paradise Lost*.

8. Annotate the following passages:—

(a.) "A gulf profound as that Serbonian bog

Betwixt Damiata and Mount Casius old,

Where armies whole have sunk: the parching air

Burns froze,"—

(b.) "Nor uglier follow the night-hag, when call'd

In secret, riding through the air she comes

Lur'd with the smell of infant blood, to dance

With Lapland witches, while the labouring moon

Eclipses at their charms."

(c.) "This wild abyss,

The womb of Nature and perhaps her grave."

9. Give a brief abstract of Dryden's *Absalom and Achitophel*.

10. Sketch the life of Scott; and characterize his genius.

11. Describe the course of Childe Harold's wanderings.

12. Write a brief abstract of Burke's *Thoughts on the cause of the Present Discontents*.

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tions.

MODERN HISTORY.

Examiner, Professor ARMSTRONG.

1. Explain the claims of James I. to the throne of England.
2. Give an account of the Hampton Court Conference.
3. Give a brief account of the constitution and of the proceedings of the first Parliament of James I.
4. Sketch briefly the public career of Wentworth, Earl of Strafford.
5. Give a brief sketch of the parliamentary history of England during the reign of Charles II.
6. Give an abstract of the Declaration of Rights, and indicate its most important clauses.
7. Give the substance of Hallam's comparison between the principles of Whigs and Tories.
8. When and under what circumstances was the Septennial Act passed?
9. Describe the relations of Parliament to the King and to the People in the earlier portion of the reign of George III., and give a brief account of the principal struggles for which that period is memorable.

METAPHYSICS.

Examiner, Professor READ.

1. Explain the Cartesian Method. Is it Inductive or Deductive?
2. What is meant by "substance," "attribute," and "mode" in the system of Spinoza?
3. How would Berkeley describe what are commonly called Laws of Nature?
4. How does Locke divide "Complex Ideas"? Explain the three heads which he mentions.
5. What account does Hume give of the difference between Fiction and Belief?
6. Explain Kant's answer to the question—How can *sensible* objects be subsumed under *intelligible* notions?
7. What is the real force of Reid's appeal to common sense? What was his own theory of the knowledge of the external world acquired through perception?
8. What classes of mental phenomena does Sir W. Hamilton propose to explain by "mental activities of which we are unconscious, but which manifest their existence by effects of which we are conscious"?
9. What according to Sir W. Hamilton is the real object in perception? How does he defend his position?
10. What is meant by "*primum cognitum*"? What are the different theories with respect to it?
11. Is it true to say that the majority of philosophers have admitted the *facts* but denied the *veracity* of the testimony of consciousness?
12. Explain what is meant by Indissoluble Association. What phenomena have been explained by it? Can any other account of them be given?

NATURAL HISTORY.

Examiner, Professor REAY GREENE.

N.B.—The following Papers were common to third year's students in Arts, and first year's students in Medicine.

BOTANY.

1. Describe the flower of any cruciferous plant, noting the number and relative position of its sepals, petals, stamens, and carpels.
2. What monopetalous plants have hypogynous stamens?
3. Name those British orders of monocotyledons in which the ovary is inferior.
4. Describe the flowers of the Scotch fir, or of any other conifer.
5. Briefly contrast the life history of a moss with that of a vascular cryptogam.

ZOOLOGY.

6. Give a general account of the structure of a typical ciliate infusorial animalcule, *e.g.* of *Paramecium*.
7. Compare the bivalve shells of the Lamellibranchiata and Brachionopoda.
8. Why are the pike and salmon referred to distinct families? Indicate the place of these two fishes in the zoological system.
9. What characters serve best to distinguish the skulls of reptiles from those of birds?
10. Name the principal divisions of ruminant mammals, and give a short account of their geographical distribution.

PHYSICAL GEOGRAPHY, GEOLOGY, AND MINERALOGY.

Examiner, Professor HARKNESS.

1. Name the Rainless regions of the New World; and explain the conditions to which such regions owe their occurrence.
2. Indicate the principal river-systems of Asia.
3. What is the mean elevation of continental land above the sea level?
4. What rocks having a crystalline structure occur as stratified rocks?
5. What is the origin, composition, and structural arrangement of Basalt?
6. In what respect do Breccias differ from Conglomerates?
7. What is the position, the structure, and the distribution of the Laurentian rocks of Canada?
8. What is the lowest known horizon in which Trilobites occur? To what genera are these referable?
9. What is the position of the Linton rocks of N. Devon?
10. What is the nature and position of the strata known as Calp in Ireland?
11. What is the nature of the strata which form the lower portion of the Lias? What valuable product does it often afford?
12. What is the position of the *Argile plastique* of the Paris basin? Mention its English equivalent.
13. To what crystalline system does Galena belong? What is its cleavage and chemical composition?
14. What is the crystalline form of Labradorite? Under what circumstances does it most frequently occur?
15. What are the external characters which distinguish Dolomite from Calcite?

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tions.

SCHOLARSHIP · EXAMINATIONS.

LITERARY SCHOLARSHIPS—FIRST YEAR.

GREEK.

Examiner, Professor BOULGER.

Translate :—

HOMER—*Iliad*, v., 498–513.EURIPIDES—*Phœnisæ*, 1495–1551.XENOPHON—*Anabasis*, B. III., c. 4, §§ 19–23.The examination in the above authors was held *viva voce*.

Translate the following sentences into Greek :—

1. I will go away that I may not see the battle.
2. He said that if you were to do this you would do him the greatest service.
3. Do not associate with those who pursue what is disgraceful.
4. If the citizens had done what they ought, they would have been prosperous.
5. He sent for another army in addition to the one he already had.

LATIN.

Examiner, Professor LEWIS.

1. State the rules for the Cæsura in hexameter verse, with examples from Virgil.
2. Describe the situation of Eburacum, Camulodunum, Corduba, Mediolanum, Panormus, and Italica. Give the corresponding modern names.
3. What are the perfects and supines of *salio, vincio, fluo, necto, gigno, scindo*?
4. What were the powers of the Tribunes of the Commons?
5. Give an account of Cæsar's expeditions into Britain.

Retranslate into Latin :—

I cannot reckon it inconstancy to change and moderate our opinion, like the course of a ship, by the weather of the Republic; this is what I have learnt, have observed, have read; what the records of former ages have delivered, of the wisest and most eminent citizens, both in this and all other cities; that the same maxims are not always to be pursued by the same men; but such, whatever they be, which the state of the Republic, the inclination of the times, the occasions of public peace require: this is what I am now doing, and shall always do.

ENGLISH LANGUAGE.

Examiner, Professor ARMSTRONG.

COMPOSITION.

Write an essay on any one of the following themes :—1. The Pleasures of Music. 2. The Pleasures of Poetry. 3. The Pleasures of Activity.

HISTORY OF THE ENGLISH LANGUAGE.

1. Specify the principal facts cited by Dr. Craik, as “constituting the external evidence that we have in regard to the sources of the English language.”

2. What portion of the language is most readily affected by foreign elements or influences? *Appendix D.*
3. Give examples of words imported into English from the Welsh. *Scholarship Examinations.*
4. Name the languages of Europe which are most closely related to the Welsh.
5. What is the origin of the word *bye-laws*?
6. Define the several periods in the growth of the English language, as they are divided by Dr. Craik.
7. Name the principal literary works which represent these several periods.
8. Give examples of words in the English language of Greek, Latin, and French origin.

HISTORY AND GEOGRAPHY.

Examiner, Professor ARMSTRONG.

HISTORY OF GREECE AND ROME.

1. Give an account of the achievements of Mardonius.
2. Mention the chief events of the Peloponnesian war, to the capture of Platæa.
3. Explain the events which led to the establishment of the Thirty at Athens.
4. Name the principal provisions of the Twelve Tables.
5. Give an account of the war with Perseus.
6. Give an account of the First Civil War at Rome.

ANCIENT AND MODERN GEOGRAPHY.

1. Give the ancient names of the Lakes of Italy.
2. Name the principal cities on the Mare Magnum.
3. Give the ancient names of the principal Mountains of Greece and Italy.
4. Name the English counties north of the Thames.
5. Where are the following towns?—Edinburgh, Brisbane, Toronto, Calcutta, Bayreuth, Beyroot, Marseilles, Adrianople, Christiansand, Ravenna, Trebizond, Drogheda, Yarmouth, Brindisi, St. Helier's.
6. Describe the courses of the following rivers:—The Danube, the Jumna, the Ebro, the St. Lawrence, the Rhone, the Severn.

SECOND AND THIRD YEARS.

GREEK.

Examiner, Professor BOULGER.

Translate:—

EURIPIDES—*Hippolytus*.

PLATO—*Phædon*.

HERODOTUS—B. I.

The examination in the above authors was held *viva voce*.

Translate into Attic Greek:—

We then, O citizens and allies of Lacedaemon, make known to you the state of things in that quarter; and it is for you to consider whether they seem deserving of attention. You ought, however, to feel assured, that the power which we have represented as great, is not yet irresistible; for such towns as have joined the community of the Olynthians against their inclination, will, if they see any opposition, quickly revolt from them.

Appendix D.

Scholarship
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tions.

LATIN.

Examiner, Professor LEWIS.

Translate :—

TACITUS—*Histories*, Book I., c. 49.

Galbae corpus, diu neglectum et plurimis ludibriis vexatum, licentia tenebrarum dispensator Argius e prioribus servis humili sepultura in privatis eius hortis contextit. Caput per lixas calonesque suffixum laceratumque, ante Patrobii tumultum (libertus is Neronis punitus a Galba fuerat) postera demum die repertum et cremato iam corpori admixtum est. Hunc exitum habuit Servius Galba, tribus et septuaginta annis quinque principes prospera fortuna emensus, et alieno imperio felicius quam suo. Vetus in familia nobilitas, magnae opes : ipsi medium ingenium, magis extra vitia quam cum virtutibus. Famae nec incuriosus nec venditator. Pecuniae alienae non adpetens, suae parcus, publicae avarus. Amicorum libertorumque, ubi in bonos incidisset, sine reprehensione patiens, si mali forent, usque ad culpam ignarus.

Translate into Latin elegiacs :—

At every turn she made a little stand,
And thrust among the thorns her lily hand
To draw the rose, and every rose she drew,
She shook the stalk, and brushed away the dew ;
Then party-coloured flowers of white and red
She wove, to make a garland for her head.
This done, she sung and carolled out so clear,
That men and angels might rejoice to hear ;
Even wondering Philomel forgot to sing,
And learned from her to welcome in the spring.

