

THE

Adelaide University Calendar

FOR THE

ACADEMICAL YEAR 1881.

ADELAIDE :

W. K. THOMAS & CO., GRENFELL STREET.

1881.

C O R R I G E N D A.

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Page 33, line 3, read CATERER, THOMAS AINSLIE, instead of  
the first name.

Page 63, line 5, for "COMPULSORY SUBJECS" read "COMPUL-  
SORY SUBJECTS."

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## Calendar for 1881.

1881.

- January 25. First day of entry for Supplementary Ordinary and for the Matriculation Examinations in March.
- February 7. Last day of entry for Supplementary Ordinary and for the Matriculation Examinations in March.
- March 8. First Term begins.
- “ 8. Matriculation, University Scholarships, and Supplementary Ordinary Examinations begin.
- “ 15. *Senate*. Last day for sending in to Clerk of Senate nominations of candidates for the offices of Warden and Clerk of the Senate, to be elected on April 6th.
- “ 15. *Senate*. Last day for sending in notices of motions to be brought forward at meeting of Senate on April 6th.
- “ 15. Lectures begin.
- April 6. *Senate* meets. Election of Warden and Clerk.
- “ 14. Easter recess begins.
- “ 19. Easter recess ends.
- May 26. Lectures end.
- “ 27. First Term ends.

## VACATION.

- June 14. Second Term and Lectures begin.
- July 12. *Senate*. Last day for sending in to Clerk of Senate notices of motions to be brought forward at meeting of Senate on August 3rd.
- August 3. *Senate* meets.
- “ 18. Lectures end.
- “ 19. Second Term ends.

## VACATION.

- September 6. Third Term and Lectures begin.
- October 9. First day of entry for Ordinary Examinations.
- “ 20. First day of entry for Primary Examination.
- “ 20. Last day of entry for Ordinary Examinations.
- “ 25. First day of entry for December Matriculation Examination, and for Examination for M. A. Degree.
- “ 31. Last day of entry for Primary Examination.
- November 5. Last day of entry for December Matriculation Examination, and for Examination for M. A. Degree.
- “ 10. Five members of Council retire.
- “ 11. Lectures end.
- “ 15. *Senate*. Last day for sending to Clerk of Senate notices of motions to be brought forward at meeting of Senate on 7th December.
- “ 21. Ordinary Examinations begin.
- “ 26. *Senate*. Last day for sending to Clerk of Senate nominations of candidates for five annual vacancies in Council.
- December 1. Primary Examination begins.
- “ 6. Matriculation Examination and Examination for the Degree of M. A. begin.
- “ 7. *Senate* meets. Election of five persons to fill the annual vacancies in the Council.
- “ 13. Third Terms ends.

## TIME-TABLE OF LECTURES, 1881.

COURSES.	HOURS OF LECTURE.				
	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY	FRIDAY.
FIRST YEAR.					
Latin } ... ..	11	11	11	11	11
Greek } ... ..					
Elementary Greek ...		12		12	
Mathematics ... ..	10		10		10
Physics ... ..		4.30		4.30	
Chemistry ... ..	4.30		4.30		
English Language and Literature ..	3		3		3
Do., Extra Class for Ladies ... ..		4-5		4-5	
SECOND YEAR.					
Latin } ... ..	10	10	10	10	10
Greek } ... ..					
Ancient History ...					12
Mathematics, Applied	11		11		11
Do., Higher, Pure ...	9		9		9
Physics ... ..		2.30-5		2.30-5	
Chemistry ... ..			10		10
*Biology ... ..		11		11	
Practical Chemistry ...	3-6		3-6		
Logic, Deductive ...	4		4		4
THIRD YEAR.					
Latin } ... ..	10	10	10	10	10
Greek } ... ..					
Comparative Philology	12		12		
Mathematics, Advanced	12		12		12
Physics ... ..		2.30-5		2.30-5	
*Biology ... ..		11		11	
†Geology and Mineralogy		12		12	
Logic, Inductive ...	2		2		2

\* Zoology will be taken in the first and second Terms; Botany in the third Term. Demonstrations and Field Lectures will also be held occasionally on Saturdays.

† Mineralogy will be taken in the first Term. Geology in the second and third Terms.

ACT OF INCORPORATION.

ANNO TRICESIMO SEPTIMO ET TRICESIMO OCTAVO  
VICTORIÆ REGINÆ—No. 20.

*An Act to Incorporate and Endow The University of Adelaide.*

[Assented to, 6th November, 1874.]

Preamble.

WHEREAS it is expedient to promote sound learning in the Province of South Australia, and with that intent to establish and incorporate, and endow an University at Adelaide, open to all classes and denominations of Her Majesty's subjects : And whereas Walter Watson Hughes, Esquire, has agreed to contribute the sum of Twenty Thousand Pounds towards the endowment of two chairs or professorships of such University, upon terms and conditions contained in a certain Indenture bearing date the twenty-fourth day of December, one thousand eight hundred and seventy-two, and made between the said Walter Watson Hughes and Alexander Hay, Esquires, representing an Association formed for the purpose of establishing such University, a copy of which said Indenture is set forth in the Schedule hereto ; be it therefore enacted by the Governor of the Province of South Australia, with the advice and consent of the Legislative Council and House of Assembly of the said Province, in this present Parliament assembled, as follows :

University to consist of Council and Senate.

1. An University, consisting of a Council and Senate, shall be established at Adelaide, and when duly constituted and appointed according to the provisions of this Act, shall be a body politic and corporate by the name of "The University of Adelaide," and by such name shall have perpetual succession, and shall adopt and have a common seal, and shall by the same name sue and be sued, plead and be impleaded, answer and be answered unto in all Courts in the said province, and shall be capable in law to take, purchase, and hold all goods, chattels, and personal property whatsoever, and shall also be able and capable in law to receive, take, purchase, and hold for ever, not only such lands, buildings, and hereditaments, and possessions, as may from time to time be exclusively used and occupied for the immediate requirements of the said University, but also any other lands, buildings, hereditaments, and possessions whatsoever, situated in the said Province, or elsewhere, and

shall be able and capable in law to grant, demise, alien, or otherwise dispose of all or any of the property, real or personal, belonging to the University, and also to do all other matters and things incidental or appertaining to a body politic and corporate : Provided always, that until the Senate of the said University shall have been constituted as herein enacted, the said University shall consist of a Council only : Provided further, that it shall not be lawful for the said University to alien, mortgage, charge, or demise any lands, tenements, or hereditaments, of which it shall have become seised, or to which it may become entitled by grant, purchase, or otherwise, unless with the approval of the Governor of the said Province for the time being, except by way of lease for any term not exceeding twenty-one years from the time when such lease shall be made, in and by which there shall be reserved during the whole of the term the highest rent that can be reasonably obtained for the same, without fine.

**First Council by whom appointed. Election of Chancellor and Vice-Chancellor.**

2. The first Council of the said University shall be nominated and appointed by the Governor within three months after the passing of this Act, and shall consist of twenty councillors, and the said Council shall elect a Chancellor and a Vice-Chancellor ; and whenever a vacancy shall occur in the office of Chancellor or Vice-Chancellor, either by death, resignation, expiration of tenure, or otherwise, the said Council shall elect a Chancellor or Vice-Chancellor, as the case may be, instead of the Chancellor or Vice-Chancellor occasioning such vacancy, the Vice-Chancellor in all cases shall be elected by the said Council out of their own body, and the Chancellor, if not a member of the said Council at the time of his election, shall, from and after his election, become a member of the said Council during the term of his office, and in any such case, and for such period, the Council shall consist of twenty-one councillors. Each Chancellor and Vice-Chancellor shall hold his office for five years, or, except in the case of the first Chancellor and Vice-Chancellor, for such other term as shall be fixed by the statutes and regulations of the University made previously to the election : Provided that there shall never be more than four ministers of religion members of the said Council at the same time.

**Vacancies in the Council, how created and filled.**

3. At the expiration of the third year, and thereafter at the expiration of each year, the five members of the Council who shall have been longest in office shall retire, but shall be eligible for re-election, and if more members shall have been in office for the same period, the order of their retirement shall be decided by ballot, and all vacancies which shall occur in the said Council by retirement, death, resignation, or otherwise, shall be filled as they may occur, by the election of such persons as the



Senate shall at meetings to be duly convened for that purpose elect ; or, if the Senate shall not have been constituted, such vacancies shall be forthwith reported by the Chancellor to the Governor, who shall within three months after such report nominate persons to fill such vacancies, or if the Senate shall fail to elect within six months, then the Governor shall nominate persons to fill such vacancies.

**Senate how constituted.**

4. As soon as the said Council shall have reported to the Governor that the number of graduates admitted by the said University to any of the degrees of Master of Arts, Doctor of Medicine, Doctor of Laws, Doctor of Science, or Doctor of Music, and of graduates of three years' standing, is not less than fifty, and such report shall have been published in the *Government Gazette*, the Senate shall be then constituted, and shall consist of such graduates, and of all persons thereafter admitted to such degrees, or who may become graduates of three years' standing, and a graduate of another University admitted to a degree in The University of Adelaide shall reckon his standing from the date of his graduation in such other University, and the Senate shall elect a Warden out of their own body annually, or whenever a vacancy shall occur.

**Questions how decided, quorum.**

5. All questions which shall come before the said Council or Senate respectively shall be decided by the majority of the members present, and the chairman at any such meeting shall have a vote, and in case of an equality of votes, a casting vote, and no question shall be decided at any meeting of the said Council unless six members thereof be present, or at any meeting of the said Senate unless twenty members thereof be present.

**Chairmanship of Council and Senate.**

6. At every meeting of the Council the Chancellor, or in his absence the Vice-Chancellor, shall preside as chairman, and at every meeting of the Senate the Warden shall preside as chairman, and in the absence of the Chancellor and Vice-Chancellor, the members of the Council present, and in the absence of the Warden the members of the Senate present shall elect a chairman.

**Council to have entire management of the University.**

7. The said council shall have full power to appoint and dismiss all professors, lecturers, examiners, officers, and servants of the said University, and shall have the entire management and superintendence over the affairs, concerns, and property thereof, subject to the statutes and regulations of the said University.

Council to make statutes and regulations with approval of the Senate.

8. The said Council shall have full power to make and alter any statutes and regulations (so as the same be not repugnant to any existing law or to the provisions of this Act) touching any election or the discipline of the said University, the number, stipend, and manner of appointment and dismissal of the professors, lecturers, examiners, officers, and servants thereof, the matriculation of students, the examination of fellowships, scholarships, prizes, exhibitions, degrees, or honours, and the granting of the same respectively, the fees to be charged for matriculation, or for any such examination or degree, the lectures or classes of the professors and lecturers, and the fees to be charged, the manner and time of convening the meetings of the said Council and Senate and in general touching all others matters whatsoever regarding the said University: Provided always that so soon as the Senate of the said University shall have been constituted, no new statute or regulation, or alteration or repeal of any existing statute, shall be of any force until approved by the said Senate.

Colleges may be affiliated, and boarding-houses licensed.

9. It shall be lawful for the said University to make any statutes for the affiliation to or connection with the same of any college or educational establishment to which the governing body of such college or establishment may consent, and for the licensing and supervision of boarding-houses intended for the reception of students, and the revocation of such licenses: Provided always that no such statutes shall effect the religious observances or regulations enforced in such colleges, educational establishments, or boarding-houses.

Statutes to be allowed by Governor.

10. All such statutes and regulations as aforesaid shall be reduced to writing, and the common seal of the said University having been affixed thereto, shall be submitted to the Governor to be allowed and countersigned by him, and if so allowed and countersigned, shall be binding upon all persons members of the said University, and upon all candidates for degrees to be conferred by the same.

Limitation of the powers of Council as regards the chairs founded by W. W. Hughes.

11. The powers herein given to the Council shall, so far as the same may effect the two chairs or professorships founded by the said Walter Watson Hughes, and the two professors appointed by him, and so far as regards the appropriation and investment of the funds contributed by him, be subject to the terms and conditions of the before-mentioned indenture.

University to confer Degrees.

12. The said University shall have power to confer, after examination, the several Degrees of Bachelor of Arts, Master of Arts, Bachelor of

Medicine, Doctor of Medicine, Bachelor of Laws, Doctor of Laws, Bachelor of Science and Doctor of Science, Bachelor of Music and Doctor of Music, according to the statutes and regulations of the said University: Provided always that it shall be lawful for the said University to make such statutes as they may deem fit for the admission, without examination, to any such degree, of persons who may have graduated at any other University.

**Students to be in residence during term.**

13. Every undergraduate shall, during such term of residence as the said University may by statute appoint, dwell with his parent or guardian, or with some near relative or friend selected by his parent or guardian, and approved by the Chancellor or Vice-Chancellor, or in some collegiate or educational establishment affiliated to or in connection with the University, or in a boarding-house licensed as aforesaid.

**No religious test to be administered.**

14. No religious test shall be administered to any person in order to entitle him to be admitted as a student of the said University, or to hold office therein, or to graduate thereat, or to hold any advantage or privilege thereof.

**Endowment by annual grant.**

15. It shall be lawful for the Governor by warrant under his hand, addressed to the Public Treasurer of the Province, to direct to be issued and paid out of the General Revenue an annual grant, equal to Five Pounds per centum per annum on the said sum of Twenty Thousand Pounds contributed by the said Walter Watson Hughes, and on such other moneys as may from time to time be given to and invested by the said body corporate upon trusts for the purposes of such University, and on the value of property real or personal, securely vested in the said body corporate, or in trustees, for the purposes of the said University, except the real property mentioned in clause 16 of this Act; and such annual grant shall be applied as a fund for maintaining the said University, and for defraying the several stipends which may be appointed to be paid to the several professors, lecturers, examiners, officers, and servants to be appointed by such University, and for defraying the expense of such fellowships, scholarships, prizes, and exhibitions, as shall be awarded for the encouragement of students in such University, and for providing a library for the same, and for discharging all necessary charges connected with the management thereof: Provided that no such grant shall exceed Ten Thousand Pounds in any one year.

**Endowment in Land.**

16. The Governor, in the name and on behalf of Her Majesty, may alienate, grant, and convey in fee-simple to such University or may reserve and dedicate portions of the waste lands of the said Province, not exceeding fifty thousand acres, for the purpose of the University

and the further endowment thereof; and the Governor may in like manner, and on behalf of Her Majesty, alienate, grant, and convey in fee-simple to such University, or may reserve and dedicate a piece of land in Adelaide, east of the Gun Shed and facing North-Terrace, not exceeding five acres, to be used as a site for the University buildings and for the purposes of such University: Provided that the lands so granted shall be held upon trust for the purposes of such University, such trusts to be approved by the Governor.

University of Adelaide included in Ordinance No. 17 of 1844.

17. The University of Adelaide shall be deemed to be an University within the meaning of section 1\* of Ordinance No. 17 of 1844, entitled "An Ordinance to define the qualifications of Medical Practitioners in this Province for certain purposes."

Council or Senate to report annually to the Governor.

18. The said Council or Senate shall, during the month of January in every year, report the proceedings of the University during the previous year to the Governor, and such report shall contain a full account of the income and expenditure of the said University, audited in such manner as the Governor may direct, and a copy of every such report, and of all the statutes and regulations of the University, allowed as aforesaid by the Governor, shall be laid in each year before the Parliament.

Governor to be Visitor.

19. The Governor for the time being shall be the Visitor of the said University, and shall have authority to do all things which appertain to Visitors as often as to him shall seem meet.

Short Title.

20. This Act may be cited as "The Adelaide University Act."

In the name and on behalf of Her Majesty, I hereby assent to this Bill.

A. MUSGRAVE, Governor.

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### SCHEDULE REFERRED TO.

This Indenture, made the twenty-fourth day of December, one thousand eight hundred and seventy-two, between Walter Watson Hughes, of Torrens Park, near Adelaide, in the Province of South Australia, Esquire, of the one part, and Alexander Hay, of Adelaide, aforesaid, Esquire, Treasurer of the Executive Council of

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\* This section has been repealed by Act No. 193 of 1880, which recognizes (amongst others) the following qualification:—"Doctor or Bachelor of Medicine, or Master in Surgery of any chartered University in Her Majesty's Dominions authorised to grant Degrees in Medicine and Surgery."

the University Association, of the other part : Whereas the said Walter Watson Hughes is desirous that a University should be established in the said Province, to be called "The Adelaide University," and has agreed to assist in the foundation of such University, by contributing the sum of Twenty Thousand Pounds in endowing by the income thereof two chairs or professorships in the said University, one for Classical and Comparative Philology and Literature, and the other for English Language and Literature and Mental and Moral Philosophy : And whereas the said Walter Watson Hughes, his executors or administrators is or are entitled to nominate and appoint the two first Professors to such chairs : And whereas an Association has been formed, and has undertaken to endeavour to found and establish such University, and has appointed an Executive Council : And whereas the said Alexander Hay has been appointed Treasurer of the said Executive Council : Now this Indenture witnesseth, that in consideration of the premises, the said Walter Watson Hughes doth hereby for himself, his heirs, executors, and administrators covenant with the said Alexander Hay, his executors and administrators, that he, the said Walter Watson Hughes, his executors, or administrators, shall and will, on or before the expiration of ten years from the date hereof pay to the said Alexander Hay, as such Treasurer, or to the said Executive Council, or if the said University is incorporated within such period, then to such Corporation the sum of Twenty Thousand Pounds sterling : And will, in the meantime, pay interest thereon, on such portion thereof as may remain unpaid at the rate of Six Pounds per centum per annum, from the first day of May, one thousand eight hundred and seventy-three, such interest to be paid by equal quarterly payments : And it is agreed and declared that the interest and annual income of the said sum of Twenty Thousand Pounds shall be applied in two equal sums in endowing the said two chairs with salaries for the two Professors, or occupiers of such chairs : And it is hereby also declared and agreed that the said Walter Watson Hughes has appointed the Reverend Henry Read, M. A., Incumbent of the Church of England in the District of Mitcham, to occupy, and that the said Henry Read shall occupy the first of such chairs as Professor of Classics and Comparative Philology and Literature : And that the said Walter Watson Hughes has appointed the Reverend John Davidson, of Chalmers Church, Adelaide, to occupy, and that the said John Davidson shall occupy the first of the other of such chairs as Professor of English Language and Literature, and Mental and Moral Philosophy : And it is hereby agreed and declared that the annual income and interest of the said sum of Twenty Thousand Pounds, shall be applied for the purposes aforesaid in equal sums quarterly, and for no other purpose whatever : And it is also declared and agreed that the said sum of Twenty Thousand Pounds shall be held by the Treasurer of the said University, or by the Corporation thereof, when the said University shall become incorporated, for the purpose of paying and applying the annual interest and income thereof equally in endowing two chairs or professorships in the said University, one of such chairs or professorships being Classics and Comparative Philology and Literature, and the other of such chairs or professorships being English Language and Literature, and Mental and Moral Philosophy : And it is also declared and agreed that the said sum of Twenty Thousand Pounds shall, when the same is received by the Treasurer of the said University, or by the University when incorporated, be invested upon South Australian Government Bonds, Debentures or Securities, and the interest and annual income arising from such investments paid and applied quarterly in endowing the said two chairs or professorships in the said University as aforesaid : In witness whereof the said parties to these presents have hereunto set their hands and seals the day and year first above written.