Translate into Latin prose :—

Methought I was unaccountably conveyed into the most delicious place mine eyes ever beheld : it was a large valley divided by a river of the purest water I had ever seen. The ground on each side of it rose by an easy ascent, and was covered with flowers of an infinite variety, which, as they were reflected in the water, doubled the beauties of the place, or rather formed an imaginary scene more beautiful than the real. On each side of the river was a range of lofty trees, whose boughs were loaded with almost as many birds as leaves. Every tree was full of harmony.

THE ENGLISH LANGUAGE AND ENGLISH LITERATURE, &c.

Examiner, Professor ARMSTRONG.

1. What are the functions of Comparative Grammar ?
2. What are the leading facts which Comparative Grammar teaches us respecting our own language ?
3. Name the principal languages of the Slavonic group.
4. Name the principal modern Indian dialects descended from Sanskrit.
5. Give a brief account of the Danish invasions of England.
6. What languages are the sources of the following words ?—Chess ; chintz ; gingham ; satin ; scimitar ; hammock ; dilettante ; flotilla ; tornado ; porcelain ; bivouac ; yacht ; loafer.
7. Make a metrical analysis of the following passage, stating the

grammatical rules which help you throughout ; and paraphrase the passage in Modern English prose :—

“ An out-rydere that lovede venerye ;
A manly man to ben an abbot able,
Full many a deynte hors hadde he in stable ;
And whan he rood, men mighte his bridel heere
Gynglen in a whistlyng wind as cleere
And eek as lowde as doth the chapel belle.”

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tions.

8. Write out the indicative mood of the verb to *love* as used by Chaucer, and compare it with the indicative mood of the A.S. *lufian*.

9. Write a brief essay on the following subject :—The relations of the English language to the history of the English people.

MODERN LANGUAGES.

Examiner, Professor DE VERICOUR.

N.B.—This paper was set to all candidates for Second and Third Years' Scholarships, and Senior Scholarship in Modern Languages, Literature and History in Arts ; and in the Scholarships of the Second Year in Medicine and Engineering.

Translate into French, German, or Italian :—

I. When I first went up to college, it was a new and a heavy-hearted scene for me : firstly, I so much disliked leaving Harrow, that though it was time (I being seventeen), it broke my very rest for the last quarter with counting the days that remained. I always hated Harrow till the last year and a half, but then I liked it. Secondly, I wished to go to Oxford, and not to Cambridge. Thirdly, I was so completely alone in this new world, that it half broke my spirits. My companions were not unsocial, but the contrary—lively, hospitable, of rank and fortune, and gay, far beyond my gaiety. I mingled with, and dined, and supped, &c., with them : but, I know not how, it was one of the deadliest and heaviest feelings of my life to feel that I was no longer a boy.

BYRON.

II. It was a pleasant winter morning, and the cool breeze served only to freshen, not to chill, the fair walkers. The towers of the ruined castle, seen high over every object in the neighbourhood, received a brighter colouring from the wintry sun. “There,” said Lucy, pointing them out in the distance, “there is the seat of our ancestors. God knows, my dear brother, I do not covet in your behalf the extensive power which the lords of these ruins are said to have possessed so long, and sometimes to have used so ill. But, O that I might see you in possession of such relics of their fortune as should give you an honourable independence, and enable you to stretch your hand for the protection of the old and destitute dependents of our family.”

“True, my dearest Lucy,” answered the young heir of Ellengowan ; “and I trust, with the assistance of Heaven, which has so far guided us, and with that of these good friends, such a consummation of my hard adventures is now not unlikely.”

W. SCOTT.

1. State the cases when the subjunctive mood is required in French ; compare its rule with those of the Latin—give examples.

2. What alteration has been made in the orthography of the French language since the age of Louis XIV. ?

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tions.

3. Which was the most brilliant epoch of French literature?
4. State what you know of one of the following authors—Corneille, Molière, Lafontaine.
5. State what you know of the life and works of one of the following poets—Dante, Ariosto, Tasso.
6. Give an account of the life and writings of Lessing and of their influence on German literature.

SCIENCE SCHOLARSHIPS—FIRST YEAR.

MATHEMATICS.

Examiner, Professor NIVEN.

FIRST PAPER.

N.B.—The University Prizes in Geometry were awarded for answering in this Paper.

1. If two triangles have two sides of one equal to two sides of the other each to each, but the included angles unequal, the base of that which has the greater angle will be greater than the base of the other.

2. Given two points A, B and a straight line of unlimited length, find a point P in the straight line such that $AP + BP$ may be the least possible.

3. If a straight line A B be divided into any two parts at the point C, prove that the squares on A B, B C are together equal to twice the rectangle under A B, B C together with the square on A C.

4. If D, E, F be the middle points of the sides B C, C A, A B of a triangle, prove that $3(AB^2 + AC^2 + BC^2) = 4(AD^2 + BE^2 + CF^2)$.

Prove also that, if $AD = BE = CF$, the triangle must be equilateral.

5. The angles in the same segment of a circle are equal to one another. State and prove the converse of this proposition.

6. A B and C D are two chords of a circle of which A B is given in position and C D given in length; find the locus of the intersections of A D, B C and of A C, B D as C D is moved round the circle.

7. Describe a circle touching a given straight line and touching a given circle at a given point.

8. Describe a regular pentagon about a given circle.

Let ABCDE be a regular pentagon and let the tangent at C to the circumscribing circle meet A D produced in G, prove that D G is equal to a side of the pentagon, and that, if all such points as G be joined, they form a regular pentagon whose side is equal to A C.

9. If the sides about the three angles of one triangle have the same ratios as the sides about the three angles of another, the two triangles shall be equiangular and have those angles equal the sides about which are proportional.

10. If A be a point outside a circle whose centre is O, and if there be drawn to the circle two unequal lines A B, A C equally inclined to A O, and if B C meet A O in D, prove that the rect: A O, D O=square on the radius of the circle.

SECOND PAPER.

1. Explain the process of converting a vulgar into a decimal fraction, and prove that it will be either terminating or repeating.

Find the continued product of $\cdot 81$, $1\cdot 30\bar{1}$, $4\cdot \bar{1}$.

2. A gold chain is made of an alloy of 3 parts gold to 1 of copper, and the cost of manufacturing it is 10 per cent. on the value of the gold employed. A sovereign consists of 11 parts gold to 1 copper, and 10 lbs.

troy of the alloy make $467\frac{1}{4}$ sovereigns. What should be the price of a chain which weighs $2\frac{1}{2}$ oz., the value of the copper being neglected?

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tions.

3. If $x = b - c$, $y = c - a$, $z = a - b$, prove that the following quantities are all equal :

$$yz - x^2, \quad zx - y^2, \quad xy - z^2, \quad yz + zx + xy, \quad \frac{3abc - a^3 - b^3 - c^3}{a + b + c}.$$

Multiply also $2a + 3b - c$ by $2a - 3b + c$.

4. Find the factors of the following expressions :

$$x^3 + 1, \quad x^3 - a^3 + \frac{3}{2}(ax^2 - a^2x), \quad (a^2 - b^2 + c^2)^2 - 4a^2c^2.$$

5. Simplify these :

$$(1) \quad -\frac{2+x}{2-x} + \frac{2x-1}{2+x} - \frac{3(2+x^2)}{4-x^2};$$

$$(2) \quad \frac{(x-1)^3}{x^3+1} \div \frac{x^2-2x+1}{x^2-x+1}.$$

Also show that

$$\frac{b^2}{a+b} + \frac{b^2}{(a+b)(2a+b)} + \frac{b^2}{(2a+b)(3a+b)} = \frac{3b}{3a+b}.$$

6. Solve the following equations :

$$(1) \quad \frac{1+x}{1-x} + \frac{2+x}{1-2x} = 3 - \frac{3(1+x)(2+x)}{(1-x)(1-2x)};$$

$$(2) \quad x + \frac{1}{3}(2y-x) = 1 + \frac{1}{4}(x+y-1) \\ x + y - \frac{1}{3} = \frac{1}{2}(1-x+y).$$

7. Define ratio, and find whether a ratio is increased or diminished by adding the same number to both numerator and denominator.

If $a + b + c : -a + b + c :: a - b + c : a + b - c$, show that a is a mean proportional between $c + b$ and $c - b$.

8. Define an arithmetic series, and find the general term and the sum of n terms.

Insert 3 arithmetic means between 5 and 6.

9. If the first, third, and fifth terms of a geometric series taken together be equal to seven-fourths of the sum of the first, second, and third terms, find the common ratio.

10. Prove, from the definitions of the sine and tangent of an angle, that

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

Given $\cot B - \tan B = \sin B - \cos B$, find $\sin B$.

11. Prove these formulæ :

$$(1) \quad \sin 2A = 2 \sin A \cos A;$$

$$(2) \quad 1 + \cos^2 x + y + \cos^2 x - y + \cos^2 2x + 2 \cos x + y \cos x - y \cos 2x = 0.$$

12. Given two sides of a triangle and the included angle, show how to solve the triangle.

Ex. Given $b = 2$, $c = 1$, $A = 60^\circ$.

13. If the perpendiculars from the angles of a triangle on the opposite sides intersect in P, prove that $AP : BP : CP :: \cos A : \cos B : \cos C$.

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tions.

SECOND AND THIRD YEARS.

MATHEMATICS.

Examiner, Professor NIVEN.

N.B.—This paper was also given to candidates for Scholarships of the second year in Engineering, subject to the modifications pointed out at the end.

1. Equiangular parallelograms have to each other the ratio compounded of the ratio of their sides.

A rhombus and an equiangular parallelogram have the same perimeter, find which has the greater area.

2. Find a factor which will rationalize $2^{\frac{2}{3}} - 3^{\frac{1}{3}}$ and extract the square root of $x + 4a^{\frac{1}{2}}x^{-1} - 2a^{\frac{1}{2}}x^{\frac{1}{2}} - 4ax^{-\frac{1}{2}} + 5a^{\frac{3}{2}}$.

3. If the squares of $xy + xz - yz$, $yz + yx - xz$, $zx + zy - xy$ be in arithmetical progression, show that x, y, z are also in arithmetical progression.