Signed, sealed, and delivered by the said Walter  
 Watson Hughes, in the presence of Richard } W. W. HUGHES. (L.S.)  
 B. Andrews, Solicitor, Adelaide. }

TRUST CLAUSE OF DEED WHEREBY SIR THOMAS ELDER,  
KNIGHT, GRANTED £20,000 TO THE UNIVERSITY.

By an Indenture which bears date the 6th day of November 1874, the Honourable Thomas Elder covenanted to pay Twenty Thousand Pounds, and the trust clause in that deed provides :—"And it is agreed and declared that the interest and annual income of the said sum of Twenty Thousand Pounds shall be applied as a fund for maintaining the said University, and for defraying the several stipends which may be appointed to be paid to the several Professors, Lecturers, Examiners, officers, and servants to be appointed by such University, and for defraying the expense of such fellowships, scholarships, prizes, and exhibitions as shall be awarded for the encouragement of students in such University, and for providing a Library for the same ; and for discharging all necessary charges connected with the management thereof, and for no other use or purpose whatsoever. And it is also declared and agreed that the said sum of Twenty Thousand Pounds shall, when the same is received by the Treasurer of the said University, or by the University when incorporated, be invested\* upon South Australian Government Bonds, Debentures, or securities, and the interest and annual income arising from such investments shall be paid and applied to and for the benefit and advantage of the said University in the manner and for the intents and purposes hereinbefore mentioned and described, and to or for no other purpose whatsoever."

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\* By a deed executed in 1880, the University is empowered to invest the moneys in the purchase of freehold lands and buildings and on first mortgages of freehold lands and buildings in South Australia.

ANNO TRICESIMO NONO ET QUADRAGESIMO  
VICTORIÆ REGINÆ.—No. 45.

*An Act to authorize the exchange for other Land of portion of the Land granted to The University of Adelaide, as a Site for the University Buildings.*

[Assented to 27th October, 1876.]

Preamble.

WHEREAS by section 16 of Act No. 20 of 1874, entitled "The Adelaide University Act," the Governor was empowered in the name and on behalf of Her Majesty to alienate, grant, and convey in fee simple to The University of Adelaide, or to reserve and dedicate a piece of land in Adelaide, east of the Gun Shed and facing North-terrace, not exceeding five acres, to be used as a site for the University buildings and for the purposes of such University, with the proviso that the land so granted should be held upon trust for the purposes of such University, such trusts to be approved by the Governor: And whereas by land grant, dated the fifteenth day of January, one thousand eight hundred and seventy-six [Register Book, Volume cxxviii., folio 239], the piece of land mentioned and described in the Schedule hereto, marked A, was in pursuance of the said recited power alienated, granted, and conveyed by the Governor in the name and on behalf of Her Majesty to The University of Adelaide: And whereas it is expedient that the Governor should be empowered to exchange with the said University the land mentioned and described in the Schedule hereto, marked B, for the piece of land mentioned and described in the Schedule hereto marked C, the last mentioned piece of land being portion of the said land so alienated, granted, and conveyed as aforesaid: Be it therefore Enacted by the Governor of the Province of South Australia, with the advice and consent of the Legislative Council and House of Assembly of the said Province, in this present Parliament assembled, as follows:—

Power to exchange part of site.

1. The Governor, in the name and on behalf of Her Majesty, may alienate, grant, and convey in fee simple, to the University of Adelaide, the piece of land mentioned and described in the Schedule hereto, marked B, and in exchange thereof the said University may grant, surrender, or otherwise assure to Her Majesty the piece of land mentioned and described in the Schedule hereto marked C: Provided that any land granted to the said University under the powers in this Act contained shall be held upon trust for the purposes of the University such trusts to be approved by the Governor.

Short Title.

2. This Act may be cited as "The University Site Act, 1876."

Incorporation with previous Act.

3. This Act and "The Adelaide University Act" shall be incorporated, and shall be read and construed together as one Act.

In the name and on behalf of Her Majesty, I hereby assent to this Bill.

A. MUSGRAVE, Governor.

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SCHEDULES REFERRED TO.

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A.

All that piece or parcel of land, in Adelaide, east of the Gun Shed, and facing North-terrace, and containing in all four acres, two roods, and eight perches, be the same a little more or less, which said piece of land commences at a point on the north side of North-terrace aforesaid, distant one hundred and sixty-two links westerly from the intersection of North-terrace by the western boundary of Pulteney-street, if such boundary were continued in a straight line across North-terrace aforesaid, for two hundred and eighty-two links, and runs thence easterly along the north side of North-terrace aforesaid four hundred and seventy-seven links, then turns at a right angle and runs thence northerly nine hundred and fifty-four links, then turns at a right angle and runs westerly four hundred and seventy-seven links, then turns at a right angle and runs southerly nine hundred and fifty-four links, where it joins the point of commencement, facing North-terrace aforesaid, which said piece of land is so situate that a line drawn from the centre of Pulteney-street, and continued across North-terrace, and thence through the said piece of land, would intersect the same piece of land longitudinally from north to south into two equal parts.

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B.

All that piece or parcel of land situated in Adelaide east of the Gun Shed, and facing North-terrace, and containing in all three acres, be the same a little more or less, the boundary of which said piece of land commences at a point on the northern side of North-terrace aforesaid, distant one hundred and sixty-two links westerly from the intersection of the northern side of North-terrace by the westerly boundary of Pulteney street, if such boundary were continued northerly in a straight line across North-terrace, and runs thence westerly along the northern side of North-terrace aforesaid three hundred and fifteen links, then turns at a right angle and runs thence northerly nine hundred and fifty-four links; then turns at a right angle, and runs thence easterly three hundred and fifteen links; then turns at a right angle and runs southerly nine hundred and fifty-four links, where it joins the point of commencement.

---

C.

All that piece or parcel of land situated in Adelaide, east of the Gun Shed, and facing North-terrace, and containing in all three acres, be the same a little more or less, the boundary of which said piece of land commences at the intersection of the northern side of North-terrace, by the western boundary of Pulteney-street, if



such boundary were continued northerly in a straight line across North-terrace aforesaid, and runs thence easterly along the northern side of North-terrace aforesaid, three hundred and fifteen links; then turns at a right angle and runs thence northerly nine hundred and fifty-four links; then turns at a right angle and runs thence westerly three hundred and fifteen links; then turns at a right angle and runs southerly nine hundred and fifty-four links, where it joins the point of commencement.

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ANNO QUADRAGESIMO SECUNDO ET QUADRAGESIMO TERTIO  
VICTORIÆ REGINÆ.—No. 143.

*An Act to amend "The Adelaide University Act," No. 20 of 1874, and  
for other purposes.*

[Assented to, 25th October, 1879.]

Preamble.

WHEREAS, in order to enable The University of Adelaide to obtain a grant of Royal Letters Patent, and for other reasons, it is expedient to amend "The Adelaide University Act"—Be it therefore enacted by the Governor of the Province of South Australia, with the advice and consent of the Legislative Council and House of Assembly of the said Province, in this present Parliament assembled, as follows :—

University has been duly constituted.

1. The University of Adelaide has been duly constituted and appointed according to the provisions of "The Adelaide University Act."

Power to repeal Statutes and Regulations.

2. Subject to the proviso contained in the eighth section of the said Act, the Council of the said University may by Statute or Regulation repeal Statutes and Regulations made by the University; and that section shall be read and construed as if the words "or Regulation" had been inserted in it next after "Statute" where that word occurs lastly therein.

Repeal of power to confer certain Degrees.

3. The words "Bachelor of Science and Doctor of Science," which occur in the twelfth section of the said Act, are hereby repealed; and that section shall be read and construed as if those words had not occurred therein.

Short Title.

4. This Act may be cited as "The Adelaide University Act Amendment Act."

In the name and on behalf of Her Majesty, I hereby assent to this Bill.

WM. F. DRUMMOND JERVOIS, Governor.

ANNO QUADRAGESIMO TERTIO ET QUADRAGESIMO QUARTO.  
VICTORIÆ REGINÆ.—No. 172.

*An Act to repeal part of "The Adelaide University Act Amendment Act,"  
No. 143 of 1879, and for other purposes.*

[Assented to, October 25th, 1880.]

**Preamble.**

WHEREAS in order to enable The University of Adelaide to obtain a grant of Royal Letters Patent, and for other reasons, it is expedient to repeal part of "The Adelaide University Act Amendment Act," and to revive part of "The Adelaide University Act," and to amend it—Be it therefore Enacted by the Governor of the Province of South Australia, by and with the advice and consent of the Legislative Council and House of Assembly of the said Province, in this present Parliament assembled, as follows :

**Repeal and revival.**

1. The third section of "The Adelaide University Act Amendment Act" is hereby repealed, and so much of "The Adelaide University Act" as was repealed by that section is hereby revived.

**Admission of women to Degrees.**

2. Women, who shall have fulfilled all the conditions prescribed by "The Adelaide University Act," and by the Statutes and Regulations of The University of Adelaide for any Degree, may be admitted to that Degree at a meeting of the Council and Senate of the said University.

**Words importing masculine gender include feminine.**

3. In "The Adelaide University Act," words importing the masculine gender shall be construed to include the feminine.

**Title.**

4. This Act may be cited as "The University of Adelaide Degrees Act."

In the name and on behalf of Her Majesty, I hereby assent to this Bill.

WM. F. DRUMMOND JERVOIS, Governor.

ANNO QUADRAGESIMO SECUNDO ET QUADRAGESIMO TERTIO  
VICTORIÆ REGINÆ.—No. 151.

*An Act to amend the Laws relating to the South Australian Institute, and  
for other purposes.*

[Assented to, 25th October, 1879.]

Preamble.

WHEREAS it is expedient that The University of Adelaide should be represented on the Board of the South Australian Institute, and that the said University should for that purpose be empowered to elect two members of that Board—Be it therefore enacted by the Governor of the Province of South Australia, by and with the advice and consent of the Legislative Council and House of Assembly of the said Province, in this present Parliament assembled, as follows :

South Australian Institute Board increased to nine.

1. From and after the passing of this Act the Board of Governors of the South Australian Institute shall, notwithstanding anything contained in the South Australian Institute Act, 1863, consist of nine members, of whom two shall be members of, and shall be elected by, the said University.

Council to convene meetings to elect. Tenure of persons elected. Filling occasional vacancies.

2. So soon as conveniently may be after the passing of this Act, and thereafter in each succeeding month of October, the Council of the said University shall convene in the prescribed manner a meeting in Adelaide of the said University to elect two members of the said Board, and the members elected at any such meeting shall (except in the event herein-after provided for) hold office until the election in the next succeeding month of October. Whenever the office held by any member so elected shall during the year or other period for which he was elected become vacant, the said Council shall in the prescribed manner convene a meeting of the University to elect in his room another member, who shall hold office only until the next annual election.

Power to make Statutes and Regulations to carry out the Act.

3. The said University is hereby empowered to make all such Statutes and Regulations as shall be deemed necessary or proper for prescribing the time and mode of nominating candidates for the said offices, of convening each such meeting, and of transacting the business and conducting the election thereat ; for prescribing the place in Adelaide at which such meetings shall be held, the members of the University who shall preside thereat, and the number of members of the University who must be present in order to constitute a valid meeting, and other Statutes and

Regulations dealing with all other matters of every kind which, in the opinion of the said University, ought to be made for the purpose of carrying out this Act in the most efficient manner.

If meeting not constituted in fifteen minutes after appointed hour, Council to elect for that occasion.

4. Notwithstanding any other provision herein contained, whenever the prescribed number of members of the University is not present within fifteen minutes after the time appointed for holding any such meeting, the Council shall, as soon as conveniently may be thereafter, elect in such manner as they shall think proper a member or (as the case shall require) two members of the said University to be members of the said Board.

Governors elected under this Act to have same rights, &c., as the others.

5. Members of the said Board of Governors elected under this Act shall during their tenure of office enjoy equal rights and powers with the other members of the said Board.

Title.

6. This Act may be cited for all purposes as the "South Australian Institute Act Amendment Act, 1879."

In the name and on behalf of her Majesty, I hereby assent to this Bill.

WM. F. DRUMMOND JERVOIS, Governor.

STANDING ORDERS OF THE SENATE.

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1. The Senate shall meet in such place as the Warden shall from time to time appoint.

2. The Senate shall meet (except as hereinafter provided) on the first Wednesday in the months of April, August, and December respectively ; or if such Wednesday be a public holiday, upon the Wednesday next preceding.

3. If the Warden be of opinion that upon any such Wednesday there is not sufficient business to bring before the Senate, he may direct that notices be issued stating that the meeting shall for that time lapse.

4. The Warden may at any time convene a meeting of the Senate.

5. Upon a requisition signed by twenty members of the Senate, setting forth the objects for which they desire the meeting to be convened, the Warden shall convene a special meeting of the Senate within one calendar month and not less than fourteen days from the date of the receipt by him of such requisition.

6. The Senate may adjourn any meeting or debate to a future day.

7. Notice of every meeting, whether ordinary or special, shall be given by circular, posted fourteen days before such meeting to the last known address of every member resident in the colony.

8. The Warden shall take the chair as soon after the hour of meeting as twenty members are present. In the absence of the Warden the Senate shall elect a Chairman.

9. If after the expiration of a quarter of an hour there be not twenty members present, the meeting shall lapse.

10. If the Warden arrive after the chair is taken, the Chairman shall vacate the chair.

11. If it shall appear on notice being taken, or on the report of a division by the tellers, that twenty members be not present, the Warden shall declare the meeting at an end or adjourned to such time as he shall direct, and such division shall not be entered on the minutes.

12. Every Vote and Proceeding of the Senate shall be noted by the Clerk of the Senate.

13. The draft Votes and Proceedings thus noted shall be read at the close of each meeting, and certified by the Warden.

14. The Clerk shall under the direction of the Warden record in a book the Votes and Proceedings of the Senate.

15. At the commencement of each meeting the Votes and Proceedings of the preceding meeting shall be read for confirmation.

16. The Clerk shall prepare a Notice-Paper of the business of every meeting, and issue it with the circular calling the meeting.

17. The Clerk shall place on the Notice-Paper, in the order in which they are received, all notices of motion received not less than twenty-one days before the day of meeting.

18. In the circular calling any meeting notice shall be given of all business from the Council, and such business shall take precedence of all notices of motion ; and (except by direction of the Senate) all other business shall be called on in the order in which it stands on the Notice-Paper.

19. In the absence of a member who has given notice of a motion any member present may move such motion.

20. Except by permission of two-thirds of the members present, no member shall make any motion initiating for discussion a subject which has not been duly inserted on the Notice-Paper for that meeting.

21. Except subject to the preceding Order, no business shall be entered on at an adjourned meeting which was not on the Notice-Paper for the meeting of which it is an adjournment.

22. A motion may be amended by the mover with leave of the Senate.

23. When a motion has been made and seconded, the Warden shall then propose to the Senate the question for discussion.

24. Any motion not seconded shall not be further discussed, and no entry thereof shall be made on the Votes and Proceedings.

25. A member who has made a motion may withdraw the same by the leave of the Senate, such leave being granted without any negative voice.

26. A question may be suspended—

I. By the motion " That the Senate do now adjourn."

II. By its appearing on notice being taken that twenty members are not present.

III. By a motion, " That the Senate proceed to the next business."

27. A debate may be closed by the motion " That the question be now put," being proposed, seconded, and carried, and the question shall be put forthwith without further amendment or debate.

28. A motion for " proceeding to the next business " may be superseded by a motion for the adjournment of the Senate.

29. The debate upon a question may be interrupted—

I. By a question of order.

II. By a motion for reading any official document relevant to the question.

30. The Senate may order a complicated question to be divided.

31. So soon as a debate upon a question shall be concluded, the Warden shall put the question to the Senate.

32. A question being put shall be resolved in the affirmative or the negative by a show of hands.

33. The Warden shall state whether in his opinion the "Ayes" or the "Noes" have it, and unless his opinion be acquiesced in, the question shall be determined by a division.

34. No question or amendment shall be proposed which is the same in substance as any question which during the same meeting has been resolved in the affirmative or the negative.

35. Any member proposing an amendment shall deliver the same in writing to the Warden.

36. A question having been proposed may be amended by leaving out certain words in order to insert or add other words, or by inserting or adding words.

37. An amendment proposed but not seconded shall not be entertained by the Senate or entered on the votes.

38. When a proposed amendment is to leave out certain words, the Warden shall put a question "That the words proposed to be left out stand part of the question," which shall be resolved by the Senate in the affirmative or the negative as the case may be.

39. When the proposed amendment is to leave out certain words in order to insert or add other words, the Warden shall put a question "That the words proposed to be left out stand part of the question," which, if resolved in the affirmative, will dispose of the amendment, but if in the negative and there is no motion before the Senate for amending the proposed amendment, another question shall be put "That the words of the amendment be inserted or added instead thereof," which shall be resolved in the affirmative or the negative as the case may be.

40. When the proposed amendment is to insert or add certain words the Warden shall put a question "That such words be inserted or added," which shall be resolved in the affirmative or negative as the case may be.

41. No amendment shall be proposed in any part of a question after a later part has been amended, or after an amendment on a later part has been proposed, unless the proposed amendment has by leave of the Senate been withdrawn.



42. No amendment shall be proposed in respect to any words which the Senate has ordered to stand part of a question, or to be inserted in or added to a question, except by way of adding other words thereto.

43. A proposed amendment may by leave of the Senate be withdrawn.

44. Amendments may be proposed to a proposed amendment, as if such proposed amendment were an original question.

45. When amendments have been made the main question as amended shall be put.

46. When amendments have been proposed, but not made, the question shall be put as originally proposed.

47. Every member desiring to speak shall rise in his place and address himself to the Warden.

48. While the Senate is dividing, members can speak only to a point of order and by permission of the Warden.

49. No member may speak to any question after the same has been put by the Warden and the show of hands has been taken thereon.

50. When two or more members rise to speak, the Warden shall call upon the member who first rose in his place.

51. A motion may be made that any member who has risen "be now heard" or "do now speak."

52. A member may speak to any question before the Senate, or upon any amendment proposed thereto, or upon a question or amendment to be proposed by himself, or upon a question of order arising out of a debate, but not otherwise; nor upon the motion that the question be now put.

53. By the indulgence of the Senate a member may explain matters of a personal nature, although there be no question before the Senate, but such matters may not be debated.

54. No member may speak twice to a question before the Senate except in explanation or reply; but a member who has merely formally seconded a motion shall not be deemed to have spoken.

55. A member who has spoken to a question may again be heard to explain himself in regard to some material part of his speech, but shall not introduce any new matter.

56. A reply shall be allowed to a member who has made a substantive motion to the Senate, but not to any member who has moved an amendment.

57. Any member may rise to speak "to order."

58. No member shall reflect upon any vote of the Senate, except for the purpose of moving that such vote be rescinded.

59. Whenever the Warden rises during a debate, any member then speaking or offering to speak shall sit down and the Senate shall be silent, so that the Warden may be heard without interruption.

60. If the Warden desires to take part in a debate, he shall vacate the chair for the time, and another chairman shall be appointed.

61. No member shall be entitled to vote in any division unless he be present when the question is put.

62. Every member present when a division is taken must vote.

63. When a division is called, the Warden shall direct the "Ayes" to the right and the "Noes" to the left, and shall appoint two tellers for each party.

64. The vote of the Warden shall be taken before the other votes, without his being required to leave the chair.

65. In case there should not be two tellers for one of the parties, the Warden shall forthwith declare the resolution of the Senate.

66. An entry of the lists of divisions in the Senate shall be made by the clerk in the Votes and Proceedings.

67. In case of confusion or error concerning the numbers reported, unless the same can be otherwise corrected, the Senate shall proceed to another division.

68. If the numbers have been inaccurately reported to the Senate, the Senate on being afterwards informed thereof shall order the Votes and Proceedings to be corrected.

69. In case of an equality of votes the Warden shall give a casting vote, and any reasons stated by him shall be entered in the Votes and Proceedings.

70. No member shall be entitled to vote upon any question in which he has a direct pecuniary interest, and the vote of any member so interested shall be disallowed if the Warden's attention be called to it at the time.

71. The annual election of Warden and of the Clerk of the Senate shall take place at the ordinary meeting in April.

72. The Clerk shall insert in the Notice Paper of any meeting at which an election of Warden or of a Clerk of the Senate is to take place, the name of any qualified person sent to him by two members of the Senate twenty-one clear days before the day of election, with the names of his proposer and seconder.

73. When any vacancy (other than the annual vacancies) in the Council of the University shall become known to the Warden, he shall forthwith issue a circular to the members of the Senate resident within the colony, stating that such vacancy has occurred, and that the Clerk will receive nominations of candidates which may be duly sent to him on or before a day not less than fourteen days after the date of such circular.

74. At any meeting for the election of a Warden or of a Clerk of the Senate or of a member of Council no person shall be proposed for election whose name has not appeared on the Notice Paper, except as is provided for in the next succeeding order.

75. The election of persons to fill the five vacancies occurring annually in the Council under the third section of the Act No. 20 of 1874, shall take place at the ordinary meeting in December. The Notice Paper convening such meeting shall state that the Clerk will receive nominations of candidates to fill such vacancies. The nominations must be signed in each case by two members of the Senate, and must reach the Clerk not later than ten days before the day of meeting.

76. Not later than seven clear days before the meeting in December the Clerk shall post to each member of the Senate resident within the colony a paper containing the names of all persons nominated as aforesaid, with the names of the respective proposers and seconders, and no person shall be eligible whose name does not appear as a candidate on such paper.

77. In all elections if no more than the required number of persons be nominated, the Warden shall declare them elected.

78. If more than the required number of persons be nominated, voting papers shall be distributed and every member present shall vote for the required number of candidates. The votes so given shall be counted by the tellers, and the number of votes given for each candidate shall be reported to the Warden, who shall then declare the result of the election.

79. Wherever the word "Warden" is used in these Standing Orders it shall mean the Warden, or in his absence the Chairman, unless the contrary is obvious from the context.

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The foregoing Standing Orders were made and adopted by the Senate at a meeting held on the 7th day of August, 1877.

WILLIAM GOSSE,

Warden.

ADDITIONAL STANDING ORDERS.

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COMMITTEE OF THE WHOLE SENATE.

80. A Committee of the whole Senate is appointed by a resolution "That the Senate do now resolve itself into a Committee of the whole."
81. The Warden shall be Chairman of such Committee unless he be unwilling to act, in which case any other member may be voted to the chair.
82. When the matters referred to the Committee have been disposed of the Senate resumes, and the report of the Committee is at once proposed to the Senate for adoption.
83. When the matters so referred have not been disposed of, the Senate having resumed and having received a report of the Committee to the effect that the matters have not been fully disposed of, may appoint a future day for the Committee to sit again.
84. A member may speak more than once to each question.
85. A motion need not be seconded.
86. When less than twenty members shall be reported to be present the Senate resumes, and is forthwith adjourned by the Warden.

SELECT COMMITTEES.

87. Select Committees, unless it be otherwise ordered, shall consist of five members, who shall elect their own Chairman, and of whom three shall be a quorum.
88. The members of Select Committees may be nominated ; but the election shall take place by ballot, provided that it be not compulsory upon all members present to take part in the said ballot.
89. The Chairman shall have both a deliberative and a casting vote.
90. At the time of the appointment of the Committee the Senate shall instruct the Committee as to the matters to be reported on by them, and their report shall be confined to such matters.
91. The report of the Committee shall be reported by the Chairman to the Senate, and shall be forthwith discussed or postponed for future consideration.

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The foregoing Standing Orders were made and adopted by the Senate, at a meeting held on the 3rd day of April, 1878.

WILLIAM BARLOW,  
Clerk of the Senate.

# The University of Adelaide.

1881.

## VISITOR.

HIS EXCELLENCY THE GOVERNOR.

## THE COUNCIL.

*Appointed by the Governor, 11th November, 1874—*

\* THE CHANCELLOR—The Right Rev. AUGUSTUS, Lord Bishop of Adelaide

† THE VICE-CHANCELLOR—The Hon. Samuel James WAY, Chief Justice of South Australia

*Elected by the Senate, 3rd April, 1878—*

THE REV. WILLIAM ROBY FLETCHER, M.A.

*Elected by the Senate, 4th December, 1878—*

WILLIAM ROBINSON BOOTHBY, Esq., B.A.

JOHN ANDERSON HARTLEY, Esq., B.A., B.Sc.

THE HON. SIR HENRY AYERS, K.C.M.G., M.L.C. (Treasurer)

EDWARD WILLIS WAY, Esq., M.B.

DAVID MURRAY, Esq., J.P.

*Elected by the Senate, 2nd April, 1879—*

THE HON. HENRY SCOTT, M.L.C.

*Elected by the Senate, 30th July, 1879—*

WILLIAM EVERARD, Esq., J.P.

*Elected by the Senate, 3rd December, 1879—*

JOHN WARREN BAKEWELL, Esq., M.A.

CHARLES TODD, Esq., C.M.G.

ROBERT DALRYMPLE ROSS, Esq., M.P.

WILLIAM ALEXANDER ERSKINE WEST-ERSKINE, Esq., M.A.  
M.P.

ALEXANDER STUART PATERSON, Esq., M.D.

*Elected by the Senate, 1st December, 1880—*

WILLIAM GOSSE, Esq., M.D., F.R.C.S., Eng.

ADOLPH von TREUER, Esq., LL.B.

HORACE LAMB, Esq., M.A., Elder Professor of Mathematics.

‡ THE REV. GEORGE HENRY FARR, M.A.

JOHN DAVIES THOMAS, Esq., M.D., F.R.C.S., Eng.

\* Elected Chancellor by the Council, 28th April, 1876.

† Elected Vice-Chancellor by the Council, 28th April, 1876.

‡ Warden of the Senate.

## THE SENATE:

WARDEN : THE VENERABLE GEORGE HENRY FARR, M. A.

## DOCTORS OF MEDICINE:

COCKBURN, JOHN ALEXANDER ... ..	1877
DEANE, CHARLES MASLEN ... ..	1877
ENGELHART, AUGUST FRIEDRICH GOTTFRIED ... ..	1877
ESAU, CHARLES FREDERICK HERMAN ... ..	1877
GARDNER, WILLIAM ... ..	1877
GETHING, ROBERT ... ..	1877
GÖRGER, OSCAR ... ..	1878
GOSSE, CHARLES ... ..	1877
GOSSE, WILLIAM ... ..	1877
GUNSON, JOHN MICHAEL ... ..	1877
MACKINTOSH, JAMES SUTHERLAND ... ..	1878
NEUBAUER, MAX FRIEDRICH ... ..	1877
PATERSON, ALEXANDER STUART ... ..	1877
RENNER, FRIEDRICH EMIL ... ..	1877
SEABROOK, THOMAS EDWARD FRAZER ... ..	1877
THOMAS, JOHN DAVIES ... ..	1877
VERCO, JOSEPH COOKE ... ..	1878
WHITTELL, HORATIO THOMAS ... ..	1877

## MASTERS OF ARTS:

AYERS, FREDERIC ... ..	1877
BAKEWELL, JOHN WARREN ... ..	1877
BURTT, THOMAS... ..	1877
CARR, WHITMORE ... ..	1877
DENDY, ARTHUR ... ..	1877
DOVE, GEORGE ... ..	1877
ELCUM, CHARLES CUNNINGHAM ... ..	1879
FARR, GEORGE HENRY (WARDEN) ... ..	1877
FIELD, THOMAS ... ..	1877
FLETCHER, WILLIAM ROBY .. ..	1877
HOWELL, EDWARD TUCKER ... ..	1877
KELLY, DAVID FREDERICK ... ..	1879
LAMB, HORACE ... ..	1877
MACBEAN, JOHN ... ..	1877
MARRYAT, CHARLES ... ..	1877



HOCTER, JOHN FRANCIS	...	...	...	...	...	...	...	1877
LABATT, EDWARD	...	...	...	...	...	...	...	1877
LABATT, GEORGE AUGUSTUS	...	...	...	...	...	...	...	1877
LEONARD, JAMES	...	...	...	...	...	...	...	1877
MCCULLAGH, WILLIAM GEORGE	...	...	...	...	...	...	...	1877
MORSE, CHARLES WILLIAM	...	...	...	...	...	...	...	1877
NANKIVELL, JOHN THOMAS	...	...	...	...	...	...	...	1877
SMYTH, JOHN THOMAS	...	...	...	...	...	...	...	1878
SPICER, EDWARD CLARK	...	...	...	...	...	...	...	1877
WELD, OCTAVIUS	...	...	...	...	...	...	...	1877
WOODS, JOHN CRAWFORD	...	...	...	...	...	...	...	1877

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**OFFICERS OF THE UNIVERSITY.**

**PROFESSORS:**

*Classics, &c.—*

DAVID FREDERICK KELLY, M.A., Hughes Professor of Classics.

*English Language and Literature, and Mental and Moral Philosophy—*

JOHN DAVIDSON, Hughes Professor of English Literature.

*Mathematics—*

HORACE LAMB, M.A., Elder Professor of Mathematics.

*Natural Science—*

RALPH TATE, F.G.S., Elder Professor of Natural Science.

**THE PROFESSORIAL BOARD:**

THE CHANCELLOR

THE VICE-CHANCELLOR

PROFESSOR KELLY (Dean)

PROFESSOR DAVIDSON

PROFESSOR LAMB

PROFESSOR TATE

**REGISTRAR AND CLERK OF THE SENATE:**

WILLIAM BARLOW, B.A., Morialta Chambers, Victoria Square West,  
Adelaide.





UFFINDELL, HENRY WALTER	...	...	...	...	...	...	1880
WELLS, ALFRED JAMES	...	...	...	...	...	...	1877
WHITINGTON, FREDERICK TAYLOR	...	...	...	...	...	...	1877
WILSON, CHARLES STANLEY	...	...	...	...	...	...	1880
WOODS, JULIAN EDMUND	...	...	...	...	...	...	1880

## ADMITTED AD EUNDEM STATUM.

BEARE, THOMAS HUDSON	...	...	...	...	...	...	1877
CLARE, WILLIAM	...	...	...	...	...	...	1878
HEWITSON, THOMAS	...	...	...	...	...	...	1878
HOSKING, EDWIN WILLIAM GLUYAS	...	...	...	...	...	...	1880
KNOWLES, FRANCIS EDWARD	...	...	...	...	...	...	1877
LANGSFORD, ARTHUR	...	...	...	...	...	...	1876
MAUGHAN, MILTON MOSS	...	...	...	...	...	...	1876
NEISH, GEORGE STUART	...	...	...	...	...	...	1879

## STUDENTS NOT STUDYING FOR A DEGREE—SESSION 1880.

Arnold, Ellen  
 Baylis, Alfred Henry  
 Bennett, Samuel Curnow  
 Birt, Sarah Howard  
 Bishop, John Frederick  
 Bowen, Edith Alice  
 Bray, James Henry  
 Brewer, Annie  
 Buchanan, Alice  
 Buchanan, Penelope Annie  
 Cherry, William Herbert  
 Cook, Edith Agnes  
 Cooke, Lillie  
 Counsell, Walter Samuel  
 Crooks, Marianne  
 Donaldson, Mary  
 Eckersley, William Henry  
 Espie, Margaret  
 Everett, Edith Julia  
 Fairweather, Francis  
 Flynn, John Dunvan  
 George, Madeleine Rees  
 George, John Henry  
 Gibson, Henry Gordon  
 Gilbert, Marie Jerome  
 Godfrey, Emela Sarah  
 Good, Annie  
 Good, Elizabeth

Good, Lydia  
 Gray, Mary  
 Gray, William  
 Hardy, Alfred  
 Hillman, Helena  
 Hosking, William  
 Humphreys, George E.  
 Johnson, Bertha Lockley  
 Lawrance, Emily  
 Lewin, Frances Sescadorowna  
 Loutit, Annie Freeman  
 Lyall, Helen  
 Maley, Charles  
 Marshall, Fanny Elizabeth  
 Marryat, Mabel  
 Maughan, Milton Moss  
 Morcombe, Thomas Yelland  
 Palmer, George Alfred  
 Phillips, James  
 Price, Elizabeth  
 Price, Thomas John  
 Rankine, Mary  
 Robin, Marie  
 Rodgers, Thomas  
 Stephens, John James  
 Thornber, Ellen  
 West, William Arthur  
 Wilson, Octavia Eleanor

## STATUTES.

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### CHAPTER I.—OF THE COUNCIL.

1. The Council shall meet on the last Friday in every month, at two o'clock in the afternoon, for the dispatch of business, and shall have power to adjourn to any intermediate period : Provided that if any such Friday shall be a Public Holiday the Council shall meet on the preceding Friday.

2. All proceedings of the Councils shall be entered in a Journal.

3. The Minutes of the preceding meeting shall be read at each Meeting of the Council and confirmed or amended thereat, and the presiding Chairman shall sign them as confirmed or amended.

4. The Chancellor or Vice-Chancellor shall have power to call a Special Meeting for the consideration and dispatch of business which either may wish to submit to the Council.

5. The Chancellor or Vice-Chancellor or in their absence the Registrar shall convene a meeting of the Council upon the written requisition of four members, in which shall be set forth the objects for which the meeting is required to be convened ; and the meeting shall be held within fourteen days after the receipt of the requisition.

6. Each member shall be supplied by the Registrar with a written or printed notice of all matters to be considered at the next ensuing meeting (whether special or ordinary) of the Council, and such notice shall be delivered or transmitted by post at least seven days before the day of meeting.

7. The Registrar shall insert in a book to be called " The Notice of Motion Book " the date of each notice of motion, that of its discussion, and the final result. And no member shall make any motion initiating a subject for discussion except in pursuance of notice of such motion given to the Registrar at least ten days previously.

8. If a quorum of the Council be not present within fifteen minutes after the time appointed for a meeting (whether ordinary or special) all business which should have been transacted at such meeting shall stand over for the next meeting and take precedence thereat : Provided that the Registrar shall deliver or transmit by post at least seven days before the day of such next meeting such notice as aforesaid.

CHAPTER II.—OF THE SENATE.

1. The Senate of the University when constituted shall meet at such times and places as shall be prescribed by the Standing Orders of the Senate.

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CHAPTER III.—OF THE PROFESSORIAL BOARD.

1. The Professors and such of the Lecturers as the Council shall from time to time nominate for that purpose shall form a Board for the consideration of all questions relating to the Studies and Discipline of the University, and of this Board the Chancellor and Vice-Chancellor or in the absence of either of them such other member of the Council as each of them may for any occasion or occasions appoint to act in his stead shall *ex officio* be Members, and the Registrar shall be Secretary.

2. The Chancellor, or if he be not present the Vice-Chancellor, shall when present preside over the Professorial Board at every meeting thereof. The Professorial Board when constituted shall elect one of their number to preside over them during the remainder of the then current Academical Year at every meeting at which neither the Chancellor nor the Vice-Chancellor shall happen to be present, and during the last term of that and of every subsequent Academical Year shall also elect one of their number to preside over them during the next ensuing Academical Year at every meeting at which neither the Chancellor nor the Vice-Chancellor shall happen to be present. Each person so elected shall be styled the Dean during his year of office.

3. The Professorial Board shall arrange the days and hours of all Lectures and Examinations and determine the subjects of all Examinations and Lectures, but every such arrangement and determination shall be made subject to the approval of the Council.

4. The Professorial Board shall prepare regulations for the maintenance of Discipline among the Students, and shall have the power of inflicting punishments for breaches of good order and propriety.

5. Every Professor and Lecturer in whose presence a breach of good order or of propriety has been committed by a Student may make a written complaint thereof under his hand to the Professorial Board, and each such complaint must be transmitted to the Dean on (at the latest) the day next succeeding that on which the conduct complained of took place, and must be brought before the Professorial Board at its meeting next after the Dean has received such complaint.

6. Whenever disorderly conduct shall occur or any breach of good order or propriety shall be committed in a class-room during the time devoted to teaching, the Professor or Lecturer in attendance may require

every misbehaving Student to withdraw at once and may dismiss each such Student from his class for that day.

7. The Professorial Board shall investigate as soon as it conveniently can each such complaint, but may when and so often as it thinks right adjourn any such investigation.

8. The Professorial Board shall through its Dean have the power

- (a) To *Admonish* the Student complained against.
- (b) To administer a *Reprimand* either in private or in the presence of a Class or Classes attended by the Student complained against.
- (c) To suspend such Student temporarily from attendance on any course or courses of Instruction in the University.
- (d) To exclude the Student from any place or places of Recreation or Study in the University for any period of time during but not extending beyond the then current Academic Year.
- (e) The Professorial Board may also recommend to the Council such other punishment as the Board shall think proper.

9. The Dean shall in each case pronounce the judgment of the Professorial Board, which judgment shall be in writing and signed by him, and shall also admonish or reprimand the Student whenever any such punishment has been awarded.

10. The Professorial Board shall prepare regulations for the management of the Library and Museum of the University.

11. The Dean shall regulate the Duties of the Porters and Servants of the University, and shall have the power of punishing them by fine or removal.

12. The Dean shall direct his particular attention to the maintenance of order and discipline in the University.

13. The Professorial Board shall furnish to the Council such information as may be from time to time required by the Council.

14. All regulations prepared by the Professorial Board shall be laid before the Council at its next meeting for approval, and on being approved shall be in force and valid from a day to be therein fixed.

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#### CHAPTER IV.—OF THE PROFESSORS AND LECTURERS.