4. Prove the Binomial Theorem for a positive integral index.

If $(1+x)^n = 1 + a_1x + a_2x^2 + \dots + a_nx^n$, prove that

$$1 + a_1 + a_2 + \dots + a_n = 2^n,$$

$$1 + \frac{a_1}{2} + \frac{a_2}{3} + \dots + \frac{a_n}{n+1} = \frac{2^{n+1} - 1}{n+1}.$$

5. If $a_0 + a_1x + a_2x^2 + \dots = b_0 + b_1x + b_2x^2 + \dots$ for all values of x , prove that $a_0 = b_0$, $a_1 = b_1$, $a_2 = b_2, \dots$

Thence sum the series $1^2 + 3^2 + 5^2 + \dots$ to n terms.

6. Prove that $\log_e N = \log_e N \div \log_e a$.

7. Explain the circular system of measuring angles, and find the number of degrees in the unit of this system.

If $\sin A = \tan b \tan c$, $\sin B = \tan a \tan c$, $\tan A \tan B = \sin c$, prove that $\sin c = \cos a \cos b$.

8. If AD, BE be the perpendiculars to the opposite sides of a triangle ABC from the angles A, B, and if DE produced meet AB in G, find AG, BG, and show that if M be the middle point of AB, then

$$MG = \frac{1}{2} \cdot \frac{c \sin C}{\sin A - \sin B}.$$

9. Find the relations which exist between the co-efficients of a rational integral equation and the sum and sums of products of the roots.

If $\alpha\beta\gamma$ be the roots of $x^3 + px^2 + qx + r = 0$, find the value of

$$(\alpha - \beta)(\alpha - \gamma) + \frac{\beta - \alpha}{\beta - \gamma} \cdot \frac{\beta - \gamma}{\gamma - \alpha} \cdot \frac{\gamma - \alpha}{\alpha - \beta}$$

in terms of the co-efficients of the equation.

10. Find the equation of the straight line passing through two points whose co-ordinates are given.

Find the line through $(1, 2)$ $(3, -2)$, its intercepts on the axes, and the perpendicular on it from the origin.

11. Find the equation of the tangent to a parabola at any point, and prove that the subnormal is constant.

12. If the normal to an ellipse at any point P meet the major axis in G, and the minor axis in G', prove that $PG : PG' :: b^2 : a^2$.

Find also the locus of the middle point of GG'.

13. If two straight lines be cut by parallel planes, prove that they are cut in the same ratio.

N.B. Candidates for the Scholarship of the Second Year in Engineering will substitute for questions 10, 11, 12 above, the following:—

(10.) If the angles at the base of a spherical triangle are both right angles, prove that the opposite sides are both quadrants and that any arc from the vertex to the base is also a quadrant.

(11.) Two sides of a spherical triangle being given, and also the included angle, investigate the expression which gives the third side.

How do we solve the corresponding problem in which two angles and the included side are given?

(12.) In a spherical triangle right-angled at C, prove that

$$\tan^2 \frac{c}{2} = \frac{\cos A - B}{\cos A + B}.$$

SENIOR SCHOLARSHIPS.

I.—ANCIENT LANGUAGES AND HISTORY.

GREEK.

Examiner, Professor BOULGER.

The candidates were examined *vis à voce* in *ÆSCHYLUS—Septem contra Thebas*; and in the subjects for the B.A. Honor examination of the University; and in Greek Literature and History.

Translate into Attic Greek:—

But with all this, the prince did not consider his work sufficiently secure. It was to be expected that the enemy would leave nothing unattempted to burst, by the force of his machines, the middle and weakest part. To guard against this, he erected in a line with the bridge of boats, but at some distance from it, another distinct defence, intended to break the force of any attack that might be directed against the bridge itself. This work consisted of thirty-three vessels of considerable magnitude, which were moored in a row athwart the stream, and fastened in threes by masts, so that they formed eleven different groups. Each of these like a file of pikemen presented fourteen long wooden poles with iron heads. These vessels were loaded merely with ballast, and were anchored each by a double but slack cable, so as to be able to give to the rise and fall of the tide. To all these defensive preparations, was added a fleet of forty men-of-war, which were stationed on both coasts, and served as a protection to the whole.

LATIN.

Examiner, Professor LEWIS.

Subject for a Latin Essay.

“Dicitur Afrani toga convenisse Menandro,
Plautus ad exemplar Siculi properare Epicharmi,
Vincere Caecilius gravitate, Terentius arte.”

Translate into Latin verse:—

Lo the poor Indian, whose untutored mind
Sees God in clouds, or hears him in the wind;
His soul proud science never taught to stray
Far as the solar walk or milky way;
Yet simple nature to his hope has given
Behind the cloud-topped hill a humbler heaven,
Some safer world in depth of woods embraced,
Some happier island in the watery waste.
To be, contents his natural desire,
He asks no angel's wing, no seraph's fire;
But thinks, admitted to that equal sky,
His faithful dog shall bear him company.

G

Appendix D.

Scholarship
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tions.

II.—MODERN LANGUAGES, LITERATURE, AND HISTORY.

ENGLISH LITERATURE.

Examiner, Professor ARMSTRONG.

1. Make an analysis of the stanza in which the *Man of Lawes Tale* is written.
2. Quote, as accurately as you can, the lines in the *Man of Lawes Tale* in which Chaucer embodies the astrological belief of the Middle Ages.
3. Give a summary of the events described in Canto V. of the *Faery Queene*, and explain the portion of the allegory contained in it.
Particularize, and, if possible, quote, what you consider the most notable passages in this canto.
4. Analyse the stanza of the *Faery Queene*, and give its history.
5. Comment upon the speech of the Porter in *Macbeth*, and state the arguments for and against the supposition that it is Shakspeare's.
6. Comment upon the comic element in *King Lear*, and show in what ways it serves to heighten the tragic intensity of the play.
7. Contrast the mental states of Lear, Edgar, and the Fool, in Scene IV. of Act III. of *King Lear*.
8. Describe the parts taken by the several Spirits in the "Great Consult," in Book II. of *Paradise Lost*.
9. Analyse the versification of *Paradise Lost*, and point out its characteristics.
10. Give an account of the origin of Dryden's *Mac Flecknoe*.
Criticise the satire of this poem, pointing out its distinguishing features, and illustrating your remarks by quotations.
11. How far may the *Essay on Man* be taken as a representative poem of the age of Pope?—Cite the principal passages in the poem from which you draw your conclusions.
12. Collect and present passages from the *Poems of the Imagination* from which you think it may be possible to extract the philosophy of Wordsworth.

MODERN HISTORY.

Examiner, Professor ARMSTRONG.

1. Explain the causes of the decay of the Empire of Charlemagne.
2. Give an account of the Crusades of St. Louis.
3. Describe the circumstances under which the question of the succession of females to the throne of France first rose into public discussion.
—Give an account of the controversy.
4. What were *appanages*?
5. Describe the position of the Jews in European Countries during the Middle Ages.
6. Give some account of the movement under Rienzi the Tribune.
7. Mention the principal conquests of Florence and of Venice during the Middle Ages.
8. What three essential principles of our Government were established by Parliament on a firm footing during the reign of Edward III.?
9. When in our history does the *privilege of Parliament* begin to attract attention?
10. Give an account of the poetry of the Germans during the Middle Ages.

MODERN LANGUAGES.

Examiner, Professor DE VERICOUR.

(See Literary Scholarships of Second and Third Years, p. 93, for this Paper.)

III.—MENTAL AND SOCIAL SCIENCE.

LOGIC AND METAPHYSICS.

Examiner, Professor READ.

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tions.

1. Compare the experimental methods of Mill with Bacon's "Tables of Instances."
2. What does Mill mean by the composition of causes? To what is it opposed? On what is the distinction founded?
3. On what ultimate principle or principles do the general rules for syllogisms depend? Illustrate by examples.
4. What is the true explanation of the necessity generally attributed to mathematical reasoning?
5. Is Des Cartes' proof of the existence of the external world a case of reasoning in a circle?
6. Explain and illustrate the method of Spinoza.
7. Criticise Cousin's objections to Locke's account of the origin of our idea of space.
8. Examine the arguments by which Hume endeavours to prove that the notion of cause and effect is not *à priori*. What is his own account of it?
9. What is Kant's answer to the assertion that all our knowledge is derived from experience?
10. What is the real answer given by Reid to what he calls the "Ideal Theory"?
11. What is the regulative faculty according to Hamilton? How does it differ from the other faculties?
12. State briefly the explanation which the "psychological method" gives of the *non ego*.

IV.—NATURAL SCIENCE.

PHYSICAL GEOGRAPHY AND GEOLOGY.

Examiner, Professor HARKNESS.

1. Mention the several kinds of mineral springs and their contents.
2. What are the causes which affect the rapidity of transmission of earthquake waves?
3. What are the causes which influence the direction of isothermal lines?
4. What are the features of deposits which are produced by the agency of currents?
5. Mention some of the more important of the Plutonic rocks, and describe their mineral composition.
6. What is the position of the Potsdam sandstone?
7. Mention some of the most characteristic fossils of the Bala or Caradoc series.
8. What is the position of the Petherwin shales? Name some of the fossils which characterize these strata.
9. What are the members which make up the Permian formation of the North of England?
10. In what horizon do the ichthyopterygia make their first appearance?
11. What is the position, and what are the characteristic fossils of the Bradford clay of Wiltshire?
12. What is the age, and what is the nature of the Nummulitic limestone?

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tions.

ZOOLOGY AND BOTANY.

Examiner, Professor REAY GREENE.

1. Give the dental formulæ of (1) the common Pig, (2) the Babyrussa, (3) the Wart-hog, and (4) the Peccaries.
 2. Describe the ear-passages as they usually appear in birds.
 3. Contrast the skull of Ichthyosaurus with that of any Crocodilian.
 4. Name the recent genera of Ganoids, and indicate the characters of the families under which they are arranged.
 5. Describe the oral appendages of the common house-fly, comparing them with those of a typical orthopterous insect.
 6. Characterize the principal subdivisions of Gasteropods (excluding Pteropods and Heteropods).
 7. Wherein do Crinoids differ from other Echinoderms?
 8. In what groups of invertebrate animals is continuous budding known to occur?
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9. Give some account of the life-history of *Edogonium*.
 10. Describe the structure of *Isoëtes*.
 11. Give examples of monocotyledons with orthotropous ovules.
 12. Draw ground-plans, comparing the floral structure in Crucifere, Fumariaceæ, and Chelidonium.

Faculty of Law.

SESSIONAL EXAMINATIONS.

SECOND YEAR'S ENGLISH LAW.—EQUITY.

Examiner, Professor O'SHAUGHNESSY.

1. Give the two meanings belonging in equity jurisprudence to the maxim, "Equity follows the law." State the limitations with which the maxim must, in both its branches, be taken.
2. Explain the rule that a court of equity never wants a trustee. State what will be done where a trust exists, and the party creating it has not appointed any trustee to execute it, where the party is (a) personal estate, and where (b) it is real estate.
3. Why does a wife's equity to a settlement not depend on any right of property in her? State the true ground on which the right rests?
4. What is the object of bills to perpetuate testimony? To what great objection is this jurisdiction of the courts of equity open?

PERSONAL PROPERTY (WILLIAMS).

5. Mention some of the acts which are considered acts of bankruptcy.
6. If a bond or covenant be given or made to two or more jointly, who must sue upon it? What would be the effect of a release by one?
7. What is the derivation of the word "bailment"? Define a bailment.

CONTRACTS (SMITH).

8. State if either of the following be void; if so, which; and state the reason:—A deed providing for a fund for a wife's support on the occasion of an immediate separation between her and her husband. A deed tending to the future separation of husband and wife.

Sessional
Examina-
tions.

9. What was the chief object of passing the Statute of Frauds? What are the contracts provided for by the 4th section? What does the 17th section provide as to the sale of goods? Appendix D.
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tions.

10. Upon what principle does a wife's power to bind her husband by contract during marriage depend?

THIRD YEAR'S ENGLISH LAW.

1. What is the general object of the provisions of the statutes which bear upon printing in general, and those which relate to particular species of publications? State some of the provisions in force for the control of newspapers.

2. Define civil injuries, and state how, in general, they are redressed.

3. State (having regard to what, in its nature, a distress at common law is) some of the things which ought not to be distrained for rent, and mention the reason.

4. What is accord? What is necessary in order that it should be a bar to any action on account of an injury?

5. Define a court. What is the practical distinction between a court of record and one not of record?

6. Define a libel. What two remedies are there to redress the injury received by the publication of a libel?

7. What is a petition of right? What are the proceedings thereunder?

8. Show that murder can be committed only by a person of sound memory and discretion.

9. What is an affray? How may an affray be suppressed? What is the difference between affrays and riots as to the number of persons who must be engaged in order to constitute the offence?

10. Distinguish a presentment (in its proper sense) from an indictment. How many must assent to find a true bill?

SCHOLARSHIP EXAMINATIONS.—SECOND YEAR.

Examiner, Professor O'SHAUGHNESSY.

Scholarship
Examina-
tions.

PERSONAL PROPERTY.

1. What is the effect of the indorsement of a bill of lading by the consignee with his name?

2. What is the rule, in the construction of wills, as to expressions when applied to personal property which, if applied to real estate, would confer an estate-tail?

3. Under what circumstances, and to whom generally, is administration *cum testamento annexo* granted?

4. Where one party, A, to an agreement verbally promised the other, B, that in consideration of his discharging from custody C, whom B had taken in execution for debt, he, A, would pay the debt, it was held that, on this verbal promise, an action might be brought. What was the reason for this decision?

CONTRACTS.

1. Why is the sale of a crop of mowing grass, unripe, and which the purchaser is to cut, considered the sale of an interest in land within the Statute of Frauds?

2. What must an executed consideration be founded upon? How does it differ in this respect from an executory consideration?

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Examinations.

3. What is the nature of the fraud in consequence of which a contract may be avoided?
4. Define a corporation aggregate. How do its powers of contracting differ from those of an ordinary person?

EQUITY JURISPRUDENCE.

1. What are the cases in which a suit for the recovery of rent may be entertained in Equity?
2. When resort is had to Equity to have an apportionment made of an incumbrance, loss, expense, or liability, what will the court enforce, consequent on such an apportionment?
3. What are the reasons why, when a married woman joins in a bond with her husband to pay his debts, without reference to her separate estate, it shall be intended as an application *pro tanto* of her separate estate?
4. In what cases only is Set-off ordinarily allowed in Equity?

Faculty of Medicine.

SESSIONAL AND PRIZE EXAMINATIONS.

EXPERIMENTAL PHYSICS.

Examiner, Professor ENGLAND.

1. Define "force." How may a force be represented by a straight line? What geometrical relation subsists between three straight lines which represent three forces in equilibrium and acting at the same point?
2. A particle is moving in a straight line under the action of a constant force, what is meant by its *acceleration*?
3. The specific gravity of mercury being 13.6, at what height would a water barometer stand when the mercurial barometer reaches thirty inches?
4. State accurately the effects of a change of temperature on each of the above instruments.
5. Explain the terms "Unit of Heat," and "Mechanical equivalent of Heat."
6. Describe some experiments to show that cold is produced by evaporation.
7. What must be the length of a cylindrical tube closed at one end which reinforces the sound of a tuning fork making 256 vibrations per second?
8. A small luminous body being held near the eye, three images of it may be observed, one by reflection from the surface of the *cornea*, the other two by reflection from the anterior and posterior surfaces of the *crystalline lens*, how would you distinguish them from each other?
9. What is the explanation of the dark lines observed in the solar spectrum.
10. A magnetic needle is capable of moving in every direction about its centre of gravity, which is fixed, what position will it assume from the action of the earth?
11. An electric magnetic machine may be constructed to exhibit effects of quantity or of intensity, what is the difference of arrangement to produce these respective effects?
12. How is a thermo-electric current produced?

Sessional
and Prize
Examinations.

CHEMISTRY.

Examiner, Professor SIMPSON.

PASS QUESTIONS.

Appendix D.

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tions.

1. If 40 grains of hydrogen gas were passed over an excess of red-hot oxide of copper, what weight of water would be formed and what loss of weight would the oxide of copper sustain?

2. Give equations representing the action of (a) sodium and water; (b) iron and water at a red heat; (c) copper and hot strong sulphuric acid; (d) nitrate of potash and sulphuric acid with heat; (e) common salt and sulphuric acid with heat.

3. When sulphide of iron is acted upon by dilute sulphuric acid what gas is evolved? Enumerate the most characteristic properties of this gas, and explain its use in qualitative analysis. What is its action upon sulphur dioxide?

4. What gases are respectively generated when nitrate of ammonia is subjected to the action of heat, and nitric acid to the action of metallic copper? Give equations explanatory of these reactions. Enumerate the most characteristic properties of the gases, and state how they may be distinguished from oxygen.

5. What are hard and soft waters? Explain the action of soap upon them, and the meaning of the terms temporary and permanent hardness?

6. How may hydrate of baryta be obtained from the native sulphate? Explain the reactions by equations.

7. Explain what is meant by the terms monobasic, bibasic, and tribasic acids? Give an example of each class?

8. How may ferrous and ferric chloride be prepared? Explain the reactions by equations, and state how they may be distinguished from each other?

9. What is the chemical difference between gray and white cast-iron? Contrast the action of hydrochloric acid upon these varieties?

10. Explain by equations the action of Sulphide of hydrogen upon acid solutions of sulphate of cadmium and arsenious acid respectively. How would you distinguish from one another the precipitates formed, and how would you obtain metallic arsenic from the arsenical one?

11. How is Tartar emetic prepared? Explain the reactions by equations, and state how antimony may be detected in the salt?

12. Explain the process of dialysis. What are "colloids" and "crystalloids"? Give examples.

13. What relation exists between the molecular weights of compound gases and vapours, and their specific gravities compared with hydrogen as unity? Give the molecular weights and specific gravities of the following compounds:—Ammonia, hydriodic acid, marsh gas, vapour of alcohol. (Atom of iodine=127.)

14. How may anhydrous prussic acid be prepared from bicyanide of mercury? Explain the reaction by an equation, and give the Prussian blue and sulphur tests for this acid.

15. What are compound radicals? Give examples of monatomic, diatomic, and triatomic radicals.

16. How is cyanide of ethyl prepared, and what is the action of potash upon it? Give equations.

17. Describe and explain Will and Varrentrapp's method for the determination of nitrogen in organic compounds.

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tions.

ANATOMY AND PHYSIOLOGY.

Examiner, Professor CHARLES, M.D.

[In addition to the oral class examinations, First Year Students are required to answer questions 1, 2, 4, 5, 7, 8, 9, and 13; Second Year, 3, 6, 7, 10, 11, 12, and 13.]

1. Describe minutely the microscopical characters of the chief varieties of Cartilage, and explain the method by which wounds in this tissue are healed.

2. Give a detailed account of all the phenomena which accompany the contraction of Muscle.

3. Describe the microscopical characters of Nerves and Nerve Cells. How are their varieties classified by Max Schultze?

4. Enumerate the characteristic differences—1, between the Large and Small Intestine; and 2, between the Duodenum and the lower end of the Ileum.

5. What is the average quantity of gastric juice secreted in the 24 hours? Describe its uses in digestion, and show how these can be experimentally determined.

6. Write a short essay on the Functions of the Liver.

7. Describe briefly any two of the following instruments—the Hæmodromometer, Pneumograph, Recording Stethometer, and Sphygmograph. State the use and mode of application of each instrument you describe.

8. How much Carbon is ordinarily exhaled, in the form of carbonic acid, from the lungs and skin respectively in 24 hours? Enumerate the more important circumstances which cause a variation in the amount of Carbonic Acid expired.

9. Describe the Urinary Bladder; its relations, ligaments, blood-vessels, and structure.

10. Give a complete account of the most recent views as to the Functions of the Vagus nerve; and, if possible, illustrate your description by diagrams.

11. Describe the developmental history of the Allantois, Wolffian Bodies, and Müller's Ducts.

12. Give a minute description of the Organ of Corti.

13. Name the preparations under the Microscopes numbered 1-8, and the moist specimens numbered 1-6.

PRACTICAL ANATOMY.

Examiner, Professor CHARLES, M.D.

[In addition to making a Dissection, First Year Students are required to answer questions 1, 2, 3, 4, 5, and 6; Second Year, 1, 2, 5, 7, 8, and 9.]

1. Give an accurate description of the outer and inner surfaces of each of the following bones:—Lachrymal, superior maxilla, trapezoid, and middle cuneiform.

2. Describe all the ligaments attached to the os calcis and sixth dorsal vertebra respectively.

3. Give the exact attachments, relations, and actions of the following muscles:—Adductor brevis, internal intercostal, psoas magnus, and teres major.

4. Describe the epigastric, subscapular, superior intercostal, and dorsalis pedis arteries.

5. State the course, relations, tributaries, and termination of each of the following veins:—Vena azygos major, vertebral, left innominate, internal jugular, and vena portæ.

6. Describe concisely the successive steps of the dissection necessary to expose every part of the Abdomen (including the pelvis, but excluding the perinaeum). No description of the parts themselves required. Appendix D.
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Examinations.