1. There shall for the present be a Professor for each of the following groups of subjects, that is to say, for—

- a. Classics and Comparative Philology and Literature.
- b. English Language and Literature and Mental and Moral Philosophy.
- c. Mathematics pure and applied.
- d. Natural Science, especially Geology and Mineralogy; the Professor to give lectures in Chemistry also.

2. Each Professor shall hold office *quam diu se bene gesserit*, but when and so often as sickness or other causes shall temporarily incapacitate any Professor or Lecturer from performing the duties of his office the Council may appoint a substitute to act in his stead during the continuance of such incapacity, and such substitute so long as he shall continue to act as such shall receive annually at the discretion of the Council out of the salary of the Professor or Lecturer so incapacitated such sum (not exceeding one-half of such salary), as the Council shall direct; but it shall be competent for the Council to appoint Professors for a fixed term or (by special arrangement on the appointment of any Professor) to modify the terms on which he shall hold office.

3. The Council may at its discretion dismiss from his office or suspend for a time from performing the duties and receiving the salary thereof any Professor who has been appointed by the Council and whose continuance in his office or in the performance of the duties thereof shall in the opinion of the Council be injurious to the progress of the students or to the interests of the University: Provided that no such dismissal shall have effect until confirmed by the Visitor.

4. No Professor shall while he is such sit in Parliament or become a member of any political association, neither shall any Professor while he is such (except with the sanction of the Council) give private instruction or deliver lectures to persons not being students of the University.

5. The Professor shall not receive any persons (other than students) as boarders in their houses without the permission of the Council.

6. Each Professor shall take such part in all University Examinations as the Council shall from time to time direct, but no Professor or Lecturer shall be required to examine in any subject other than the subject or subjects which it is his duty to teach or to lecture upon.

7. There shall be such Lecturers on such subjects and for such times as the Council shall from time to time think fit to appoint.

8. On all days during Term time, except Sundays and public holidays, the whole time of each Professor shall be at the disposal of the Council for the purposes of the University.

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#### CHAPTER V.—OF THE REGISTRAR.

1. There shall be a Registrar of the University, whose duty it shall be to attend the meetings of the Council and to keep minutes thereof, to prepare and have charge of the records of the University, to keep all Registers which may be requisite, and to receive all fees and hand them

over to the Treasurer, and to keep books of account thereof, and to conduct all correspondence and answer all enquiries connected with the University.

The Registrar shall also perform the duties of Librarian.

2. The Council may at any time appoint a Deputy to act in the place of the Registrar for such period as they may think fit, and assign to him any of the duties of Registrar, and dismiss any such Deputy at their discretion.

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#### CHAPTER VI.—OF THE SEAL OF THE UNIVERSITY.

The Seal of the University shall be entrusted to the Chancellor and shall be affixed to documents only at a meeting of the Council and by the direction thereof.

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#### CHAPTER VII.—OF TERMS.

1. The Academical Year shall be divided into three Terms.

The first term shall commence on the second Tuesday in March, and the third Term shall terminate on the second Tuesday in December in each year.

The Council shall year by year fix the commencement of the second and third and the termination of the first and second Terms, and there shall always be a fortnight's vacation between the first and second and second and third Terms.

#### CHAPTER VIII.—OF MATRICULATION AND DEGREES.

1. There shall be a Matriculation Examination for all candidates who desire to become Students of the University, and no candidate shall be permitted to Matriculate who shall not have passed the Matriculation Examination, and who being a male shall not have completed the full age of sixteen years, and being a female shall not have completed the full age of eighteen years.\*

2. The Matriculation Examination shall be held in each year on the first Tuesday in March, or on such other day or days as the Council shall from time to time appoint.†

3. The names of all candidates who shall have passed the Matriculation Examination shall be laid before the Professorial Board, and shall be entered in a book called the "Examination Book," and shall be attested by the signatures of the Examiners.

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\* See post, p. 43, the alteration of this Statute making the age uniform.

† See post p. 45, Regulations as to Matriculation Examinations prescribing that the second Matriculation Examination shall commence on the first Tuesday in December.

4. Every candidate who has passed the Matriculation Examination and has completed the full age of sixteen or eighteen years as the case may be and who in the presence of the Registrar or the Deputy Registrar signs his or her name in the University Roll Book and makes and signs the declaration hereinafter mentioned shall thereby become a Matriculated Student of the University. The declaration hereinbefore referred to shall be in the following form :—

“ I do solemnly promise that I will faithfully obey the Statutes and Regulations of the University of Adelaide so far as they may apply to me, and that I will submit respectfully to the constituted authorities of the said University, and I declare that I believe myself to have attained the full age of sixteen years [or eighteen years, *as the case may be.*]

5. All certificates of attendance at Lectures and Examinations shall be laid before the Professorial Board, and the names of such students as shall have been ascertained by the Board to have fulfilled the conditions required by the Regulations of the University shall at the end of each year be inscribed in the Examination Book as having completed the course for that year and be authenticated by the signature of the Dean affixed at a meeting of the Professorial Board.

6. No student shall be permitted to proceed with the business of the second or any subsequent year unless he shall have duly passed the examinations of the previous portions of the course.

7. The course for the Degree of Bachelor of Arts shall extend over three Academical Years, and must be completed by each student before he or she can attain the Degree.

8. Students who shall have fulfilled all the conditions prescribed by the Statutes and Regulations for any Degree may be admitted to that Degree at a meeting of the Council of the University until the Senate shall have been constituted, and from and after the time when the Senate shall have been constituted then at a meeting of the Council and Senate, and all members for the time being of the University shall be entitled to be present at each such meeting. Meetings for such purpose and for admitting Graduates of other Universities to Degrees in The University of Adelaide shall be held in each year on such days as the Council shall from time to time determine.

9. Bachelors of Arts of not less than two years' standing who shall have fulfilled the conditions prescribed by the Regulations of The University of Adelaide may be admitted to the Degree of Master of Arts.

10. Persons who have been admitted to Degrees in any University recognised by The University of Adelaide, and who shall produce to the Council thereof satisfactory evidence of such admission, may be admitted to the same Degrees in The University of Adelaide.



11. Every candidate for admission to any Degree in the University who is resident in the Province of South Australia shall be presented by the Dean of the Professorial Board, and whenever any candidate for admission to any Degree in the University shall be resident out of the said Province and shall have passed the final examination for such Degree and shall have fulfilled all other conditions prescribed for admission to such Degree, the name of each such candidate may notwithstanding his absence from the said Province be presented by the Dean of the Professorial Board, and each such candidate may in his absence be admitted to such Degree.

12. Persons who have completed the whole or part of their undergraduate course in any University or College of a University recognised by the University of Adelaide, and shall produce to the Council thereof satisfactory evidence of such completion, may be allowed corresponding standing in the University of Adelaide.

\* 13. The fees payable in the University shall be those specified in Schedule A.

†

15. A student who having paid the fees for any examination shall fail to pass such examination shall not be entitled to receive back the fee so paid or any part thereof.

16. The following shall be the forms of Presentation for and Admission to Degrees :—

FORM OF PRESENTATION FOR STUDENTS OF THE UNIVERSITY OF  
ADELAIDE.

*Mr. Chancellor, Mr. Vice-Chancellor, and Members of the Council and Senate of The University of Adelaide.*

I present to you \_\_\_\_\_ as a fit and proper person to be admitted to the Degree of \_\_\_\_\_. And I certify to you and to the whole University that he has fulfilled the conditions prescribed for admission to that Degree.

FORM OF PRESENTATION FOR STUDENTS OF OTHER UNIVERSITIES.

*Mr. Chancellor, Mr. Vice-Chancellor, and Members of the Council and Senate of The University of Adelaide.*

I present to you \_\_\_\_\_ who has been admitted to the Degree of \_\_\_\_\_ in The University of \_\_\_\_\_ as a fit and proper person to be admitted to the rank and privileges of that Degree in The University of Adelaide.

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\* The fees payable under the statutes now in force are specified on p. 44.

† NOTE.—No. 14 has been repealed.

FORM OF ADMISSION TO ANY DEGREE.

By virtue of the authority committed to me, I admit you  
to the rank and privileges of a \_\_\_\_\_ in The University of  
Adelaide.

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FORM OF ADMISSION TO ANY DEGREE DURING THE ABSENCE OF THE  
CANDIDATE.

By virtue of the authority committed to me, I admit in his absence:  
from the Province of South Australia \_\_\_\_\_ to the rank and  
privileges of a \_\_\_\_\_ in The University of Adelaide.

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Allowed on 28th January, 1876.

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## STATUTES.

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So much of Chapter VIII. of the Statutes as relates to the age of candidates is hereby altered, by substituting for the ages thereby prescribed the age of sixteen years for all persons desiring to become students of the University: Provided, nevertheless, that the Chancellor, or (in case of his absence) the Vice-Chancellor may, at his discretion, admit as students persons who have fulfilled all other conditions, but have not attained the age of sixteen years: Provided also, that the Chancellor, or (as the case may be) the Vice-Chancellor, shall report to the Council at its meeting next after each exercise of such power the name of the person in whose favour—and the grounds upon which—it has been exercised.

Allowed on 2nd May, 1877.

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## FEES.

The following is the Scale of Fees at present in force. It is, however, subject to alteration :—

	£	s.	d.
Entrance Fee for Students not intending to Graduate ...	0	10	6
Fee payable by Undergraduates of other Universities for admission to same standing in The University of Adelaide	2	2	0
Fees payable in advance in each Term by every student who takes up any subject included in the course for the degree of B.A. :—			

	£	s.	d.
For each such subject included in the first year's course ...	0	10	0
Do. do. do. second or third year's course	0	15	0

## EXAMINATION FEES.

Fee for admission to Matriculation Examination ... ..	2	2	0
Fee for each subject specified in each student's notice of intention to present himself, or herself, at the First Ordinary Examination ... ..	0	5	0
Fee for each subject specified in each student's notice of intention to present himself, or herself, at the Second or Third Ordinary Examination ... ..	0	7	6
Fee payable by each Candidate for the University Primary Examination ... ..	0	10	6
Fee payable by a Candidate for the Angas Engineering Scholarship Examination ... ..	5	5	0
Fee payable by each Matriculated Student who sends notice of his intention to present himself at a Supplementary Examination ... ..	2	2	0
Fee for the Examination for the Degree of Master of Arts	5	5	0

## DEGREE FEES.

Fee for the Degree of Bachelor of Arts ... ..	3	3	0
Fee for the Degree of Master of Arts ... ..	5	5	0
Fee for Graduates of other Universities admitted to the same Degree (when not honorary) in The University of Adelaide	3	3	0

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## REGULATIONS.

1. The Regulations adopted by the Council on the third day of March, in the year 1876, and on the eleventh day of August in the same year, are hereby repealed, except as regards students who matriculated before January, 1878.

### \* \* OF THE MATRICULATION EXAMINATION.

2. The Matriculation Examination shall be held twice in each year. The first examination shall commence on the second Tuesday in March, and the second on the first Tuesday in December.

3. The fee for the Matriculation Examination shall be £2 2s. If a candidate withdraw from, or fail to pass the examination, the fee shall not be returned, but the candidate shall be admitted to one subsequent Matriculation Examination without the payment of any additional fee, provided the usual notice be given to the Registrar.

4. At each Matriculation Examination every candidate shall be required to satisfy the Examiners in the following subjects :—

1. *Latin.*
2. *Mathematics* : Arithmetic ; Algebra to simple equations ; Elementary Geometry (the substance of Euclid, Books I. and II.), with simple exercises.
3. *English Language.*
4. *English History.*
5. *Geography.*

5. Candidates may also present themselves for examination in any or all of the following optional subjects :—

6. *Greek.*
7. *French or German.*
8. *Natural Philosophy.*
9. *Chemistry.*
10. *Natural History.*

6. Schedules fixing the special subjects of examination in Classics, French, and German, and defining as far as may be necessary the range of questions to be set in each of the remaining subjects, shall be drawn up by the Professorial Board, subject to the approval of the Council, for each December examination, and shall in each case be published not later than the month of January preceding.

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\* See post, p. 60.

The subjects of the March examination shall be in all respects the same as those of the next preceding December examination.

7. The names of the successful candidates shall be arranged in two classes, in the First Class in order of merit, and in the Second Class in alphabetical order; and no candidate shall be placed in the First Class who does not pass in one at least of the optional subjects above enumerated. The Class-List shall be published in each case within one week from the conclusion of the examination.

8. Every successful candidate shall be entitled to a certificate showing in what subjects he has passed, and in which class he has been placed.

#### OF LECTURES.

9. The ordinary Lectures of the University shall, subject to the condition stated below, be open to all persons, whether matriculated or not matriculated, who shall have signed the University Roll and paid the prescribed fees to the Registrar.

10. Persons intending to become non-matriculated students may be required to satisfy the Professors or Lecturers whose classes they propose to attend of their competence to profit by the course of instruction given.

11. The Professors and Lecturers shall record the attendance of students at each lecture, but may refuse to any student credit for attendance at any lecture for which the student may have omitted the requisite study and preparation.

#### OF THE DEGREE OF BACHELOR OF ARTS.

12. To obtain the Degree of Bachelor of Arts every candidate must after matriculation complete three academical years of study, and pass the Ordinary Examination proper to each year.

13. The Ordinary Examinations shall be held within the last fortnight of the closing term of each academical year.

14. At the First Ordinary Examination every candidate for the Degree of Bachelor of Arts shall be required to satisfy the Examiners in each of the following subjects :—

1. *Latin.*
2. *Greek or Elementary Greek.*
3. *Pure Mathematics (Elementary).*
4. *Natural Philosophy (Elementary)<sup>1</sup>.*
5. *Inorganic Chemistry.*
6. *English Language and Literature.*

15. The Second Ordinary Examination for the Degree of Bachelor of Arts shall be in two alternative parts or sides, Classical and Scientific.

Candidates on the Classical side shall be required to satisfy the Examiners in each of the following subjects :—

1. *Latin.*
2. *Greek.*
3. *Ancient History.*
4. *Mathematics (Elementary Applied).*
5. *Deductive Logic.*

Candidates on the Scientific side shall be required to satisfy the examiners in—

1. *Mathematics (Elementary Applied).*
2. *Deductive Logic.*

And in two at least of the following :—

3. *Mathematics (Higher Pure).*
4. *Physics.*
5. *Chemistry (Inorganic and Organic).*
6. *Biology.*

16. The Third Ordinary Examination for the Degree of Bachelor of Arts shall also be in two alternative parts or sides, Classical and Scientific.

Candidates on the Classical side shall be required to satisfy the Examiners in each of the following subjects :—

1. *Latin.*
2. *Greek.*
3. *Comparative Philology.*
4. *Inductive Logic.*

Candidates on the Scientific Side shall be required to satisfy the Examiners in—

1. *Inductive Logic.*

And in two at least of the following subjects :—

2. *Mathematics, Advanced.*
3. *Physics.*
4. *Mineralogy and Geology.*
5. *Biology.*

No candidate who has at the Second Ordinary Examination passed in any branches of Physics or in Biology shall be allowed to present himself in the same branches of Physics or in Biology, as the case may be, at the Third Ordinary Examination.

17. Schedules fixing the special authors and works to be studied in Latin and Greek, and defining as far as may be necessary the range of

questions to be set in the other subjects, shall be drawn up by the Professorial Board, subject to the approval of the Council, and shall be published not later than the month of January in each year.

18. No candidate shall at any Ordinary Examination be allowed to present himself in any subject in which he has failed to gain credit for attendance at the University lectures during the current academical year, except in cases where attendance on lectures may have been dispensed with by special order of the Council.

No student shall in any academical year be credited with attendance at the University lectures on any subject unless he shall have attended in each Term of that year three-fourths of the lectures given in that subject, except in cases of illness or other sufficient cause to be allowed by the Council.

19. The names of the successful candidates at each Ordinary Examination shall be arranged in three classes, in alphabetical order in each, according to the results of the whole examination; and no candidate shall be placed in the First Class who does not show decided merit in two at least of the subjects of examination.

20. The Examiners at any Ordinary Examination may grant to such unsuccessful candidates as they may think proper permission to present themselves at a Supplementary Examination to be held at the beginning of the next academical year. Candidates who pass this Supplementary Examination shall be held to have completed the preceding academical year.

All other unsuccessful candidates shall be required to pass through an additional year of study before again presenting themselves for examination.

\*20A. Any Matriculated Student who, having paid the proper fees and given the prescribed notice of intention to present himself at an Ordinary Examination in any month of November, has been prevented from attending it, may, not later than the first day of the following December, furnish to the Registrar a written application for permission to present himself at the next Supplementary Examination.

The application shall specify the cause (whether illness or any other) of his non-attendance at the Examination, and shall be accompanied by a medical certificate or such other evidence in support of the statements contained in it as the applicant shall think proper to send.

The Professorial Board may require the applicant to supply such further evidence as they shall deem necessary; and, if the alleged cause



shall be proved to their satisfaction and constitute in their opinion a sufficient excuse for the applicant's omission to attend the Examination, may grant his request.

Every Student availing himself of such permission shall give the prescribed notice of his intention to present himself at the Supplemental Examination, and the notice shall be accompanied by a fee of £2 2s.

On passing the Supplementary Examination—the subjects of which shall be the same as those of the next preceding Ordinary Examination—the Student shall be held to have completed the preceding Academical year.

21. Non-matriculated Students may at any Ordinary Examination present themselves in any subject in which they have gained credit for attendance at the University Lectures during the current Academical Year.

22. All Students who shall have passed in any or all of the subjects of any Ordinary Examination shall be entitled to certificates showing in what subjects they have passed.

#### OF THE DEGREE OF MASTER OF ARTS.

23. The examination for the Degree of Master of Arts shall take place once in each year during the month of December.

24. The fee for the Examination shall be £5 5s.

25. Every candidate shall be required to show a competent acquaintance with one at least of the following branches of knowledge :—

1. *Classics and Comparative Philology.*
2. *Mathematics.*
3. *Experimental Physics.*
4. *Natural Science.*
5. *Metaphysics, Logic, and Political Economy.*

26. Schedules fixing the special authors and works to be studied in Latin and Greek, and defining as far as may be necessary the range of questions to be set in the other subjects, shall be drawn up by the Professorial Board, subject to the approval of the Council, and shall be published not later than the month of January in the year preceding that in which the examination is held.

27. No candidate shall be admitted to the Degree of Master of Arts until after the expiration of two academical years from the time at which the candidate obtained the Degree of Bachelor of Arts, Bachelor of Science, or Bachelor of Medicine in this, or in some other University recognized by this University.

Allowed on 6th January, 1879.

REGULATIONS.

OF THE NOTICE TO BE GIVEN BY CANDIDATES FOR EXAMINATIONS.

Every candidate for any University Examination shall, not less than one calendar month and not more than six weeks before the commencement of such examination, enter his or her name for such examination by furnishing to the Registrar in the prescribed form the particulars therein specified.

No entry for any examination shall be received unless and until the fee for that examination shall have been paid.

The Regulations of the 18th March, 1876, II. c., are hereby altered by expunging the following words :—“ Provided that notice is given to the Registrar at least fourteen days before the commencement of the examination.”