7. Give the course, relations, and distribution of the fourth sacral, glosso-pharyngeal, and obturator nerves.

8. Describe the dissection of the Soft Palate, and give a careful account of the attachments, relations, actions, and nervous supply of each of its muscles.

9. Describe the Fourth Ventricle of the Brain; the method of exposing it for examination, its boundaries, shape, and internal appearances. Give also a brief account of the gray matter in its floor.

MATERIA MEDICA AND THERAPEUTICS.

Examiner, Professor O'KEEFFE.

1. How would you distinguish between a gum, a resin, and a gum-resin?

Name the most important drugs in each class described in the B. P.

2. Give the source, active principles, dose, and mode of administering the following named substances:—chamomile, calumba, colchicum, digitalis, hyoscyamus, jalap, quassia, santonica, and senna.

3. What are the doses of the following for an adult:—Fowler's solution, liquid extract of opium, corrosive sublimate, Dover's powder, liquid extract of yellow bark, hydrocyanic acid, chloral hydrate, permanganate of potash, granulated sulphate of iron?

4. Classify the extracts of the B. P.

5. In what different ways do emetics act? When are they indicated? and how administered? Name the principal medicines of this class.

6. Write a prescription for an eight-ounce mixture containing an alkaline bicarbonate, with directions to have it taken in effervescence with lemon-juice, citric acid, or tartaric acid.

7. Ergot—Sketch its botanical history. What are its principal constituents, therapeutical indications, and modes of administration?

8. Name the most common impurities of iodide of potassium, with the mode of detecting them. How may the purity of this drug be determined by volumetric analysis?

9. Give the pharmacopœial processes for obtaining strychnia and morphia, respectively; and contrast the chemical, physiological, and therapeutical properties of these alkaloids.

10. How would you distinguish between a ferrous and a ferric compound? What means are adopted in the B. P. for the conversion of the former into the latter?

11. Name the most important indications for the use of electricity in medicine.

Contrast the therapeutic properties and powers of Galvanism and Faradism.

12. Name the specimens placed before you, marked 1, 2, 3, 4, 5, 6, the preparations from them in the B. P., and the indications for their use.

PRACTICE OF MEDICINE.

Examiner, Professor O'CONNOR.

1. What are the external appearances, and the symptoms in purpura and scorbutus respectively?

2. Specify the various causes of hæmoptoe, with an explanation of their *modus operandi*.

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tions.

3. What are the secondary effects of intermittent fever, and the manner of their production?
4. What age is most liable to typhoid fever, and the reason of any preference?
5. What modification of variola do we find in those who had been vaccinated, and the influence of time from the period of vaccination on the symptoms?
6. How is cerebral disease caused by the condition of other organs, and what organs?
7. Enumerate the various pathological states of the bronchi and air cells. Explain their causes.
8. What treatment would you adopt in a case of hepatic congestion?
9. What symptoms would influence you to give wine in a given case of fever?
10. What would influence you to give or withhold tonics in a case of dyspepsia?

SURGERY.

Examiner, Professor TANNER.

1. Describe the pathology, or essential nature of the process of inflammation.
2. Also the pathological anatomy of pyæmia.
3. What are the different kinds of erysipelas, their course and treatment?
4. In what respects does hydrophobia resemble and differ from tetanus?
5. What are the different kinds and signs of hæmorrhage, and their treatment?
6. Give the several fractures of the skull.
7. State the different kinds of abdominal hernia, the symptoms of strangulated, oblique, inguinal hernia, and the treatment, giving in detail, Wood's operation for its radical cure.
8. Describe the operation for excision of the wrist-joint, and of the os calcis.

MIDWIFERY.

Examiner, Professor HARVEY.

1. The ovaries of a child, of an adult, and of an old person are placed before you. How would you distinguish them from one another; and upon what do the differences depend?
2. What are the peculiarities of the pelvis known as the "masculine pelvis"? How does its existence affect the progress of labour?
3. A lady is supposed to be pregnant;—not having menstruated for the three last periods. What other points of evidence can you avail of to aid you in determining the question?
4. Give an account of the pathology, growth, symptoms, and treatment of uterine hydatids.
5. Does the cervix uteri, during the last months of pregnancy, come to form a portion of the walls of the general cavity of the uterus; and if not, how is it disposed of?
6. Give your view of the nature of uterine contraction in labour. How does the action of the organ in the first stage differ from that in the second, in its mechanism, its characteristic phenomena, and its objects?

7. Detail minutely the mechanism of all the steps of the progress of the child's head through the pelvis in a natural labour. Mention if there be an accidental occurrence which may take place, and seriously interfere with the completion of the process.

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tions.

8. Describe the action of ergot on the gravid uterus. What ill effects may arise from its use; and in what cases is it peculiarly serviceable?

9. You are called to attend a case of twins. How would you diagnose the presence of two children in case of opportunity for an examination occurring; and how would you manage the whole case?

10. Under what circumstances is post-partum hemorrhage likely to take place? What means would you take to guard against its occurrence, and what would be your treatment in case of its coming on?

MEDICAL JURISPRUDENCE.

A.—MEDICAL PART.

Examiner, Professor O'KEEFFE.

a. Written Examination.

1. The body of an infant is submitted to you for examination. How would you proceed to ascertain—(a.) Whether it had arrived at the full period of intra-uterine life; (b.) whether it had lived to breathe; (c.) whether it had lived from three to six days?

2. What are the signs of recent delivery, and to what extent are they available in medico-legal practice?

3. A body is found dead with ecchymosed marks upon it. How would you proceed to examine whether these were the results of violence inflicted before or after death?

4. Give your opinion as to the best criterion of a lucid interval; and state what conditions would justify you in signing a certificate for putting an insane person under restraint, and the formalities to be gone through on such an occasion.

5. A body is exhumed. It has lain in a coffin in dry earth for four months. What marks of putrescence (external and internal) will you probably find upon it, and how may these be modified by circumstances?

6. A skeleton (or parts of one) is dug up and presented to you for examination. How would you proceed to ascertain the age and sex of the individual to whom it belonged?

7. Three men died recently on descending into a well in a certain town in this county. What was the probable cause of death, and what precautions should have been used after the descent of the first man? What were the appearances present in the body of the animal you saw poisoned by carbonic oxide?

b. Oral Examination.

1. Obtain Tiechmann's crystals from the piece of blood-stained cloth placed before you, and exhibit them under the microscope.

2. The bottle (marked T) contains a mineral poison in organic matter. Proceed, with the reagents at your hand, to determine what it is.

3. Say which of the pieces of cotton cloth, marked C and D, is stained with menstrual blood?

4. (K) is a dialysed fluid, obtained from the contents of the stomach of an animal poisoned for lecture purposes. What is the poison in it?

5. (P) is a plant which, by its admixture with articles of food, has

Appendix D. produced dangerous symptoms. What is it, and what are the symptoms produced by its use?
 Sessional and Prize Examinations. 6. Three bottles are placed before you (marked A, B, C), each containing certain crystals. What are they?

B.—LEGAL PART.

Examiner, Professor O'SHAUGHNESSY.

1. Under what circumstances may a burn inflicted come under the usually-accepted legal definition of a wound?

Discuss the terms of the definition.

2. What principle should guide a medical man in expressing an opinion before a legal tribunal as to a wound being dangerous to life?

3. To what should the evidence of a medical witness be specially directed when examined as to the cause of death where a wound has been criminally inflicted?

In case of doubt what course is to be recommended?

4. What limitation does the law put upon the meaning of the words when inserted in a policy of life assurance, "any other disease or disorder tending to shorten life"?

5. What is there in the nature of a policy of life assurance which makes the general state of health of the person insured a material element in the contract.

Scholarship
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SCHOLARSHIP EXAMINATIONS—FIRST YEAR.

(See Papers for Literary and Science Scholarship Examinations in the Faculty of Arts, pp. 90, 94.)

SECOND YEAR.

NATURAL PHILOSOPHY.

Examiner, Professor ENGLAND.

1. What is meant by saying that the acceleration produced by gravity is .32?

2. What is meant by centrifugal force; how is it measured when a heavy body moves in a circle of given radius with a given velocity?

3. How is it shown that there is a part of the *retina* of the eye insensible to the action of light?

4. Illustrate by a sketch, the position of the image of an object, as seen by an ordinary magnifying glass.

5. If 1.5 lbs. of ice at 0°C. mixed with 9 lbs. of water at 20° give 10.5 lbs. of water at 5°, what is the latent heat of water?

6. What do you mean by harmonic tones; how are they produced on a strained cord?

7. How is it shown that electricity is accumulated on the surface of an insulated charged conductor?

8. Why does a fine platinum wire become heated by passing an electric current through it, while a similar copper wire does not.

9. How would you magnetize a fine steel needle by means of frictional electricity.

CHEMISTRY.

Examiner, Professor SIMPSON.

N.B.—This paper was given to Candidates for Scholarships of the Second Year in Medicine and Engineering.

Appendix D.

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tions.

1. What is the composition of the atmosphere, and how may it be determined by means of the eudiometer?
2. By what experiments could you prove that the gases contained in the atmosphere are simply mixed and not chemically combined?
3. Give two processes for the preparation of nitrogen gas. Enumerate its principal properties, and state under what conditions it may be made to combine with carbon and hydrogen respectively.
4. How is sulphur dioxide prepared? Give its most characteristic properties, and state how the dry gas may be made to combine directly with oxygen. Write the formula of the body formed when sulphur dioxide dissolves in water.
5. How would you prove that the atomic weight of oxygen is double its equivalent weight?
6. How is ammoniacal gas prepared? Enumerate its most characteristic properties, and explain how its composition by volume may be determined by means of the eudiometer. Explain also the preparation and application of Nessler's test for the detection of this alkali.
7. What are hard and soft waters? Explain the difference between temporary and permanent hardness. Explain also the action of hard waters upon soap.
8. Enumerate the principal ores of iron and give their composition.
9. What is the chemical difference between gray and white cast iron? Explain the action of hydrochloric acid upon each of these varieties.
10. How is ferrous sulphate prepared, and how may it be transformed into ferric sulphate? Give the formulæ of these salts, and state how they may be distinguished from each other.
11. What do you mean by the term atomicity or equivalence as applied to an element? Write the graphic formulæ of the following compounds:—nitric, sulphuric and tribasic phosphoric acids, barium nitrate, olefiant gas, alcohol, glycol, acetic acid.
12. How is hydrocyanic acid prepared? Explain by an equation the action of strong hydrochloric acid upon it, and give the Prussian blue and sulphur tests.
13. By what chemical experiments could you prove that a molecule of marsh gas contains four atoms of hydrogen?
14. Give a general method for the preparation of monobasic, and one for the preparation of bibasic organic acids. Illustrate by examples, and write equations explanatory of the reactions.
15. How may marsh gas be transformed into methyl alcohol, and ethylene gas into ethyl alcohol?
16. Explain Varrentrapp and Will's process for the determination of nitrogen in organic compounds.

NATURAL HISTORY.

Examiner, Professor REAY GREENE.

ZOOLOGY.

1. Give examples of mammals, belonging to different orders, having two incisors on each side of the upper jaw.
2. Name the primary divisions of the order of serpents (Ophidia), and add the characters of each.
3. Describe the skull of Chimæra.

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4. Describe the position and structure of the gills in an oyster.
5. In what arthropods are the sexes not distinct?
6. Describe the skeleton of a brittle-star (*Ophiura*).

BOTANY.

7. What unicellular plants have the power of apical growth?
8. Contrast *Ophioglossum* with ordinary Ferns.
9. Name the orders of Gymnosperms.
10. Under what larger groups are the orders of *Thalamifloræ* conveniently arranged?

ANATOMY AND PHYSIOLOGY.

Examiner, Professor CHARLES, M.A., M.D.

1. A breakfast is taken of eggs, meat, and bread. Describe in detail the changes which occur in each of the substances named as it passes through the alimentary canal. Name the secretion or secretions which act upon each, and say at what portions of the canal its fundamental constituents are absorbed.
2. State approximately the weight of the blood in an adult. Give a short account of the different methods by which this has been determined.
3. Define the terms:—"vital capacity," "reserve air," "residual air," "complemental air"; and state the amount of each, in cubic inches, in an adult.
4. Describe carefully the microscopical characters of involuntary muscular fibre. Mention the principal parts of the body in which this tissue is found.
5. Contrast and compare in detail yellow with white fibrous tissue.
6. Give the dimensions and weight of each of the following organs: liver, spleen, ovary, lungs, heart, thyroid body, cerebrum, and spinal cord.

ORAL EXAMINATION.

THIRD YEAR.

ANATOMY AND PHYSIOLOGY.

Examiner, Professor CHARLES, M.A., M.D.

1. Describe briefly the microscopical characters, and, if possible, give sketches of the following structures:—an intestinal villus, lymph corpuscle, nerve cell, tactile corpuscle, muscular fibre of the heart, Malpighian capsule of the kidney, and solitary gland of the large intestine.
2. Give a full account of the glycogenic function of the liver, and show how it is influenced by the nervous system.
3. Describe carefully a lymphatic gland, and state what is known regarding the origin of lymphatics.
4. What are the special functions of the spinal cord and the cerebellum?
5. Describe in detail the structure and development of the chorion. How is the fœtus in aplacental mammals nourished?

ORAL EXAMINATION.

PRACTICAL ANATOMY.

Examiner, Professor CHARLES, M.A., M.D.

1. Describe carefully the first metacarpal and first metatarsal bones. In what respects does the metacarpal bone of the thumb resemble (1) an ordinary metacarpal bone, and (2) a phalanx?
2. Give the attachments, relations, and nervous supply of the fol-

lowing muscles :—Flexor digitorum sublimis, triangularis sterni, psoas magnus, and tibialis posticus. Appendix D.

3. Describe the arterial anastomoses around the elbow, ankle, knee, and wrist joints respectively. Scholarship Examinations.

4. Give an accurate description of the different layers of fasciæ attached to Poupart's ligament and the pubic arch.

5. Enumerate (1) the points of correspondence, and (2) those of difference, in the anatomy of the hand and foot.

6. Name the specimens numbered 1 to 10, and give reasons for your opinion.

ORAL EXAMINATION.

MATERIA MEDICA.

Examiner, Professor O'KEEFFE.

A.—WRITTEN EXAMINATION.

1. Name and classify the different medicines which act as diuretics, and write a prescription for a diuretic mixture with instructions for its use in unabbreviated Latin.

2. Tartar emetic. How prepared? Give its physiological and therapeutical actions—dose, and mode of administration.

3. Name the chief active principles contained in opium, and give the therapeutic action of each.

4. Iodide of potassium. How prepared? Its characters. Most usual adulterations. How may they be detected? Dose.

5. Classify the extracts of the B. P. on the basis of their mode of preparation. Give the mode of preparation, and strength of the liquid extract of yellow bark.

6. Name the principal alkaloids contained in the several officinal cinchona barks respectively; and give some process for testing the remedial value of a preparation of any of these barks.

7. Scammonium. How obtained? Most usual adulterations. Tests for its purity. What pharmacopœial preparations contain it?

8. What relation subsists between the weights and measures of the pharmacopœia. Explain the decimal (French) system of measures and weights. What English measure or weight corresponds most nearly to the centimetre, litre, and kilogramme, respectively?

9. Tests of veratrina, morphia, quinia.

B.—ORAL EXAMINATION.

Give the name, source, active principles, and therapeutic uses of the six drugs placed before you.

FOURTH YEAR.

ANATOMY AND PHYSIOLOGY.

Examiner, Professor CHARLES, M.A., M.D.

1. Give a brief and accurate account of the development of the skull and face.

2. Trace the fibres of the spinal cord upwards through the medulla oblongata.

3. Describe the structure and function of the thymus and prostate glands.

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tions.

4. Describe the urachus, ductus venosus, ductus arteriosus, organ of Giraldés, parovarium, and sinus pocularis, as they exist in the adult. Give a full account of the early condition of each of these structures.
5. Write a short essay on the nervous and muscular currents.

ORAL EXAMINATION.

PRACTICAL ANATOMY.

Examiner, Professor CHARLES, M.A., M.D.

1. What is a *vas aberrans* of the arm? Between what arteries are vasa aberrantia usually found? How are they supposed to be developed, and by what series of changes in them and the arteries can you account for the high origin of arteries in the upper extremity?
2. The subclavian artery has been ligatured in the third stage; how will the circulation in the upper extremity of that side be maintained?
3. Describe fully the otic, semilunar, and Caserian ganglia.
4. Give a full account of the following arteries:—princeps cervicis, median, ilio-lumbar, transversalis colli, dorsalis hallucis, bronchial, internal circumflex, and profunda femoris.
5. Give a full account of the veins of the thorax.
6. Name the specimens numbered 1 to 10. State to which side of the body each belongs, and describe the character of the markings on which your opinion is based.

ORAL EXAMINATION.

THERAPEUTICS.

Examiner, Professor O'KEEFFE.

1. The different modes by which emetics act upon the system? Give the therapeutical actions of this class of remedies, and their uses in the treatment of disease.
2. Give a classification of cathartics. Explain the several modes in which medicines of this class prove curative, and the cautions to be observed in their exhibition.
3. What injurious effects have been known to follow the external use of carbolic acid?
4. What are the relative values of the induced and constant currents in the cure of disease? In what class of affections are they found to prove most serviceable?
5. Specify some of the most important uses of water, hot and cold, as a therapeutic agent.
6. State your opinion as to the curative value of counter-irritation. Name the substances most commonly used for this purpose, and the morbid conditions that call for their exhibition.
7. Describe the method of exhibiting medicines by the process of atomization. What medicines may be most usefully administered in this manner, and in what class of cases?
8. Mode of action of chloral hydrate? It is said to be converted into chloroform in the blood; give any facts, or state the results of any observations with which you are acquainted, that would support or contradict this conclusion. Express your own opinion on its probability.

PATHOLOGY.

Examiner, Professor O'CONNOR.

Appendix D.

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Examina-
tions.

1. Describe the appearance of the kidney in the different forms and stages of Bright's disease.
2. What changes take place in the urine in these cases ; what is the immediate cause of the changes, and their tests ?
3. Explain the various causes of general anasarca separately, and of ascites.
4. What are the different causes of apoplexy, and the state of the brain in each ?
5. Enumerate and describe the different kinds of cancer, and state their usual seat.
6. What are the arguments for and against Niemeyer's views of pulmonary consumption ?
7. What are the causes of jaundice ?
8. What organs become affected in intermittent fever, and the immediate cause of these affections ?

SURGERY.

Examiner, Professor TANNER.

1. From what morbid conditions has stone in the bladder to be diagnosed ? Contrast the operations of lithotomy and lithotripsy, in the treatment of stone, pointing out the indications and contra-indications for each.
2. Give the symptoms of subspinous dislocation of the humerus ; and contrast the method of reduction by manipulation with that by extension.
3. What is the pathology, and what are the anatomical changes, in the disease described by Adams as chronic rheumatic arthritis ?
4. What are the views held by modern pathologists with respect to the nature of scrofulous inflammation ?
5. What pathological conditions call for excision of the elbow joint, and state in detail, the different steps of the operation ?
6. Describe Professor Esmark's method of amputation, pointing out its advantages and the dangers to which it is liable.
7. Contrast the methods of torsion and ligature in the treatment of wounded arteries, describing the condition of the vessel after each mode of treatment.
8. Give the symptoms and diagnosis of ulcer of the rectum. How would you treat this affection ?
9. And the symptoms, diagnosis, and treatment, of the morbid condition known as glaucoma. What plan of treatment has been introduced for this affection ?

MIDWIFERY.

Examiner, Professor HARVEY.

1. Mention the points of difference between the egg of an oviparous and a viviparous animal. What special objects are attained in each by its peculiar characteristics ? How is the oviduct modified by the egg ?
2. Can you adduce any facts or arguments which would tend to show that, in impregnation, the male element enters into the formation of the embryo as well as that of the female ?

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tions.

3. In an abortion at four months the fetus has come away, leaving the placenta and membranes in the uterus. What are the dangers to be apprehended in such a state of things; and how would you treat the case?

4. What difficulties in the progress of labour result from the condition known as "Pendulous Belly"? How does it act; and by what means are its effects to be obviated?

5. Describe the various steps of the operation of bipolar version. What advantages has it over the ordinary operation? Mention the cases to which it is not applicable.

6. You are attending a patient in labour who has had *post-partum* hemorrhage in her previous confinements. What means would you take to prevent a recurrence of it this time? Is there anything in the character of the labour that would lead you beforehand to expect its occurrence?

School of Engineering.

SESSIONAL EXAMINATIONS—FIRST YEAR.

GEOMETRICAL DRAWING.