The form of notice to be sent to the Registrar by matriculated students of their intention to present themselves for examination is hereby altered, by expunging the words :—“ And I send herewith the evidence of my having fulfilled the conditions prescribed for admission to the said Ordinary Examination.”

OF CONDUCT PROHIBITED AT EXAMINATIONS, AND ITS PUNISHMENT.

If during any examination whatever, any candidate use book or notes, or give assistance to another candidate, or through culpable negligence allow any other candidate to copy from or otherwise use his or her papers, or accept assistance from any other candidate, or fraudulently use any paper of any other candidate, he or she shall lose that examination, and shall be liable to such further punishment by exclusion from future examinations or otherwise as the Council on the report of the Professorial Board shall award ; and if detected at the time, shall be summarily dismissed from the examination room.

OF ACADEMIC DRESS.

At all lectures, examinations, and public ceremonials of the University, Graduates and Undergraduates must appear in academic dress.

The academic dress shall be :—

For Undergraduates—A plain black stuff gown and trencher cap.

For all Graduates—A black trencher cap with black silk tassel ; and

For Bachelors and Masters of Arts, Bachelors and Doctors of Medicine, and Bachelors and Doctors of Laws—Gowns similar to those used at Oxford and Cambridge for the same Degrees ; and hoods, of the shape shown in a coloured drawing marked A, to which the Seal of the University has been this day affixed,

and which is countersigned by the Registrar, of a black colour, and (save as to the edging and lining thereof) of such material as the wearer shall select.

The hoods for Bachelors of the several Faculties shall have on both the inner and the outer fold an edging of silk of one and a-half inches in width. The colour of the edging shall, for Bachelors of Arts, be white ; for Bachelors of Medicine, scarlet ; and for Bachelors of Laws, the colour known as "Napoleon blue."

The hoods for Masters of Arts shall be lined throughout the inner fold with white silk, and have on the outer fold an edging of the same silk of one and a-half inches in width.

The hoods for Doctors of Medicine shall be lined throughout the inner fold with scarlet silk, and have on the outer fold an edging of the same silk of one and a-half inches in width.

The hoods for Doctors of Laws shall throughout the inner fold be lined with silk of the colour known as "Napoleon blue," and have on the outer fold an edging of the same silk of one and a-half inches in width.

Notwithstanding anything contained in the foregoing Regulations members of the Senate who have been admitted *ad eundem gradum* may at their option, wear the academic dress appropriate to the Degree in virtue of which they have been so admitted.

Allowed on 21st August, 1878.

\* UNIVERSITY PRIMARY EXAMINATION.  
REGULATIONS.

I. COMPULSORY SUBJECTS.

Every candidate will be required to satisfy the Examiners in each of the following subjects :—

1. *Reading, Writing, and Spelling.*
2. *English Grammar*, including the analysis of simple sentences.
3. *Writing a Short English Composition*—such as a description of a place, an account of some useful product, or the like.
4. *The Elements of Arithmetic*, including vulgar and decimal fractions.
5. *The Outlines of Geography*, and in particular the geography of Australia, Tasmania, and New Zealand.
6. *The Outlines of English History* including the succession of Sovereigns, the chief events, and some account of the leading men in each reign.

II. OPTIONAL SUBJECTS.

Every candidate will be required to satisfy the Examiners in one at least of the following divisions—A, B, C, D, and E; and no candidate will be placed in the First Class who has not passed creditably in at least two of them :—

A.—ENGLISH.

1. *History of England*: some selected period to be fixed from year to year.
2. *English Literature*: some selected author or authors to be fixed from year to year.

† B.—CLASSICS.

1. *Latin*: a selected work of some author to be fixed from year to year.
2. *Greek*: a selected work of some author to be fixed from year to year.

Candidates will be required to answer questions on Grammar, and to translate easy passages from English. An easy passage will also be set for translation from some author not previously named.

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\* See pcst, p. 72.

† The Medical Examining Bodies of Great Britain require students to pass in Latin before registration.

Candidates who satisfy the Examiners in either Latin or Greek will pass in this Division.

C.—MODERN LANGUAGES.

1. *French*: a selected work of some author to be fixed from year to year.
2. *German*: a selected work of some author to be fixed from year to year.

Candidates will be required to answer questions on Grammar, and to translate easy passages from English. An easy passage will also be set for translation from some author not previously named.

Candidates who satisfy the Examiners in either French or German will pass in this Division.

D.—MATHEMATICS.

1. *Arithmetic*.
2. *Algebra*.
3. *Geometry*.

Candidates who satisfy the Examiners in Arithmetic, in Algebra to simple equations, and in Euclid (Books I. and II.), will pass in Mathematics; but questions will also be set in Algebra as far as the Binomial Theorem (inclusive), and in Geometry as far as Euclid, Book VI. (inclusive).

E.—PHYSICAL AND NATURAL SCIENCE.

- |                                |                                |
|--------------------------------|--------------------------------|
| 1. <i>Chemistry</i> .          | 4. <i>Zoology</i> .            |
| 2. <i>Elementary Physics</i> . | 5. <i>Physical Geography</i> . |
| 3. <i>Botany</i> .             | 6. <i>Animal Physiology</i> .  |

Candidates who pass in one of the above Sub-Divisions will satisfy the Examiners in this Division.

The names of the successful candidates will be published, arranged in three classes—those in the First Class will be placed in order of merit; those in the Second and Third alphabetically. The class lists will also specify the school, if any, from which a candidate comes to attend the examination, and the subjects in which he or she has passed.

A certificate will be issued to every successful candidate, specifying the class in which his or her name was placed, and the subjects in which he or she satisfied the Examiners. In the case of the optional subjects, it will also be stated whether the candidate simply passed, or passed with credit.

RULES AS TO THE MODE OF CONDUCTING THE UNIVERSITY PRIMARY EXAMINATION.

- I. The Examination shall be held in the month of December in each year.
- II. Candidates must be under eighteen years of age on the 1st of December in the year in which they present themselves for examination.
- III. All applications from candidates must be sent to the Registrar of the University, so as to reach him one month before the day of the examination. In each application must be stated the candidate's name and address in full ; the date of his or her birth ; the school, if any, from which the candidate comes to attend the examination ; and the length of time he or she has resided in the colony.
- IV. The subjects to be included in each examination shall be fixed annually by the Council of the University ; and the programme of subjects shall be published not later than the month of January in each year.
- V. The Board of Examiners shall be appointed annually by the Council of the University.
- VI. \* A fee of £2 2s. must be sent to the Registrar by each candidate along with his or her application.
- VII. Each Examiner shall, subject to confirmation by the Board of Examiners, prepare questions on the subject or subjects allotted to him, assign the marks to be allotted to each question, and determine the marks gained by each of the candidates competing in such subject or subjects ; but in all cases the total number of marks allotted to each subject shall be determined by the Board of Examiners.
- VIII. The first examination under this scheme shall be held in December, 1878.  
Allowed on 12th December, 1877.

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\* This fee has been reduced to 10s. 6d.

SCHEDULE.

I. Form of Notice to be sent to the Registrar by Candidates for the Matriculation Examination.

THE UNIVERSITY OF ADELAIDE.

..... 18

I hereby give notice that I intend to present myself at the Matriculation Examination in the Term, 18 , for examination in the following subjects, viz. :—

- |    |     |
|----|-----|
| 1. | 6.  |
| 2. | 7.  |
| 3. | 8.  |
| 4. | 9.  |
| 5. | 10. |

and I send herewith the prescribed fee of £2 2s., and supply the information required of me, viz. :—

1. Name at full length.....
2. Date and place of birth.....
3. Name of father .....
4. Profession or occupation of father .....
5. Name and residence of parent (if any) who sends me .....
6. Signature of ditto .....
- or
5. Name and residence of guardian (if any) who sends me .....
6. Signature of ditto .....
7. Post Office address .....
8. Name and residence of friend (if any) with whom resident in Adelaide.....
9. Last place of education.....

(Signed

The Registrar,  
University of Adelaide.

II. Form of Notice to be sent to the Registrar by Matriculated Students of their Intention to present themselves for Examination.

THE UNIVERSITY OF ADELAIDE.

I, Matriculated Student of this University, hereby give notice that, for the purpose of completing the year of the course for the Degree of Bachelor of Arts, I intend to present myself at the Ordinary Examination in the Term of 188 , for examination in the undermentioned subjects, viz. :—

- |    |    |
|----|----|
| 1. | 4. |
| 2. | 5. |
| 3. | 6. |

(Signed)

Dated this day of  
The Registrar,  
University of Adelaide.

.....  
188 .

III. *Form of Notice to be sent to the Registrar by Students not studying for Degrees of their Intention to present themselves for Examination.*

THE UNIVERSITY OF ADELAIDE.

I, \_\_\_\_\_ a Non-Matriculated Student of this University, hereby give notice that I intend to present myself at the Ordinary Examination in the \_\_\_\_\_ Term, for examination in the following subjects:—

- |    |    |
|----|----|
| 1. | 4. |
| 2. | 5. |
| 3. | 6. |

And I send herewith the prescribed fee of £ \_\_\_\_\_, being \_\_\_\_\_ for each subject in which I intend to present myself for examination.  
(Signed) \_\_\_\_\_

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 188 \_\_\_\_\_  
The Registrar,  
University of Adelaide.

IV. *Form of Notice to be sent to the Registrar by Candidates for the University Primary Examination.*

THE UNIVERSITY OF ADELAIDE.

I, \_\_\_\_\_ hereby give notice that I intend to present myself at the University Primary Examination in December, 18 \_\_\_\_\_, for examination in the subjects named below:—

And I send herewith the prescribed fee of 10s. 6d., and supply the information required of me, viz:—

1. Name at full length.....
2. Date of Birth.....
3. School (if any) from which candidate comes to attend the Examination.....
4. Length of time during which candidate has resided in South Australia.....
5. Address of candidate.....

SCHEDULE OF SUBJECTS IN WHICH I INTEND TO PRESENT MYSELF FOR EXAMINATION:—

I. All the COMPULSORY SUBJECTS, namely—

1. *Reading, Writing, and Spelling.*
2. *English Grammar*, including the analysis of simple sentences.
3. *Writing a short English Composition*—such as a description of a place, an account of some useful product, or the like.
4. *The Elements of Arithmetic*, including vulgar and decimal fractions.
5. *The Outlines of Geography*, and in particular the geography of Australia, Tasmania, and New Zealand.
6. *The Outlines of English History*, including the succession of Sovereigns, the chief events, and some account of the leading men in each reign.



AND—

II. THE FOLLOWING OPTIONAL SUBJECTS :—

DIVISION A.—ENGLISH.

- 1.
- 2.

DIVISION B.—CLASSICS.

- 1.
- 2.

DIVISION C.—MODERN LANGUAGES.

- 1.
- 2.

DIVISION D.—MATHEMATICS.

- 1.
- 2.

DIVISION E.—PHYSICAL AND NATURAL SCIENCE.

- 1.
- 2.
- 3.

- 4.
- 5.
- 6.

(Signed)

To the Registrar of  
The University of Adelaide,  
Morialta Chambers,  
Victoria Square West,  
Adelaide.

N. B.—Every notice from a candidate for any examination must be furnished to the Registrar, and reach him not less than one calendar month and not more than six weeks before the commencement of such Examination. See the days specified in the calendar ante p. 5.

Printed copies of all Forms may be obtained from the Registrar.

RULES FOR THE CONDUCT OF EXAMINATIONS.

1. The doors of the Examination Room will be opened punctually at the time fixed for the commencement of the Examination.

2. No Candidate will be allowed to enter the Examination Room after the expiration of half-an-hour from the time fixed for the commencement of the Examination.

3. No Candidate will be allowed to leave the Examination Room before the expiration of half-an-hour from the time fixed for the commencement of the Examination.

4. Candidates are requested to observe the following rules :—

(a) Write on *one* side only of each sheet of paper.

(b) Write your name at the top of each sheet of paper which contains any part of an answer.

(c) Prefix to each answer the number of the question answered.

(d) Begin each answer on a separate sheet of paper.

(e) Arrange your papers face upwards in the order of the questions answered, the lowest number on the inside.

(f) Fold each parcel of paper once parallel to the longer side, and write on the back of the outer sheet your name and the subject of the paper :  
*e.g.*, Aaron Crooks, Arithmetic.

5. No communication of any kind is to take place between candidates while within the Examination Room.

6. The attention of all candidates is particularly drawn to the following Regulation —

OF CONDUCT PROHIBITED AT EXAMINATIONS, AND ITS PUNISHMENT.

“ If during any Examination whatever any Candidate use book or notes, or give assistance to another Candidate, or through culpable negligence allow any other Candidate to copy from or otherwise use his or her papers, or accept assistance from any other Candidate, or fraudulently use any papers of any other Candidate, he or she shall lose that examination, and shall be liable to such further punishment by exclusion from future examinations or otherwise as the Council on the report of the Professorial Board shall award ; and if detected at the time, shall be summarily dismissed from the Examination Room.”

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## RULES OF THE LABORATORY.

- I. The University will provide all apparatus, reagents, and gas necessary for the use of the students.
- II. A set of apparatus will be placed in the charge of each student who does not provide himself with a set.
- III. The following articles constitute a set of apparatus:—
- |   |  |
|---|--|
| Conical brass blowpipe  | Glass Combustion Tubes, $\frac{3}{8}$ inch bore, |
| Platinum Wire, 6 inches   | $\frac{1}{2}$ lb., in lengths of 2 feet          |
| Platinum Foil, 2 by 1 inches                                      | Bunsen Gas Burner, &c.                           |
| Test Tube Stand, 24 holes   | Caoutchouc tubing, 2 feet                        |
| Test Tubes, 18 of 6 by $\frac{3}{4}$ inches                       | Corks, 3 doz. assorted                           |
| Test Tubes, 12 of 5 by $\frac{1}{2}$ inches                       | Woulff's Bottle, 2 necks, pint size              |
| Boiling Tubes, 2 of 8 by $1\frac{1}{4}$ inches                    | Stopped German Retort, 2 oz.                     |
| Test Tube Brushes, 2  | Set of 3 Cork Borers                             |
| Beaked Tumblers, a set of 3                                       | Round, triangular, and square flat               |
| German Flasks, 1 each—2 oz., 4 oz.,                               | files, 1 each                                    |
| 8 oz., 16 oz., and 30 oz.   | Crucible Tongs                                   |
| Berlin Porcelain Crucibles $1\frac{1}{4}$ inch, and               | Porcelain Mortar, 4 inch                         |
| $1\frac{1}{2}$ inch   | Box of Test Papers                               |
| Berlin Porcelain Evaporating Dishes, $1\frac{1}{2}$               | Cobalt Nitrate Solution, $\frac{1}{2}$ oz.       |
| inch, and $1\frac{1}{2}$ inch                                     | Silver Nitrate Solution $\frac{1}{2}$ oz.        |
| Funnels, 1 each— $1\frac{1}{2}$ inch and 2 inch                   | Platinic Chloride Solution, $\frac{1}{2}$ oz.    |
| Filtering Paper, 1 quire  | Two Dusters                                      |
| Iron Retort Stand   | Glass Spirit Lamp, 4 oz.                         |
| Watch Glasses, 2 inch, 6  | Methylated Spirit, 1 pint.                       |
| Glass Tubes, soft, 3-16 to $\frac{1}{4}$ inch, $\frac{1}{2}$ lb., |  |
| in lengths of about 2 feet  |  |
- IV. Each student to whom is entrusted a set of apparatus provided by the University shall previously to receiving the set deposit a sum (of £3 10s.), equal to the value in Adelaide of the Articles.
- V. At the end of his course the student, on delivering up the apparatus and reagent bottles, shall receive back out of his deposit the value of the articles which he delivers up in good order.
- VI. Other apparatus may be used by the students, but all breakages are to be made good.
- VII. Each student is at liberty to provide himself with a set of apparatus.
- VIII. Each student is recommended to provide himself with a box having a lock and key, in which to keep the apparatus placed in his charge.
- IX. No experiments of a dangerous character are to be performed without the previous knowledge of the Professor or his assistant.

## MATRICULATION EXAMINATION.

The attention of Medical Students, Candidates for the Civil Service, and gentlemen desirous of Articling themselves to Solicitors, is directed to the advantage of passing this Examination.

MEDICAL STUDENTS.—The Royal College of Surgeons of England recognises the First-Class certificate of having passed the Matriculation Examination, and the Decree of B.A., of this University, as exempting Candidates from the necessity of passing the Preliminary Examination for the Diploma of Member of the College.

The General Council of Medical Education and Registration of the United Kingdom has recognised the Matriculation Examination of The University of Adelaide, and inserted it in the list of Examinations fulfilling the conditions of the Medical Council as regards Preliminary Examination; and has intimated that

“On and after the first day of January, 1882, no person shall be allowed to be registered as a Medical Student unless he shall have previously passed a Preliminary Examination in the subjects of General Education as specified in the following list:—

- (1) English Language, including Grammar and Composition ;\*
- (2) English History ;
- (3) Modern Geography ;
- (4) Latin, including Translation from the original and Grammar ;
- (5) Elements of Mathematics, comprising (a) Arithmetic, including Vulgar and Decimal Fractions ; (b) Algebra, including Simple Equations ; (c) Geometry, including the first two books of Euclid or the subjects thereof ;
- (6) Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics ;†
- (7) One of the following Optional Subjects :—  
(a) Greek ; (b) French ; (c) German ; (d) Italian ; (e) any other Modern Language ; (f) Logic ; (g) Botany ; (h) Elementary Chemistry.”

CIVIL SERVICE.—Under the Civil Service Regulations the Matriculation Examination of this University is recognised as qualifying Candidates for admission to the Civil Service.

ARTICLED CLERKS.—Under the Rules of the Supreme Court no person can be articulated to a Solicitor until he has passed the Matriculation Examination of The University of Adelaide, or that of some University recognised by it, or a Preliminary or Intermediate Examination which Articled Clerks in the United Kingdom are required to pass. [See the *South Australian Government Gazette* for October 5, 1876, p. 2,019, *et seq.*]

\* “The General Medical Council will not consider any Examination in the English Language sufficient that does not fully test the ability of the Candidate:—(1) To write sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition;—(2) to write correctly from dictation;—(3) to explain the grammatical construction of sentences;—(4) to point out the grammatical errors in sentences ungrammatically composed, and to explain their nature; and (5) to give the derivation and definition of English words in common use.”

† “This subject may be passed either as Preliminary, or before, or at the first Professional Examination.”

DETAILS OF SUBJECTS OF EXAMINATION, AND RECOMMENDATIONS  
AND ANNOUNCEMENTS FOR THE MATRICULATION EXAMINATION  
TO BE HELD IN MARCH, 1881.

(See Regulations 2 to 8.)

COMPULSORY SUBJECTS.

LATIN—

Smith's Smaller Latin Grammar.  
Translation of simple English into Latin.  
*Virgil*—Aeneid, Book I.

MATHEMATICS—

Arithmetic.—The ordinary rules of Arithmetic, fractions (vulgar and decimal), and the extraction of the square root.

Algebra: 10 simple equations, inclusive.

Both in Arithmetic and in Algebra candidates will be expected to show not merely proficiency in the use of the various rules and processes, but also a knowledge of the reasoning on which these are based.

Elementary Geometry—the substance of Euclid, Books I. and II., with simple exercises.

In Geometry candidates will not be restricted to Euclid's methods of proving the various propositions; and any proofs that are strictly geometrical will be accepted.

ENGLISH LANGUAGE—

Including Grammar; Composition; (1) Writing sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition; (2) Writing correctly from dictation; (3) Explaining the grammatical construction of sentences; (4) Pointing out the grammatical errors in sentences ungrammatically composed, and explaining their nature; and (5) giving the derivation and definition of English words in common use.

ENGLISH HISTORY.

GEOGRAPHY—

General descriptive geography of the World, particularly of the Australasian Colonies.

Map drawing from memory.

Physical geography, such as may be obtained from a good class book.

The natural history of the raw materials of commerce.

OPTIONAL SUBJECTS.

GREEK—

Smith's Smaller Greek Grammar.  
Translation of simple English into Greek.  
*Xenophon*—Anabasis, Book I.

FRENCH OR GERMAN—

FRENCH: *Racine*, *Athalie*.

GERMAN: *Goethe*, *Hermann und Dorothea*.

In both French and German candidates will be required to answer questions on Grammar, and to translate easy passages from English. An easy passage will also be set for translation from some author not previously named.

NATURAL PHILOSOPHY—

The elementary parts of Statics, including the composition and resolution of forces, the conditions of equilibrium of forces acting in one plane, the definition and properties of the centre of gravity, the nature and laws of fluid pressure, the conditions of equilibrium of liquids and of floating bodies, and the construction and use of the principal instruments and machines whose action depends on the facts and laws above specified.

The elements of Kinetics, including the definition and measurement of velocity, acceleration, mass, momentum, and force; the laws of motion, and the motion of falling bodies.

The elements of the science of Heat, including the definition of temperature, the construction of the mercurial thermometer, the laws of expansion of gases and vapours, the principle of the air-thermometer, the nature of conduction, convection, and radiation of heat, specific heat, and the elements of calorimetry.

#### CHEMISTRY—

Simple and compound matter. Different modes of chemical action. Principles of chemical nomenclature. Chemical formulæ. Classification of elements.

Preparation and properties of hydrogen, chlorine, oxygen, carbon, nitrogen, iodine, and sulphur, and of their simpler compounds.

#### NATURAL HISTORY.

Candidates who pass in one of the following divisions will satisfy the Examiners in this subject.

##### I. BOTANY.

Questions will be confined to the *general structure of the flowering plant* with especial reference to the following illustrative plants—*Wallflower, nettle, pea, gum-tree, sow-thistle, snapdragon, lily, and wild-oat.*

Candidates will be required to describe in technical language the organs of fresh plants in the following order :—

Root	Calyx	Fruit
Stem	Corolla	Seed
Leaves	Stamens	Embryo
Inflorescence	Pistil	
Bracts	Ovule	

##### II. ZOOLOGY.

Questions will be confined to the following subjects, with which the candidates will be expected to show a practical acquaintance :—

The leading facts relating to the anatomy and physiology of the skeleton, and of the alimentary, circulatory, and respiratory organs in a fish, in a frog, in a bird, and in a mammal.

The characters of the orders of the vertebrata, and the broad facts relating to the geographical distribution of the vertebrata.

##### III. GEOLOGY.

Questions will be confined to the undermentioned topics in the elements of physical geology :—

Proofs of the origin of stratified rocks resulting from the degradation of the land produced by the action of rain, rivers, frosts, glaciers, icebergs, accumulations of organic debris, &c.

The transport of matter by rivers, the formation of deltas, &c., and the general accumulations of great deposits of marine and freshwater strata. The theory of the origin of salt lakes.

Proofs that large areas of the earth's surface are now being slowly elevated above or depressed beneath the sea. The relations of coral reefs and of earthquake and volcanic phenomena to this branch of the subject.

Explanation of common geological terms—as clay, sand, gravel, horizontal and inclined strata, anticlines and synclines, unconformability, dip, joint, fault.

The candidates will also be required to make sketches, and name unlabelled specimens of the commoner rocks of this country.

DETAILS OF SUBJECTS OF EXAMINATION AND RECOMMENDATIONS  
AND ANNOUNCEMENTS FOR THE MATRICULATION EXAMINA-  
TIONS TO BE HELD IN DECEMBER, 1881, AND MARCH, 1882.

(See Regulations 2 to 8).

COMPULSORY SUBJECTS.

LATIN—

Smith's smaller Latin Grammar.  
Translation of simple English into Latin.  
*Cicero—De Senectute.*

MATHEMATICS—

Arithmetic	}	As prescribed for the Matriculation Examination to be held in March, 1881.
Algebra		
Geometry		

ENGLISH LANGUAGE	}	As prescribed for the Matriculation Examination to be held in March, 1881.
ENGLISH HISTORY		
GEOGRAPHY		

OPTIONAL SUBJECTS.

GREEK—

Smith's Smaller Greek Grammar.  
Translation of simple English into Greek.  
*Homer—Iliad, Book I.*

\* FRENCH—*De Maistre*—"La jeune Sibérienne," and *Le lépreux de la Cite d'Aoste*

\* GERMAN—*W. Hauff*—*Das Wirshaus im Spessart.*

NATURAL PHILOSOPHY	}	As prescribed for the Matriculation Examination to be held in March, 1881.
CHEMISTRY		
NATURAL HISTORY		

DETAILS OF SUBJECTS AND RECOMMENDATIONS AND ANNOUNCEMENTS FOR THE ORDINARY EXAMINATIONS FOR THE DEGREE OF BACHELOR OF ARTS TO BE HELD ON THE 21ST OF NOVEMBER, 1881, AND FOLLOWING DAYS; AND THE SUPPLEMENTARY ORDINARY EXAMINATIONS TO BE HELD (if required) IN MARCH, 1882.

FIRST YEAR'S COURSE.

(See Regulations 12 to 14.)

LATIN—

The subjects are—

*Virgil*—Aeneid, Books VI., VII.

*Terence*—*Andria* and *Heautontimorumenos*.

ELEMENTARY GREEK—

Greek Grammar, and Arnold's Greek Prose Composition, Part I.

*Theophrastus*—Selected characters.

GREEK (Advanced)—

The subjects are—

*Euripides*—*Medea*.

*Thucydides*—VI.

Prose Composition.

At the First Ordinary Examination a separate paper, containing questions in Latin and Greek Grammar, with simple and easy sentences of English to be translated into Latin, will be set.

PURE MATHEMATICS (Elementary)—

The Geometry of the straight line and circle; the Theory of Proportion and of Similar Rectilinear figures.

The Elements of Algebra, as far as the Binomial Theorem (exclusive).

The Measurement of Angles, the definitions of the Trigonometrical ratios, and the relations between them for one and for two angles; the simpler relations between the sides and angles of triangles; the properties and use of logarithms.

Text-books recommended:—

Wilson's Elementary Geometry; Todhunter's Euclid and Algebra for Beginners; J. H. Smith's Elementary Trigonometry.

NATURAL PHILOSOPHY (Elementary)—

A general outline of Physics.

Text-book recommended:—

Everett's Text-book of Physics.

INORGANIC CHEMISTRY—

The general principles of chemical combination by weight. Notation and Nomenclature. The classification of the elements and the principles of the leading chemical theories. Oxygen, Ozone. Hydrogen, Water, Distillation, Filtration. Nitrogen, Carbon, Carbonic oxide, and Carbonic acid. The Atmosphere, Diffusion of gases. The Oxides of Nitrogen, Ammonia. Chlorine, Bromine, and Iodine, and their Compounds with Oxygen and Hydrogen. Cyanogen. Theory of acids and salts; of Bleaching. Sulphur. Sulphurous acid. Sulphuric acid. Sulphuretted Hydrogen. Laws of Combination by volume. Phosphorus, its Oxygen compounds, Phosphuretted Hydrogen. Principal Hydrogen compounds of Carbon. Combustion and the structure of Flame. Boron, Bolic acid.



**Text-books recommended :—**

Wilson's Elementary Chemistry.  
Fownes's Elementary Chemistry.

**ENGLISH LANGUAGE AND LITERATURE.**

**LITERATURE—**

**Text-books recommended :—**

Collier's History of English Literature.  
Craik's History of English Literature.  
Taine's History of English Literature.  
Dr. Smith's "Students' Specimens of English Literature."

**LANGUAGE—**

Earle's Philology of the English Tongue.  
Abbott and Seeley's English Lessons for English Learners.  
(A) English Literature of the age of Queen Anne.  
(B) Shakspeare : King Lear.  
(C) The Poetry of the present century.

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SECOND YEAR'S COURSE

(See Regulation 15.)

LATIN—

The subjects are—

*Tacitus*—Annals I, II.

*Juvenal*—Satires I, III, IV, V, VIII, X.

Prose Composition.

GREEK—

The subjects are—

*Sophocles*—Ajax.

*Plato*—Theætetus.

Prose Composition.

ANCIENT HISTORY—

Early Greek History down to B.C. 479.

History of the Roman Emperors from Augustus to Domitian, inclusive.

MATHEMATICS (Elementary Applied)—

The Elements of Kinetics, Statics (including Elementary Attractions), and Hydrostatics, treated with the help of so much Pure Mathematics as is included in the first year's course.

DEDUCTIVE LOGIC—

Text-books :—

Jevons' Elementary Logic.

J. S. Mill's System of Logic, Books I, II.

MATHEMATICS (Higher Pure)—

The Binomial Theorem, the theory of Convergent and Divergent Series, the Exponential and Logarithmic Series, the construction of Logarithmic Tables, the elements of the theory of Probability, Notation. The solution of triangles, the properties of a triangle and its associated circles, the construction of trigonometrical tables, the geometrical representation of complex quantities, De Moivre's Theorem and the principal theorems derived from it, the simpler trigonometrical series.

ANALYTICAL GEOMETRY—

The Theory of Lines of the First and Second Degrees.

PHYSICS—

Heat, Electricity, and Magnetism.

Text-books—

Deschanel's Natural Philosophy, Parts II, III.

CHEMISTRY (Inorganic and Organic)—

Classification and Characters of Metals.

Description of the following elements and their compounds :—Potassium, Sodium, Silver, Barium, Strontium, Calcium, Zinc, Magnesium, Mercury, Copper, Gold, Platinum, Tin, Lead, Aluminium, Iron, Manganese, Cobalt, Nickel, Arsenic, Antimony, Bismuth, Chromium.

The chief applications of Chemistry in the Arts and Manufactures. Calculation of empirical formulæ.

The elements of Organic Chemistry. Chief constituents of organic substances. Fibrin, Casein, Gelatine; cellulose, starch, gum, sugar, fatty and oily bodies. Principal vegetable acids and alkaloids.

Alcohol and its chief derivatives. Fermentation. Methyl Alcohol.

## PRACTICAL CHEMISTRY—

In the Laboratory the instruction is devoted to the analysis of simple salts, soils, rocks, and the ores of the more important metals.

The student must be provided with Jarmain's or Valentin's "Tables for Qualitative Analysis." Fresenius's Qualitative Analysis should also be consulted.

## BIOLOGY (Botany and Zoology).

## BOTANY—

The teaching will be conducted as far as practicable with reference to actual illustrative specimens. The chief subjects lectured upon will be—

1. The chemistry of the compounds forming the principal part of the structure of plants.
2. Vegetable Histology.
3. The general structure and physiology of a flowering plant.
4. The morphology and physiology of fungi and algæ.
5. The characters and general properties of the chief natural orders of Australian plants, including Cruciferae, Caryophyllaceae, Malvaceae, Rutaceae, Leguminosae, Myrtaceae, Umbelliferae, Compositae, Goodenovicæ, Epacridæ, Scrophulariaceae, Myoporinæ, Solanaceae, Labiatae, Chenopodiaceae, Amarantaceae, Proteaceae, Euphorbiaceae, Orchidaceae, Liliaceae, Cyperaceae, and Gramineae.
6. The broad facts of the geographical distribution of flowering plants.

Candidates will be required to prove a practical acquaintance with the morphology and physiology of plants, and with the chief constituents of the local flora.

## Text-books :—

- Balfour. Text-book of Botany.  
Bentham. Flora Australiensis.

## ZOOLOGY—

The teaching will be conducted as far as practicable with reference to actual illustrative specimens. The lectures will embrace—

Inheritance and variation, Origin of Species.

Principles of classification.

Morphology and physiology of the Protozoa and Cœlenterata.

The structure, functions, and distribution in time and space of the different classes of the Mollusca and Annulosa.

The anatomy and physiology of the skeleton, of the alimentary, circulatory, nervous, and respiratory organs in fish, amphibia, reptiles, birds, and mammals.

The characters of the orders of the vertebrata.

The broad facts relating to the geographical and geological distribution of the vertebrata.

## Text-books :—

- Nicholson's Manuals of Zoology and Palæontology.  
Hutton's Zoological Exercises (Dunedin.)  
Huxley's Practical Biology.

## THIRD YEAR'S COURSE.

(See Regulation 16.)

## LATIN—

The subjects are—

*Tacitus*—Annals I., II.*Juvenal*—Satires I., III., IV., V., VIII., X.

Prose Composition.

## GREEK—

The subjects are :—

*Sophocles*—Ajax.*Plato*—Theætetus.

Prose Composition.

COMPARATIVE PHILOLOGY:—Peile's Introduction to Latin and Greek Etymology.

## INDUCTIVE LOGIC—

Text books—

Jevon's Elementary Logic.

J. S. Mill's System of Logic, Books III., IV., V.

## MATHEMATICS (Advanced)—

The Elements of the Differential and Integral Calculus, and of Analytical Geometry of Three Dimensions, with their simpler physical applications.

## PHYSICS—

Heat, Electricity, and Magnetism.

Text-books—

Deschanel's Natural Philosophy, Parts II., III.

## MINERALOGY AND GEOLOGY—

*Mineralogy*.—The course of lectures in Mineralogy will comprise—

1. The *physical properties* of minerals viewed principally as aiding in the practical discrimination of the various kinds, Fracture. Hardness. Tenacity. Specific Gravity. Lustre. Transparency. Refraction. Optic Axes.
2. *Crystallography*.—Classification of the crystalline forms and their chief combinations. Isometric drawing. Principles of goniometers. Cleavage, Pseudomorphism. Fossilization.
3. The use of the blowpipe, and of such chemical tests as are calculated to be serviceable when in the field. Dimorphism. Isomorphism.
4. The systematic description of the more important species, with particular reference to the mode and places of occurrence, both of those substances which bear a commercial value, and of those which derive their chief interest from geological and physical considerations.

Candidates for examination will be required to prove a practical acquaintance with crystal forms, and with minerals, and the physical and chemical methods of discriminating them.

The following text-books may be used :—

Collins—A First Book of Mineralogy.

Dana—Manual of Mineralogy.

Mitchell's Crystallography.

Scheerer's Use of the Blowpipe

## GEOLOGY—

- I. The principles of geological dynamics, and physiography. Effects of rain ; sources of water supply. Geological action of rivers. Marine denudation. Geological action of snow and ice. Formation of modern strata. Central heat. External phenomena of volcanoes. Movements of the earth's crust. Agency of organic beings in modifying earth's surface.
- II. The composition and formation of the principal rocks. Disintegration of rocks. Classification and characters ; metamorphism. Cleavage.
- III. The structure of rock masses. Stratification. Calculation of thickness of strata. Disturbance and contortion of strata, &c., &c. Construction of geological sections and maps.
- IV. The laws and generalizations of Palæontology.
- V. Historical Geology. The typical rocks and characteristic fossils of the Palæozoic, Mesozoic, and Cainozoic systems of Europe.  
 The Azoic rocks of South Australia, their metamorphic character, igneous rocks, succession, industrial value.  
 The Silurian and Devonian strata in New South Wales and Victoria, South Australian equivalents.  
 The carboniferous strata in New South Wales, typical rocks and fossils, Triassic and Jurassic strata in Victoria, typical rocks and fossils. Jurassic rocks of South Australia. Cretaceous fossils of Queensland and West Australia. Typical rocks and characteristic fossils of the South Australian Tertiary epochs. Relation to existing fauna. Bone caves. Glacial and volcanic phenomena of this period.

As text books may be used :—

*Jukes*—Manual of Geology

*Lyell*—Student's Manual of Geology

*Tate*—Student's Class Book of Geology

but more advanced works will need to be consulted.

## BIOLOGY—

As prescribed for the Second Year.

## EXAMINATION FOR THE DEGREE OF MASTER OF ARTS.

(See Regulations 23 to 27.)

## BRANCH I.

## CLASSICS AND COMPARATIVE PHILOLOGY.

The Examiners will limit their selection of passages to the following authors, and in each year four will be prescribed for special study.

## GREEK—

- Homer*—Iliad, Books I. to VI.  
 Odyssey, Books I. to VI.  
*Æschylus*—Prometheus Vincetus.  
 Septem contra Thebas.  
 \**Sophocles*—Edipus Tyrannus.  
 Ajax. Antigone.  
 †*Euripides*—Medea and Hecuba.  
*Aristophanes*—Knights.  
*Herodotus*—Books III. and IV.  
 †*Thucydides*—Books VI. and VII.  
 \**Plato*—Apology and Phædo.  
*Demosthenes*—De Coronâ and In Leptinem.

## LATIN—

- Virgil*—Eclogues, Georgics, and Æneid.  
 †*Horace*—Odes and De Arte Poeticâ.  
*Plautus*—Menechmi and Miles Gloriosus.  
 †*Juvenal*—Satires IV. and X.  
 \**Lucretius*—Book I.  
*Cicero*—The Verrine Orations.  
*Livy*—Books XXI, XXII, XXIII.  
 \**Tacitus*—The Histories, Books I., II.

Composition—Greek and Latin prose.

The papers set at the Examination will also contain questions in Geography and Grammar.

Candidates will be expected to have a general acquaintance with the History of Greece and Rome, and one or more papers will be set in Comparative Philology.

## BRANCH II.

## MATHEMATICS—

Candidates may present themselves for examination either in Pure Mathematics or in Applied Mathematics; but will in either case be expected to show a competent knowledge of the following preliminary portions of Mathematics, that is to say of—

- Algebra, the simpler properties of Equations and Determinants.  
 Plane Trigonometry.  
 Elementary Analytical Geometry of Two and Three Dimensions.  
 The elements of the Differential and Integral Calculus, with their simpler applications to Geometry.  
 The solution of such ordinary Differential Equations as occur in Dynamics.  
 The Statics of Solids and Fluids.  
 The Kinetics of a particle.

\*Prescribed for special study for the examination to be held in December, 1881.

†Prescribed for special study for the examination to be held in December, 1882.

Candidates who present themselves in Pure Mathematics will further be examined in

The Theory of Equations, the higher parts of Analytical Geometry of Two and Three Dimensions, and of the Differential Calculus, and in Differential Equations.