Examiner, Professor JACK.

1. If three straight lines meet in one point, and a straight line be perpendicular to each of them at that point, these three straight lines are in the same plane.

2. Explain what is meant by the "projection" of a point or line on a plane.

3. Show that the projection of a line on two planes at right angles to one another are generally sufficient to determine the line. Can the same method be applied to the representation of curved surfaces?

4. Given the traces of two planes, find the projections of their line of intersection.

5. Find the projections of a line which shall pass through a point whose projections are given, and be parallel to a line whose projections are given.

6. Given a right circular cone with the axis vertical, find the projections and real size of the section of it, by a plane parallel to one side.

7. Given the projections of a sphere, and the traces of a plane cutting it; find the projections of the curve of section.

8. A semicircular cylinder is placed with its axis vertical, the hollow side being turned to the front; find the shadow cast by its own edges on the surface.

9. What are the measuring point and line for a horizontal line making 45° with the picture plane?

10. Explain the meaning of the following terms in classic architecture—Entablature, frieze, abacus, ovolo, scotia, capital.

SECOND YEAR.

SURVEYING, LEVELLING, AND MENSURATION.

Examiner, Professor JACK.

1. Practical examination with Theodolite.

2. Practical examination with Level.

3. How far is *triangulation* necessary in a chain survey?

4. How do you check the accuracy of the principal triangles in a chain survey? When do you discontinue the use of this method?

5. In chaining a line you meet with an obstacle which cannot be seen over, how would you carry on the line beyond the obstacle? Appendix D.

6. What is the nature of the adjustment of the line of collimation in a theodolite of the ordinary form, and how would you examine whether the adjustment be correct? Sessional Examinations.

7. What is meant by a level "traversing" correctly? What provision is made in a Gravatt's level for making this adjustment, and how would you examine its correctness?

8. Calculate Bidder's numbers for heights of 20 and 30.

9. Describe the vena contracta, and explain the influence it has on the flow of water through an orifice with thin edges.

10. What is meant by the angles of skewback in an oblique bridge? What use is made of these quantities?

THIRD YEAR.

CIVIL ENGINEERING.

Examiner, Professor JACK.

First Paper.

1. What is the nature of the test employed for the degree of fineness to which cement has been ground? Why is this test required?

2. Describe the means now employed for the preparation of the clay in brickmaking.

3. In the process for the conversion of cast-iron into malleable iron, describe the operation called puddling. What attempts have been made to carry on this operation by mechanical agencies?

4. Describe the slide rest in a lathe.

5. What is meant by welding? How do welds often fail, and hence what precaution should be taken to secure good work?

6. What is the nature of the stress to which a rivet is subject when the portion of the structure in which it is is subject to a tensile stress.

7. Show that in a Warren girder the stress in any diagonal arising from a uniformly distributed load may be expressed in terms of the load between that diagonal and the centre of the girder.

8. Calculate the stresses in the parts marked in the sketch of a roof truss shown to you.

9. The following expression has been given to be used in calculating approximately the strength of a flanged girder loaded at the middle. Explain the meaning of the letters used, and show how the expression has been deduced—

$$w = \frac{4f}{cl} \frac{a_1 a_2 d^2}{A}.$$

10. Explain the reason that in girder bridges of small span on a railway the girders may be subjected to larger stresses than those which would be produced by the uniformly distributed loads which are generally assumed.

Second Paper.

1. In cases where the piers and abutments of a bridge encroach on the water-way, especially during periods of floods, in what manner is the subject of the foundations affected, and how must it be discussed by the engineer?

2. How have cylinders of brick or concrete been employed in foundations? describe examples if you can.

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Examina-
tions.

3. Illustrate by a sketch the manner in which radiating courses have been employed in the abutments of stone bridges.

4. What preparation is generally made for supporting the ends of iron arched ribs for bridges? Note the additional precautions in the case of bridges of large span.

5. Describe the detail of the permanent way for a railway, when the broad-footed rail is employed.

6. What is the object generally sought to be attained in the machinery constructed for connecting the signals on a railway with the moveable parts employed in shifting a train from one line of rails to another?

7. How is the slide valve of a locomotive constructed and set, so as to provide that the steam following the piston shall be allowed to escape before the piston has reached the end of its stroke?

8. How does the amount of force necessary to draw a train vary with the speed, &c.? What proportion of the weight of a locomotive is available for the production of this force?

9. What are "relief tanks" on the line of pipe in a system of water supply for a town?

10. Describe the action of the cataract in a Cornish engine.

Scholarship
Examina-
tions.

SCHOLARSHIP EXAMINATION.—FIRST YEAR.

(See papers for Science Scholarship Examination for First Year in the Faculty of Arts, p. 94.)

SECOND YEAR.

(See papers: 1, on *Mathematics*, Science Scholarship Examination of Second Year, in the Faculty of Arts, p. 96; 2, on *French*, Literary Scholarship Examination of First Year, in the Faculty of Arts, p. 93; 3, on *Chemistry*, Scholarship Examination of the Second Year in the Faculty of Medicine, p. 109.)

GEOMETRICAL DRAWING.

Examiner, Professor JACK.

1. Give a method for drawing an arc of a circle subtending a small angle by points when you are given the rise and span.

2. Give a method for describing a cycloid.

3. Find the traces of a plane passing through a given point and line.

4. Find the projections of a line passing through a given point, intersecting a given line, and making a given angle with it.

5. Find the traces of a plane passing through a given point and touching a cone, of which the horizontal trace and projections of vertex are given.

6. Explain the method of finding the projections of the curve of intersection of a vertical cylinder and a sphere.

7. How would you find the actual length of a line, of the ends of which the isometric projections are given, the isometric planes in which these ends are situated being also represented?

8. To what extent may a perspective drawing be reduced in size?

9. Describe the method of constructing, by measuring points and lines, the perspective of the front of a building, all the lines of which are either horizontal or vertical, and of which the dimensions are given; and point out the least amount of construction which it is necessary to obtain from the plan and elevation.

10. To what style of architecture do the buildings represented in the photographs shown to you belong?

THIRD YEAR.

MATHEMATICS.

Examiner, Professor NIVEN.

Appendix D.

Scholarship
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tions.

1. If A D be the perpendicular from the angle A of a triangle on the opposite side B C, and A E the diameter of the circumscribing circle, prove that the rectangle under A B, A C=rectangle under A D, A E.

2. If the squares of $xy + xz - yz$, $yx + yz - xz$, $zx + zy - xy$ be in arithmetical progression, prove that x, y, z are also in arithmetical progression.

3. Explain the theory and use of Logarithms, particularly referring to the tables of Proportional Parts.

Prove that $\log_a N = \log_e N \div \log_e a$.

4. Find approximately the circular measure of an angle of $13' 5''$.

If $\sin A = \tan b \tan c$, $\sin B = \tan a \tan c$, $\tan A \tan B = \sin c$, prove that $\sin c = \cos a \cos b$.

5. State Napier's rules for the solution of right-angled spherical triangles, and verify by direct proof the rule which expresses an angle of the triangle in terms of the adjacent sides.

In a triangle of which one side (c) is a quadrant, prove that

$$\cos C + \cos A \cos B = 0, \cos a + \tan A \cot C = 0.$$

6. Find the area of a spherical triangle.

7. The equation of a circle described on the line joining the points (x_1, y_1) , (x_2, y_2) as diameter is $(x - x_1)(x - x_2) + (y - y_1)(y - y_2) = 0$.

Prove this, and show thence that the angle in a semicircle is a right angle.

8. Find the equation of a hyperbola referred to its asymptotes as axes.

9. Differentiate $e^{\tan^{-1} x}$, and prove that if

$$a - \cos \theta \sqrt{a^2 - 1} = (a + \cos \phi \sqrt{a^2 - 1})^{-1}, \text{ then } \frac{d\theta}{d\phi} = \frac{1}{a + \cos \phi \sqrt{a^2 - 1}}.$$

10. State and prove MacLaurin's Theorem.

11. Define the circle of curvature of a curve at any point, and find an expression for its radius.

Find the radius of curvature at any point of the curve $x^2 - y^2 = a^2$.

12. Integrate these : $\frac{1}{\sqrt{a^2 - x^2}}$, $\frac{1}{x^2 + a^2}$, $e^x \sin x$.

13. Apply the integral calculus to find the surface of a sphere.

GEOLOGY AND MINERALOGY.

Examiner, Professor HARKNESS.

1. To what groups are Volcanic rocks referable?

2. What are the characters of Plutonic rocks?

3. What is the nature of the rocks known as Gneiss? To what groups are these referable?

4. What are the divisions of the Cambrian formation? Mention some of the fossils which mark these divisions.

5. Mention some of the more important of the fossils of the Eifel limestones.

6. In what formation is clay-ironstone found in the greatest abundance? What is the nature of this substance?

7. What are the divisions of the English Keuper? Mention some of the fossils which it affords.

- Appendix D. 8. What is the nature and what is the position of the Portland stone?
- Scholarship Examinations. 9. Where, and under what circumstances, is the Jurassic formation represented in Ireland?
10. To what family of minerals does *albite* belong? Mention its crystalline system and its composition.
11. What are the external characters by means of which *calc-spar* can be recognised?
12. What is the nature of the mineral from whence the tin of commerce is obtained?

Early English Text Society's Prizes.

Early English Text Society's Prizes (1876).

Examiner, Professor ARMSTRONG.

1. Decline the A. S. *personal pronouns*, and *interrogative pronouns*.
2. Give an example of the conjugation of a *strong verb*.
3. Describe the relations of English to the Teutonic group of languages.
4. Describe the exact nature of the influences of Norman-French upon the English language.
5. Give an account of the Norman-French, and of its affinities to other Romance dialects.
6. Give a brief history of the *alphabet* of the English language.
7. Paraphrase the following passages in Modern English prose, and indicate the words in which the older forms of letters are used in the MS. :—

(a.) "For ther was ordre of monekes· er seint Patrik com,
And er seint Austyn to Engilonde brought Cristendom ;
And seint Patrik deide, tuo hondred· and tuo and vyfti yer,
After that oure suete Leuerdi· oure Louerd here ber."

(b.) "At Hampton, als I vnderstand,
Come the gaylayes vnto land,
And ful fast thai slogh and brend,
But noght so mekill als sum men wend,
For, or thai wened, war thai mett
With men that sone thaire laykes lett."

(c.) "Now is the kyng in gret perell,
For slepe he swa a litell quehile,
He sall be ded foronten dred,
For the thre tratouris tuk gud hede,
That he on slep wes and his man."