Candidates who present themselves in Applied Mathematics will be examined in

The Dynamics of Rigid Bodies, and of Material Systems in general.  
Hydrodynamics.  
The Theories of Sound and Light.  
The Theory of Attractions.

#### BRANCH III.

##### EXPERIMENTAL PHYSICS—

The following subjects treated experimentally, and also mathematically so far as the compulsory mathematical subjects of the B.A. course are applicable to them.

1. Properties of Matter.
2. Physical Chemistry.
3. General Theory of Wave motion ; Theory of Sound.
4. Light, including Physical Optics.
5. Heat.
6. Magnetism and Electricity.

#### BRANCH IV.

##### NATURAL SCIENCE—

Candidates will be examined in either of the following groups of subjects:—

- A. Geological Science, including Geology and the subsidiary subjects Mineralogy and Palæontology :—
- B. Biological Science, including Zoology and Botany, and the subsidiary subject Palæontology.

and will be required to show a general practical acquaintance with the subjects of examination. Each candidate shall have the option of selecting some one department with which he shall be expected to show especial practical acquaintance.

An original memoir in any branch will, according to its merit, be accepted in evidence of practical knowledge.\*

#### BRANCH V.

##### METAPHYSICS, LOGIC, AND POLITICAL ECONOMY—

*Philosophy.*—The History and Criticism of Philosophical Systems.  
*Moral Philosophy.*—The History and Criticism of Ethical Systems.  
*Logic.*—History of Logic. Inductive and Deductive Logic.  
*Political Economy.*

Candidates who present themselves for Examination in this branch will be required to possess such a knowledge of Greek, Latin, French, and German, as will enable them to exhibit a thorough acquaintance with the prescribed subjects.

The Examiners shall not be precluded from setting passages in philosophical books in the original languages.

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\* Some lines of research are indicated in Professor Tate's Address "On the present state of our Knowledge of the Natural History of South Australia," read before the Philosophical Society of Adelaide.

UNIVERSITY PRIMARY EXAMINATION.\*

DETAILS OF OPTIONAL SUBJECTS OF EXAMINATION AND RECOMMENDATIONS AND ANNOUNCEMENTS FOR THE UNIVERSITY PRIMARY EXAMINATION TO BE HELD ON 1ST DECEMBER, 1881, AND FOLLOWING DAYS.

(See Regulations, ante p. 52 *et seq.*)

DIVISION A.

1. The History of England, from the reign of James II. to that of Queen Anne inclusive.

Text-books recommended—

Green's History of the English People.  
The Student's Hume.

2. ENGLISH LITERATURE—

Pope : Essay on Criticism.  
Addison : Cato.

DIVISION B.

1. LATIN—

Cicero—De Senectute.

2. GREEK—

Homer—Iliad, Book I.

DIVISION C.

1. FRENCH—

† *De Maistre*—La jeune Sibérienne, and Le lèpreux de la Cité d'Aoste.

2. GERMAN—

† *W. Hauff*—Das Wirthaus im Spessart.

DIVISION D. (MATHEMATICS).

(See p. 53.)

DIVISION E.

1. CHEMISTRY (Inorganic)—

Simple and compound matter. Different modes of Chemical action. Principles of Chemical nomenclature. Chemical formulæ. Classification of elements.

Preparations and properties of Hydrogen, Chlorine, Oxygen, Carbon, Nitrogen, and Sulphur, and of their simpler compounds.

\* The first-class certificate of having passed this examination exempts the holder from the necessity of passing the Preliminary Examination for the Diploma of the Royal College of Surgeons, when the certificate shows that the holder passed in Latin, Algebra, and Geometry, and in one of the subjects mentioned in Divisions C and E, as well as in the compulsory subjects.

The first-class certificate is also accepted by the General Council of Medical Education and Registration of the United Kingdom, provided the certificate contains all the subjects set forth on p. 60 ante.

† The editions published by the Pitt Press, Cambridge, are recommended for use.



2. ELEMENTARY PHYSICS—

The elementary laws of Rest and Motion of Solids, Liquids, and Gases, and their applications, treated experimentally.

A knowledge of the mathematical treatment of the above subjects will *not* be expected, but questions involving simple numerical calculations will be set.

3. BOTANY—

The questions will be confined to the *general structure of the flowering plant* with especial reference to the following illustrative plants :—*Wallflower, nettle, pea, gum-tree, sow-thistle, lily, wild oat, and snap-dragon.*

4. ZOOLOGY—

The questions will be confined to the following subjects :—

The leading facts relating to the anatomy and physiology of the skeleton, of the alimentary, circulatory, and respiratory organs in an osseous fish (Murray cod or Tommy-rough), in a frog, in a bird (pigeon, fowl, &c), in a mammal (rabbit, opossum, &c.)

The characters of the order of the vertebrata.

The broad facts relating to the geographical distribution of the vertebrata.

5. PHYSICAL GEOGRAPHY—

The following synopsis includes the various branches of the subject required :—

- (a) Relation of continents and islands. Grouping of islands. Influence of the form of a coast line. Characteristic features of the various great masses of land.
- (b) Details of the great mountain systems of the world. Nature and position of high plains. Low plains, their relations to geological structure, their position, distribution and characteristics. Different kinds of valleys.
- (c) Ocean—Divisions, depth, density, temperature and colour. Form and nature of the ocean floor. Movements of the ocean. Waves and currents.
- (d) Distribution of rain. Subterranean circulation of water. Springs, their origin, temperature, and mineral contents.
- (e) River systems of the world. Deltas. Extent and peculiarities of lakes.
- (f) Snow line. Glaciers. Icebergs.
- (g) Distribution of winds in both hemispheres. Special local winds and their cause.
- (h) Phenomena of and causes that produce or modify climate.
- (i) Volcanic and earthquake phenomena.
- (j) The simple facts of the vertical and horizontal distribution of plants and animals on the land and in the sea.

6. ANIMAL PHYSIOLOGY—

The outlines as given in Huxley's *Elements of Physiology.*

## SCHOLARSHIPS.

UNIVERSITY SCHOLARSHIPS.—The Department of Education offers annually for competition three *University Scholarships*, each of the value of Fifty Pounds per annum, and tenable for three years.

These Scholarships will in future be awarded on the recommendation of the Council of the University. Candidates must be under eighteen years of age on the 31st of January in the year in which the Examination is held, and must have been resident in the Province for at least two years immediately preceding that day. The University will hold the first of these examinations in March, 1881, and applications for admission to it must be made to the Department of Education before the 31st January, 1881.

The full number of Scholarships will not be awarded unless the Examiners are satisfied that a sufficient number of candidates are worthy.

The successful competitors must, as soon as possible after the Examination, become students at the University of Adelaide. Payment of the Scholarship will not be made unless the holder conducts himself or herself to the satisfaction of the University authorities, and passes the annual examination for the Degree of B.A..

Scholars are exempted from paying all University Fees.

The following awards have so far been made to these Scholarships :—

1876	1	} Mack, Hans Hamilton Robin, Percy Ansell
	<i>Æq.</i> 2	
	3	
		Wyatt, Harry Sutton (resigned)
1877	1	Donaldson, Arthur
	2	} Not adjudged.
	3	
1878	1	Moore, Edwin Canton
1879	2	Holder, Sydney Ernest
March	3	Rogers, Richard Sanders
Dec.		Gill, Alfred

The following are the details of the Examination to be held in March, 1881 :—

Papers will be set in the following subjects ; no credit will be allowed for any paper in which a candidate fails to obtain one-third of the marks.

## DIVISION I. CLASSICS.

- (1.) *Latin*. Sallust Jugurtha.  
Horace Odes, Books III., IV.  
Translation of an easy passage into Latin.

- (2.) *Greek.* Demosthenes de Coronâ.  
Sophocles, Oedipus Rex.  
Translation of an easy passage into Greek.

DIVISION II. MATHEMATICS.

- (1.) *Geometry.* The substance of Euclid, Books III., IV., and VI., with exercises. (Any purely geometrical proof will be accepted.)  
(2.) *Arithmetic.* The higher rules.  
(3.) *Algebra*, as far as the proof of the Binomial Theorem for a positive integral exponent.  
(4.) *Plane Trigonometry*, as far as the solution of triangles, with the nature and use of logarithms.

DIVISION III. ENGLISH LANGUAGE AND LITERATURE.

- (1.) *Earle's* Philology of the English Tongue, cc.I. to IX, inclusive.  
(2.) History of English Literature to the Accession of Queen Elizabeth.  
(3.) *Shakespeare.* Hamlet.  
*Spenser.* Fairy Queen. Bk. I.  
(4.) An English essay on a subject to be prescribed.

DIVISION IV. MODERN LANGUAGES.

- (1.) French, or  
(2.) German.

Passages will be set for translation] and re-translation, and also questions on the Grammar.

\* \* \* A *vive voce* examination will be held in each subject, should the examiners think it desirable. The marks allowed for Divisions I. and II. will be twice as many as those allowed for Divisions III. and IV.

The following are the details of the examination to be held in March, 1882 :—

DIVISION I. CLASSICS.

- (1.) *Latin.* Livy, XXI., XXII.  
Terence, Phormio.  
Translation of an easy passage into Latin.  
(2.) *Greek.* Thucydides, I.  
Euripides, Hippolytus.  
Translation of an easy passage into Greek.

DIVISION II. MATHEMATICS.

- (1.) *Geometry*. The substance of Euclid, Books III., IV., and VI., with exercises. (Any purely geometrical proof will be accepted.)
- (2.) *Arithmetic*. The higher rules.
- (3.) *Algebra*, as far as the proof of the Binomial Theorem for a positive integral exponent.
- (4.) *Plane Trigonometry*, as far as the solution of triangles, with the nature and use of logarithms.

DIVISION III. ENGLISH LANGUAGE AND LITERATURE.

- (1.) *Earle's* Philology of the English Tongue, cc, I. to IX., inclusive.
- (2.) History of English Literature to the Accession of Queen Elizabeth.
- (3.) *Shakspeare*. Coriolanus.  
*Gray's* Elegy.
- (4.) An English essay on a subject to be prescribed.

DIVISION IV. MODERN LANGUAGES.

- (1.) French, or
- (2.) German.

Passages will be set for translation and re-translation, and also questions on the Grammar.

\* \* A *vive voce* examination will be held in each subject, should the examiners think it desirable. The marks allowed for Divisions I. and II. will be twice as many as those allowed for Divisions III. and IV.

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THE SOUTH AUSTRALIAN SCHOLARSHIP.

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The Department of Education offers annually for competition a Scholarship of the value of Two Hundred Pounds per annum and tenable for four years, which is called the *South Australian Scholarship*, and will be awarded on the recommendation of the Council of the University. Candidates must be under twenty-one years of age on the 31st December in the year in which the examination is held, and must have been resident in the Province at least five years immediately preceding the Examination. The successful candidate must, as soon as possible after the Examination, become a student at some European University, to be approved by the Department of Education, and payment of the Scholarship will not be made unless the holder conducts himself or herself to the satisfaction of the authorities of such University, and passes such Examinations as may be decided by the Minister Controlling Education.

The following awards have been made to this Scholarship :—

1879. Beare, Thomas Hudson.  
1880. Robin, Percy Ansell.

Subjoined are the subjects of the Examination to be held in December, 1881, and the rules relating to it :—

Classics, with History and English Composition.  
Mathematics.  
Physics.  
Natural Science.

The range of questions to be set in Classics, Mathematics, Physics, and Natural Science, will be defined by the Schedules of the corresponding parts of the three examinations for the Degree of B.A., as published in the University Calendar.

All candidates will be expected to show a knowledge of Classics and Mathematics up to the standard of the First Examination for the Degree of B.A.

The Examiners will award the Scholarship by preference to a candidate who shall show special excellence either in

- (a). Classics, with History and English Composition ; or in
- (b). Mathematics and Physics ; or in
- (c). Physics, Chemistry, and Natural Science.

If in the opinion of the Examiners no candidate is of sufficient merit, the Scholarship will not be awarded.

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Each candidate must send to the Registrar of the University, on or before 1st November, 1881, a certificate from the Minister Controlling Education that the candidate is entitled to compete for the Scholarship in the December following.

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THE ANGAS ENGINEERING SCHOLARSHIP.

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J. H. Angas, Esquire, has founded in connection with the University a Scholarship, of which the object is to " Encourage the training of Scientific men, and especially Civil Engineers, with a view to their settlement in South Australia."

The following are the conditions upon which the Scholarship has been founded.

1. The Scholarship shall be tenable for three years, and shall be of the annual value of £200.

2. It shall be competed for triennially ; but if on any competition the Examiners shall not consider any candidate worthy to receive the scholarship, it shall for that year lapse, but shall be competed for during the following year.

3. The Scholarship shall be held conditionally on good behaviour and continuous progress in engineering studies to the satisfaction of the Council.

4. The award shall be determined by a special examination in Mathematics, Natural Science, Mechanics, and Drawing, and such other subjects as the Council of the University shall from time to time direct, and the examination shall be conducted by Examiners appointed by the Council.

5. Each Candidate for the Scholarship must be under twenty-eight years of age at the commencement of the examination, and must have resided in South Australia for at least five years.

6. Each Candidate must also have graduated in Arts or Engineering at the University of Adelaide, and have passed, to the satisfaction of the Council of the University, through such courses of special studies and practical training for the purpose of qualifying him to be a Civil Engineer as shall from time to time be prescribed by the Statutes or Regulations of the University.

7. Within such time after gaining the Scholarship as the Council of the University shall in each case allow the Scholar must proceed to the United Kingdom, and there article himself to such Civil Engineer and for such time as the Council shall approve, or enter himself as a student in such College or University there and prosecute such studies suitable to qualify him to be a Civil Engineer, as the Council shall approve, or enter himself as such student and prosecute such studies for part of the time during which he shall hold such Scholarship, and for the remainder of such time shall article himself to such Civil Engineer as aforesaid.

8. On his returning to settle in South Australia within five years from the time of gaining the Scholarship and in possession of such Degree, Diploma, or Certificate as a Civil Engineer as the Council shall approve, and upon his writing to the approval of the Council a report of his proceedings and engineering work, he shall receive the further sum of £100 towards his travelling expenses.

The Statutes, of which a copy is subjoined, have been made by the University in reference to this Scholarship.

#### STATUTES.

1. The Scholarship shall be tenable for three years, and shall be of the annual value of £200.

2. Each Candidate must be under twenty-eight years of age at the commencement of the examination, and must have resided in South Australia for at least five years.

3. Candidates must have graduated in Arts at the University of Adelaide, and have passed to the satisfaction of the Council through courses of special study and practical training in the subjects hereinafter mentioned.

4. The Scholarship shall be competed for triennially, in the month of March; but if on any competition the Examiners shall not consider any candidate worthy to receive it, the Scholarship shall for that year lapse, but shall be again competed for in the month of March next ensuing.

5. Candidates shall give at least three calendar months' notice, in the prescribed form, of their intention to compete, and shall with their notice forward to the Registrar an Examination Fee of £5 5s., together with evidence satisfactory to the Council of having fulfilled the conditions hereinbefore stated.

6. The Examination shall be in the following subjects:—

- (1) *Mathematics.*
- (2) *Mechanics.*
- (3) *Physics.*
- (4) *Geology.*
- (5) *Chemistry.*
- (6) *Mechanical and Engineering Drawing.*
- (7) *Use of the Theodolite, Level, Sextant, and other engineering instruments.*
- (8) *Engineering Surveying.*
- (9) *Theory of the Steam Engine.*

And in such other subjects as the Council shall from time to time direct.



Schedules defining the scope of the Examination in the above subjects shall be drawn up by the Professorial Board, subject to the approval of the Council, and shall be published in the University Calendar in each year.

7. Within such time after gaining the Scholarship as the Council shall in each case allow, the Scholar must proceed to the United Kingdom and there article himself to such Civil Engineer and for such time as the Council shall approve ; *or* enter himself as a student in such College or University there, and prosecute such studies suitable to qualify him to be a Civil Engineer, as the Council shall approve ; *or* enter himself as such student and prosecute such studies for *part* of the time during which he shall hold such Scholarship, and for the *remainder* of such time shall article himself to such Civil Engineer as aforesaid. The successful candidate shall within one month after the publication of the results of the examination furnish, in writing, to the Registrar, for the approval of the Council, a statement of the mode in which he proposes to comply with these conditions.

8. Payment of the Scholarship, computed from the first day of April next succeeding the award thereof, shall be made quarterly, at the Office of the Agent-General, subject to the previous receipt of satisfactory evidence of good behaviour and continuous progress in Engineering Studies, according to the course proposed to be followed by the Scholar.

9. Whenever such evidence is not satisfactory the Council may altogether withhold, or may suspend for such time as they may deem proper, payment of the whole or of such portion as they may think fit of any moneys due, or to accrue due, to the Scholar on account of the Scholarship, or may deprive him of his Scholarship.

10. On his returning to settle in South Australia within five years from the time of gaining the Scholarship, and in possession of such Degree, Diploma, or Certificate as a Civil Engineer as the Council shall approve, and upon his writing to the approval of the Council a report of his proceedings and engineering work, he shall receive the further sum of £100 towards his travelling expenses.

11. Should any successful candidate not retain the Scholarship for the full period of three years, notice of the vacancy shall be published by the Council in the Adelaide daily papers ; and an examination shall be held in the month of March next ensuing.

NOTICE BY CANDIDATE OF INTENTION TO COMPETE FOR THE  
"ANGAS ENGINEERING SCHOLARSHIP."

I hereby give notice that it is my intention to present myself as a Candidate for the "Angas Engineering Scholarship" at the Special Examination for it, which is to be held in the month of March, 188 , and I send herewith the Examination Fee of £5 5s., and the documentary evidence specified in the underwritten Schedule.

Signature of Candidate .....

Address of Candidate .....

Dated this ..... day of ..... 188 .

*This is the Schedule referred to in the above-written notice :—*

1. Proof of date of my birth .....
2. Proof of residence for five years in South Australia .....
3. Proof of graduation at the University of Adelaide in Arts .....
4. Proof of having passed to the satisfaction of the Council of the University the prescribed courses of special studies and practical training .....

Signature of Candidate .....

Allowed on 13th January 1880.

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An examination for this Scholarship will, if required, be held in March, 1882.

The following schedule has been drawn up by the Professorial Board in accordance with No. 6 of the foregoing Statutes :—

1. MATHEMATICS.—The compulsory Mathematical subjects of the first Ordinary Examination for the B.A. Degree, together with

The solution of Triangles.

2. MECHANICS.—The applied Mathematics of the second year of the B.A. course.

Questions will also be set in the higher Mathematical subjects of the Second and Third Ordinary Examinations, more especially in Applied Mathematics ; but a knowledge of these will not be regarded as indispensable.

3. PHYSICS.—A general outline of Physics, such as is required in the First Examination of the B.A. course ; with the following portions of the advanced course in Physics :—

The properties of matter.

The theory of heat, with special reference to heat as a motive power.