State from what authors these passages are extracted.

8. Give a brief account of Chaucer ; sketch the plan of the *Canterbury Tales* ; and enumerate the characters described in the *Prologue*.

9. Make a metrical analysis of the following passage, stating the rules which guide you ; comment upon its peculiarities of grammar and phraseology ; and paraphrase the whole in Modern English prose :—

"Anon to drawn every wight began,
And shortly for to tellen as it was,
Were it by aventure, or sort, or cas,
The soth is this, the cut fil to the knight,
Of which ful blithe and glad was every wight ;
And telle he moste his tale as was resoun,
By forward and by composicioun,
As ye han herd ; what needeth wordes moo ?"

The New Shakspeare Society's Prizes (1876).

Examiner, Professor ARMSTRONG.

Appendix D.
New Shakspeare Society's Prizes.

1. Compare together the *Merchant of Venice*, *King John*, and *King Lear*, contrasting the methods of characterization, the systems of versification, and the management of the plots.

2. Annotate the following passages, state in what plays they appear, name the characters in whose mouths they are put, and describe the circumstances under which they are spoken :—

(a.) "By this scimitar,
That slew the Sophy and the Persian prince,
That won three fields of Sultan Solymán,"—

(b.) "And pat he comes, like the catastrophe of the old comedy : my cue is villanous melancholy, with a sigh like Tom o' Bedlam. O, these eclipses do portend these divisions !"

(c.) "Renege, affirm, and turn their halcyon beaks
With every gale and vary of their masters,"—

(d.) "To this effect, before you were new-crowned,
We breath'd our counsel : but it pleased your highness
To overbear it ; and we are all well-prais'd,
Since all and every part of what we would,
Doth make a stand at what your highness will."

(e.) . . . "I thought it fit
To send the old and miserable king
To some retention and appointed guard ;
Whose age has charms in it, whose title more,
To pluck the common bosom to his side,
And turn our impress'd lances in our eyes
Which do command them—"

3. Write a criticism on the character of Coriolanus.

4. Give a brief account of the works of Greene, Peele, and Webster.

5. State what is known of the relations between Shakspeare and Ben Jonson, Greene, and Ford, respectively.

6. Describe the state of the English drama at the time when Marlowe first appears before the world as a writer.

7. Describe the events of the Fourth Act of *Coriolanus*, naming the principal characters that take part in them.

8. Contrast the mental conditions of the several interlocutors in the Fourth Scene of the Third Act of *King Lear*.

9. Give a list of all the plays which have been ascribed to Shakspeare either wholly or in part, assigning them to their ascertained or most probable periods.

10. Quote as accurately as you can—

(a.) Constance's apostrophe to Death.

(b.) Shylock's address to Antonio, following the question—
"Well, Shylock, shall we be beholding to you ?"—

(c.) Lear's dying speech.

Appendix E.

APPENDIX E.

No. XV.

DONATIONS to LIBRARY and MUSEUMS.

Donations
to Library
and
Museums.

Library.

- Aberdeen, Catalogue of the General Library of the University of.
3 vols. 8vo. 1873. By the University.
- Antiquary, The Indian. (Bombay). *Received regularly.*
From the Editor.
- Army Medical Reports, 1873 (Vol. XV.) 1 vol. 8vo. 1875.
By the Army Medical Department.
- British Museum Publications :—
Ancient Greek Inscriptions. Part I. Attika.
Catalogue of Additional MSS. (1854–1860). 1 vol. 8vo. 1875.
Catalogue of Birds. Vol. I. (Accipitres or Diurnal Birds of Prey.
By R. Bowdler Sharpe.) 1 vol. 8vo. 1874.
Catalogue of Birds. Vol. II. (Striges, or Birds of Prey. By
R. Bowdler Sharpe.) 1 vol. 8vo. 1875.
Catalogue of Marine Polyzoa. Cyclostomata. Part. III.
Catalogue of Oriental Coins. Vol. I. 1875.
Catalogue of Spanish MSS. By Don Pas. de Gayangos.
1 vol. 8vo. 1875.
- Cuniform Inscriptions. Vol. IV.
By the Trustees of the British Museum.
- Hand List of Seals, &c. By Dr. J. E. Gray. 1 vol. 8vo. 1874.
- Beale, James, The Poems of. 1 vol. 1876. By the Author.
- Belfast Philosophical Society, Proceedings of. By the Society.
- Bentham, George, V.P.L.S., Flora Honkongensis. 1 vol. 8vo. 1861.
By the Right Hon. the Earl of Carnarvon, Secretary of
State for the Colonies.
- Blacker, Rev. B. H., Sketches of the Parishes of Booterstown and
Donnybrook. 1 vol. 1872. By the Author.
- Bourchier, Lady, Memoir of Sir Edward Codrington.
2 vols. 8vo. 1873. By the Authoress.
- Canadian Journal, The, of Science, Literature, and History. (Regularly.)
By the Canadian Institute.
- Chemist and Druggist, The. London. *Received regularly.*
From the Editor.
- Coues, Dr. Elliott, Abstract of Results of a Study of the Genera Geomys
and Thomomys, with Addenda on the Osteology of Geomyidae, &c.
Washington, 1875.
- „ Some Account, Critical, Descriptive, and Historical, of Zapus
Hudsonius.
- „ On the Zoological Results of the Travels of Lewis and Clarke.
By the Author, through Smithsonian Institution.
- Crowe, O'Beirne, The Amra Choluim Chilli of Dallan Forgaill.
1 vol. 8vo. Dublin, 1871.
By Rev. Maxwell Close.
- Cudmore, P., Civil Government and Constitutional History of the U. S.
America. 1 vol. 8vo. New York, 1875. By the Author.
- Ericson, J., Solar Investigations. Parts I, II. Pamphlets.
By the Author.

- Fitzgerald, R. D. F.L.S., Australian Orchids. Part. I. Sydney. By the Government of New South Wales. Donations to Library and Museums.
- Gilbert, J. T., National Manuscripts of Ireland. Part I. Folio. 1875. By the Right Hon. the Master of the Rolls in Ireland.
- Gray's Inn Library. First Supplement to Catalogue of 1874. By the Benchers.
- Hartt, C. F., Amazonian Tortoise Myths. Pamphlet. 1875. By the Author.
- Hayden, F. V. Geological Survey of the U. S. America. Cretacea Vertebrata. Vol. II. 4to. 1875. By the Author.
- Annual Report of, 1874. By the Author.
- Institution of Civil Engineers, Minutes and Proceedings of. Vols. XLII. and XLIII. 1875-76. By the Institution of Civil Engineers.
- Jones, Dr. H. M., Medical Responsibility in the choice of Anaesthetics. 1876. By the Author.
- Journal de l'Instruction Publique. Province de Quebec. Regularly.
- Journal of Education. Province of Quebec. Regularly. By the Minister of Public Instruction.
- MacCarthy, Daniel (Glas), Life and Letters of Florence MacCarthy Reagh, Tanist of Carbery, MacCarthy Mor. 1 vol. 8vo. 1867.
- A Historical Pedigree of the Sliochd Feidhlimidh, the MacCarthys of Gleannacroim. 1 vol. 8vo. By the Author.
- McCormac, H., M.D., Human Vivisection. Three Lectures on Juridical Manslaughter. Pamphlet. By the Author.
- Max Müller, Rig-veda-Sanhita. Vol. VI. 1874. By the Secretary of State for India.
- Medical Reports (China), Shanghai. Regularly. By the Inspector-General of Customs.
- Navy Medical Reports. 1874. By the Navy Medical Department.
- Nigra, Cav. C., Glossæ Hibernicæ veteres Codicis Taurinensis. 1 vol. 8vo. Lutetiae Parisiorum. 1869. By the President.
- Pickering, Charles, M.D., The Geographical Distribution of Animals and Plants. (Vol. XV. of Wilkes' United States Exploring Expedition.) 1 vol. 4to. Boston and London, 1854. By the Author.
- Public Health Reports of the Officers of the Privy Council. Nos. 4, 5, and 6, 1876. By the Local Government Board (England).
- Quebec, Report of the Minister of Public Instruction for the Province of, for the years 1873, 1874, and part of 1875. Quebec, 1876.
- Redfern, Professor P. (12 Pamphlets):—
1. Abnormal Nutrition in Articular Cartilages.
 2. Do. Do. Part II.
 3. Do. Do. Part III.
 4. Healing of Wounds after Amputations in Do.
 5. Thickness of the Articular Cartilage at different periods of life in the Human Subject.
 6. Origin of the Epigastric and Obturator Arteries.
 7. Case of Hydrophobia.
 8. On the Nature and Primary Changes of Cancerous Exudations.
 9. On the Nature of the Torbanehill, &c., Coal.
 10. Flustrella Hispida and its Development.
 11. Report on the organic and other solid matters found by Microscopical Examination of Waters supplied from the Thames and other sources.
 12. Address delivered to the Biological Section of the British Association, Belfast, August 19th, 1874. By the Author.

- Appendix E.* Returns, Weekly, of Births and Deaths, Dublin.
 Donations to Library and Museums. „ Quarterly, of Marriages, Births, and Deaths, in Ireland.
Received regularly. By Registrar-General.
 Smith, W. G., On Home-grown Podophyllum and Jalap. Pamphlet.
 By the Author.
 Smithsonian Institute :—
 Contributions to Knowledge. Vol. XIX. 1874.
 Miscellaneous Collections. Vol. XII. 1874.
 Report of. 1874. By Smithsonian Institute.
 Stewart, C., International Correspondence by means of Numbers.
 By the Author. 1 vol. 8vo. 1874.
 Sullivan, W. K., and J. P. O'Reilly, Notes on the Geology and Mineralogy of the Spanish Provinces of Santander and Madrid.
 ——— Note on the Great Dolomite Bed of Spain. By the Authors.
 Testament, Translation of the New, in Chinese. 1 vol.
 By Professor Bunnell Lewis, M.A., F.S.A.
 Trevandrum Magnetical Observations. Vol. I. 1874.
 By His Highness the Maharajah of Travancore.
 Winthrop, R. C., The Life and Letters of J. Winthrop, Governor of Massachusetts. 2 vols. 8vo. 1874. By the Author.

The following were presented by J. H. CORBETT, M.D., late Professor of Anatomy, Queen's College, Cork :—

- Alston, C., Index Medicamentorum. 12mo. Edinburgh, 1752.
 Arbuthnot, J., On Aliments, &c. Dublin, 1731.
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