The theory of optical instruments.

4. GEOLOGY.—

(1) As prescribed in the Third year's course in Arts.

(2) The application of the science to drainage and water supply, architecture, road construction, and cognate branches.

(3) The candidates will be required to prove a practical acquaintance with the methods of constructing geological sections and maps. In this particular, specimens of actual work done may be submitted in evidence of practical knowledge.

5. CHEMISTRY.—As prescribed in the First and Second year's courses.

Special attention to be given to the rock forming minerals, and the chemistry of the same, disintegration of rocks ; limes, cements, and clays. The chemistry of explosives. A general practical acquaintance with the methods of water analysis. And in general, the application of chemistry to the elucidation of the causes of decay of building materials, and of the means whereby the same may be arrested or prevented.

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THE SOUTH AUSTRALIAN COMMERCIAL TRAVELLERS'  
ASSOCIATION (INCORPORATED) SCHOLARSHIP.

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This Scholarship, which is tenable only by children of members of the Association, has been established by the deed of which a copy is sub-joined :—

Articles of Agreement made this 26th day of September, 1879, between The University of Adelaide, hereinafter called "The said University" of the one part, and the "South Australian Commercial Travellers' Association," incorporated, hereinafter called "The said Association" of the other part, witnesseth as follows :—

1. The said Association shall pay to the said University the sum of £150 in cash.

2. In consideration of such payment the said University shall provide a Scholarship, tenable for the period hereinafter provided, the holder whereof shall have the advantages hereinafter specified.

3. The said Scholarship shall be awarded by the said University to any matriculated student thereof, who being a son or daughter of a member of the said Association shall be nominated by the Committee of Management of the said Association, and such student so nominated shall hold such scholarship for one or more consecutive years, as the Committee of Management of the said Association shall from time to time declare ; and it shall be lawful for the Committee of Management of the said Association from time to time, at the end of any academical year, to substitute another student for the holder of the said Scholarship for the time being, and such substitute shall thereupon have all the advantages connected with the holding of such Scholarship.

4. The holder of the said Scholarship shall have the following advantages, that is to say : he shall be exempt from payment of all University fees during such time as he shall hold the Scholarship up to and including the fees payable on taking the B.A. Degree ; but in case any student shall cease to hold the Scholarship, such student shall not be exempt from payment of such fees after the time at which he shall cease to hold such Scholarship. And any holder of such Scholarship taking the B.A. Degree while holding such Scholarship shall be entitled to have his matriculation fee returned to him.

5. Every such scholar shall be in all respects subject to the discipline and to the Statutes and Regulations for the time being of the said University.

6. Save by permission of the Council of the said University, no such scholar shall be entitled to exemption from University fees during more than nine consecutive Academic Terms computed from the day next preceding the commencement of the Academic year in which, or in the vacation preceding which, he or she becomes a scholar.

7. No such scholar, who shall be a daughter of a member of the said Association, shall be entitled to claim or to receive any Degree, unless power to confer Degrees on women shall hereafter be granted to the said University by Letters Patent under the sign manual of a Sovereign of England.

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JOHN HOWARD CLARK SCHOLARSHIPS.

STATUTES.

Whereas various persons have subscribed and have agreed to pay to the University of Adelaide a sum of money for the purpose of constituting a fund for founding the Scholarships hereinafter named : And the Council of the said University have agreed to invest that sum, when received by them, and to apply the income thereof, in the manner specified in these Statutes : And whereas it has been agreed that the word "income" shall include as well interest to accrue from investments of the said fund as grants to be received from the Government in respect thereof :

It is hereby provided that from and after the receipt by the said Council of the said sum :—

1. There shall be two Scholarships, tenable for two years each, one of which shall be competed for in the month of April in each year by Matriculated Students of the University who shall, at the next preceding Ordinary or Supplementary Ordinary Examination, have completed the first year of their course for the Bachelor of Arts Degree. The Scholarships shall be called the "John Howard Clark" Scholarships.

2. Each Scholarship shall be competed for at a special examination in English Literature in subjects prescribed by the Council one year previously, but if on any competition the Examiners shall not consider any candidate worthy to receive the Scholarship it shall for that year lapse.

3. Only one Scholarship shall be awarded in any one year so long as there are only two Scholarships.

4. Each scholar shall pass the Ordinary Examinations proper to his year, and shall also pass in the month of April at the end of the first year of his Scholarship such examination in the subjects thereof as the Council shall from time to time prescribe. Those subjects shall be published by the Council twelve months before the examination.

5. Every such scholar shall be in all respects subject to the discipline and to the Statutes and Regulations for the time being of the University.

6. Each scholar shall receive one half of the annual income so long as that income does not exceed sixty pounds. Whenever the annual income shall exceed sixty pounds, each scholar shall receive thirty pounds per annum.

7. The Fund for founding the Scholarships shall be invested by the Council in such a manner as will entitle the Council to claim from the Government an annual grant in respect thereof. Any surplus interest, and any sums accumulating from the non-awarding of the Scholarships, shall be considered part of the Fund and be invested in the like manner until there shall have accumulated a sum sufficient to found a third Scholarship, which shall be competed for and awarded at such times as the Council shall direct: Provided that no portion of the annual grant shall be so accumulated. All subsequent accumulations shall be applied at the discretion of the Council towards the carrying out of the general objects of the John Howard Clark Scholarships.

Allowed: 31st December, 1880.

The Council have prescribed the following subjects for the examination to be held, if required, in April, 1882 :—

The Sonnets of Milton.  
Shakespeare's "As You Like It."  
The Prologue to the Canterbury Tales.

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( 88 )

DEGREES CONFERRED BY THE UNIVERSITY OF ADELAIDE  
DURING THE YEAR 1880.

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B. A.

James Henderson.  
Hans Hamilton Mack.  
Percy Ansell Robin.  
Stirling Smeaton.

*Ad eundem gradum :*

M. B.

William Lennox Cleland, *Edinburgh.*  
James Alexander Greer Hamilton, *Dublin.*

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# APPENDIX.

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## CONTENTS:

I.—Examination Papers set in 1880 :—

FOR

- 1.—Supplementary Ordinary Examination held in March.
- 2.—Matriculation Examination held in March.
- 3.—Ordinary Examination held in November.
- 4.—Matriculation Examination held in December.
- 5.—South Australian Scholarship Examination held in December.

II.—Annual Report for 1880.

# The University of Adelaide.

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## SUPPLEMENTARY

## ORDINARY EXAMINATION.

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### FIRST YEAR.

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#### PHYSICS I.

- I. A certain force  $P$  acting on a mass of 10 lbs. for five seconds generates a velocity of 50 feet per second; and another force  $Q$  acting on a mass of 1 ton for one minute generates a velocity of 5 miles per hour. Compare the intensities of the forces  $P$ ,  $Q$ .
- II. Explain the term *Uniform Acceleration*; and describe some experimental arrangement for studying uniformly accelerated motion.
- A body is thrown vertically upwards with a velocity of 100 feet per second; find the path described in the fourth second of its motion.
- III. State carefully the *Parallelogram of Forces*. Describe some experimental verifications.
- IV. Define *Centre of Gravity*, *Stable Equilibrium*. How does the stability of equilibrium of a body depend on the position of its centre of gravity?
- V. What is the fundamental property of a *Fluid*? Define *Fluid Pressure*, and explain how it is measured.
- Find the total pressure on each face of a cube whose side is 2 ft., and which rests on the bottom of a cistern of water whose depth is 6 feet. [Assume that a cubic foot of water weighs 1,000 oz., and that the atmospheric pressure is 15 lbs. to the square inch.]

- VI. Describe the construction and action of the Hydraulic Press.  
Verify that the work done by the power is equal to the work spent in overcoming the resistance.
- VII. Explain the term *Specific Heat*.  
Give a practical demonstration of the small specific heat of the metals as compared with water.
- VIII. Explain carefully the terms *Radiation* and *Conduction* of Heat, and give illustrations.  
Describe an experiment illustrating the different conducting powers of different metals.
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## PHYSICS II.

- I. Describe and explain the action of the *Siren*. What laws of Acoustics can be verified by means of this instrument?
- II. Explain the reflection of a wave of sound by a wall.  
Why are the acoustic properties of a building better when it is filled with an audience than when it is empty?
- III. State the laws of Reflection and Refraction of Light.  
Why does a basin filled with water always appear shallower than it really is?
- IV. Explain the action of a Convex Lens. Define the term *Focal Length*.  
Explain the action of a convex lens as a magnifying glass. Give a careful figure.
- V. Why are the properties of an ordinary bar magnet exhibited only at the poles, whereas the bar is really magnetized throughout?  
Describe experiments in support of your explanation.
- VI. Describe the *Gold-Leaf Electroscope*, and explain how you would use it to test whether a given body is positively or negatively electrified.
- VII. State the magnetic properties of the electric current.  
Explain the action of the *Electric Bell*.

## ENGLISH LANGUAGE AND LITERATURE.

- I. What do you know of Chaucer and his works? What was the character of his influence upon subsequent writers? and what value did he put upon his own rhyme and rhythm?
  - II. Mention the chief works of Gower, Lydgate, Sackville, and Surrey.
  - III. Give a short history of Spenser, and explain the structure and intention of the "Faëry Queen."
  - IV. What is known of the life of Shakespeare? Give an outline of the plot of "Hamlet."
  - V. Examine his reasoning in the famous soliloquy beginning, "To be, —or not to be? that is the question?"
  - VI. Polonius gives advice to his daughter Ophelia, to his son Laertes, and to Queen Gertrude. What opinion do you form of his character from these advisings?
  - VII. What are the principal minor poems of Milton? and what is their character?
  - VIII. Quote from the "Hymn on the Nativity," or from "L'Allegro," or from "Il Penseroso," one or more passages which you admire.
  - IX. Give the names of the prominent "Court Poets."
  - X. What is the intention of Dryden's "Absalom and Achitophel," and his "Hind and the Panther"?
  - XI. Quote his lines written under the portrait of Milton.
  - XII. Mention the chief works of Jonson, Marlowe, Prior, Otway, Samuel Butler, Clarendon, Bunyan, Locke, and Bishop Burnet.
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# MATRICULATION EXAMINATION.

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MARCH, 1880.

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## LATIN PAPER.

Translate—

Nam quibusdam, quos audio sapientes habitos in Græcia, placuisse opinor mirabilia quædam. sed nihil est, quod illi non persequantur argutius : partim fugiendas esse nimias amicitias, ne necesse sit unum sollicitum esse pro pluribus : satis superque esse suarum cuique rerum : alienis nimis implicari molestum esse : commodissimum esse, quam laxissimas habenas habere amicitiae ; quas vel adducas, cum velis, vel remittas. caput enim esse ad beate vivendum, securitatem ; qua frui non possit animus, si tanquam parturiat unus pro pluribus. Alios autem dicere aiunt multo etiam inhumanius, (quem locum breviter perstrinxi paullo ante) praesidii adjunctique causa, non benevolentiae, neque caritatis, amicitias esse expedendas. itaque ut quisque minimum firmitatis habeat, minimumque virium, ita amicitias appetere maxime. ex eo fieri, ut mulierculæ magis amicitiarum praesidia quaerant, quam viri : et inopes, quam opulenti : et calamitosi, quam ii, qui putentur beati.

Translate—

Molesta veritas, si quidem ex ea nascitur odium ; quod est venenum amicitiae : sed obsequium multo molestius, quod peccatis indulgens, praecipitem anicum ferri sinit. maxima autem culpa in eo est, qui et veritatem aspernatur, et in fraudem obsequio impellitur. Omni igitur hac in re habenda ratio et diligentia est : primum, ut monitio acerbitate, deinde objurgatio contumelia careat : in obsequio autem (quoniam Terentiano verbo lubenter utimur) comitas adsit : assentatio, vitiorum adjutrix, procul amoveatur : quæ non modo amico, sed ne libero quidem digna est. aliter enim cum tyranno, aliter cum amico vivitur. Cujus autem aures veritati clausæ sunt, ut ab amico

verum audire nequeat, hujus salus desperanda est. scitum est enim illud Catonis, ut multa; Melius de quibusdam acerbos inimicos mereri, quam eos amicos, qui dulces videantur: illos verum sæpe dicere, hos numquam.

Decline in full the words:—Helene—foedus—calcar—arcus—pelagus—Orpheus; giving gender of each.

Give the perfect Indic., the Supine in um, and the infin. of pecto—sono—vivo—spondeo—fugio—pereo—ferio—studeo—minuo—caveo—audeo.

Write down the Comparative and Superlative of—facilis—juvenis—arduus—magnopere—miser.

Distinguish between the Singular and Plural of—auxilium—castrum—comitium—copia—littera—opera—sal, and derive debilis—delubrum—septemtrio—armentum.

How would you turn into Latin such phrases as—(1) Grieving is no use. (2) Far from doing this, I abhor it. (3) To prevent their going.

Translate into Latin prose—

I am persuaded that he has not arrived yet.

This is a strong proof of his innocence.

Laocoon warned the Trojans not to trust the horse.

Less than two thousand men escaped.

## GREEK PAPER.

Translate—

Ἐπὶ τούτοις πιστὰ δόντες καὶ λαβόντες, ὄχοντο. Καὶ ἦγον τῇ ὑστεραίᾳ ἄγοντες τριάκοντα πλοῖα μονόξυλα καὶ ἐν ἐκάστῳ τρεῖς ἄνδρας, ὧν οἱ μὲν δύο, ἐκβάντες, εἰς τάξιν ἔθεντο τὰ ὄπλα, ὁ δὲ εἰς ἔμνευε. Καὶ οἱ μὲν, λαβόντες τὰ πλοῖα, ἀπέπλευσαν· οἱ δὲ μένοντες ἐξετάζαντο ὄδου. Ἔστησαν ἀνὰ ἑκατὸν μάλιστα, ὡς χοροὶ, ἀντιστοιχοῦντες ἀλλήλοις, ἔχοντες γέρρα πάντες λευκῶν βοῶν δασέα, εἰκασμένα κιττοῦ πετάλω, ἐν δὲ τῇ δεξιᾷ παλτὸν ὡς ἐξάπηχυ, ἔμπροσθεν μὲν λόγχην ἔχον, ὀπισθεν δὲ αὐτοῦ τοῦ ξύλου σφαιροειδές. Χιτωνίσκους δὲ ἐνεδεδύκεσαν ἵπερ γονάτων, πάχος ὡς λινοῦ στρωματοδέσμον· ἐπὶ τῇ κεφαλῇ δὲ κράνη σκύντια, οἷα περ τὰ Παφλαγονικὰ, κρόβυλον ἔχοντα κατὰ μέσον, ἐγγύτατα τιαροειδῆ· εἶχον δὲ καὶ σαγάρεις σιδηρᾶς. Ἐντεῦθεν ἐξῆρχε μὲν αὐτῶν εἰς, οἱ δὲ ἄλλοι πάντες, ἐπορευόντο ἄδοντες ἐν ῥυθμῷ, καὶ διελθόντες διὰ τῶν τάξεων καὶ διὰ τῶν ὄπλων τῶν Ἑλλήνων, ἐπορευόντο εὐθὺς πρὸς τοὺς πολεμίους, ἐπὶ χωρίον, ὃ ἔδοκε ἐπιμαχώτατον εἶναι.

Translate—

Ἐπεὶ δὲ ταῦτα ἔλεξεν, οἱ μὲν ὑπώπτεον φιλίας ἕνεκα τῆς Κορύλα λέγειν, (καὶ γὰρ ἦν πρόξενος αὐτῷ,) οἱ δὲ καὶ ὡς δῶρα ληψόμενον διὰ τὴν συμβουλήν ταύτην· οἱ δὲ ὑπώπτεον καὶ τοῦτου ἕνεκα λέγειν, ὡς μὴ περὶ ἰόντες τὴν Σινωπέων τι χώραν κακὸν ἐργάζοντο. Οἱ δ' οὖν Ἕλληνες ἐψηφίσαντο κατὰ θάλατταν τὴν πορείαν ποιῆσθαι. Μετὰ ταῦτα Ξενόφων εἶπεν· Ὡ Σινωπεῖς, οἱ μὲν ἄνδρες ἤρηνται πορείαν, ἣν ὑμεῖς συμβουλεύετε· οὕτω δὲ ἔχει· εἰ μὲν πλοῖα ἔσσεσθαι μέλλει ἰκανὰ ἀριθμῷ, ὡς ἓνα μὴ καταλείπεσθαι ἐνθάδε, ἡμεῖς ἂν πλείομεν· εἰ δὲ μέλλοιμεν οἱ μὲν καταλείψεσθαι, οἱ δὲ πλείεσθαι, οὐκ ἂν ἐμβαίημεν εἰς τὰ πλοῖα. Γινώσκομεν γάρ, ὅτι, ὅπου μὲν ἂν κρατῶμεν, δυναίμεθ' ἂν καὶ σώζεσθαι, καὶ τὰ ἐπιτήδεια ἔχειν· εἰ δὲ που ἤττους τῶν πολεμίων ληφθῆσόμεθα, εὐδηλον δὲ, ὅτι ἐν ἀνδραπόδων χώρᾳ ἔσόμεθα. Ἀκούσαντες ταῦτα οἱ πρέσβεις ἐκέλευον πέμψειν πρέσβεις.

What are the feminine terminations corresponding to the masculine *ος, της, τηρ*?

Give instances of variety of meaning produced by the collocations of the article and its absence.

With what parts of the verb is *ἂν* not used—and why?

Decline in full *Ζεὺς, γραῦς, ἀνδρῶν, Ἀχιλλεύς, κἀρα, πολὺς, σιδηροῦς*.

Give the tenses in use of *διδράσκω, χέω, ῥήγνυμι, τιτρώσκω*.

Translate into Greek—

If you said that again I should be angry with you.

They gave me this supposing that thus they would make a friend of me.

I, more than any other man, have injured you.

I know that I have been your benefactor.

## ARITHMETIC AND ALGEBRA.

- I. Explain the ordinary (Arabic) system of notation, and point out what advantages it possesses over the Roman system.

Multiply 572 by 825, giving the reason for each step of the process.

- II. Find how much of a certain commodity can be bought for £37 15s. 2¼d. at the rate of £16 per ton.
- III. A force of police 1921 strong is to be distributed among four towns in proportion to the number of inhabitants in each: the populations being 4,150, 12,450, 24,900, and 29,050 respectively, find the number of men sent to each.

- IV. Explain the reason of the rule for fixing the position of the point in the product of two decimals. Illustrate your answer by an example.

A metre = 39·37079 inches; find to four places of decimals the ratio of a thousand metres to five furlongs.

- V. The present value of £678 8s. due sixteen months hence is £640. What is the rate per cent? [Simple interest.]

- VI. Prove the truth of the following statements:

$$(1) \quad a + b = b + a,$$

$$(2) \quad ab = ba.$$

- VII. O, A, B, C are four points in a row, and P, Q, R are the middle points of BC, CA, AB respectively; prove that  
 $OA + OB + OC = OP + OQ + OR.$

- VIII. (1) Find the value of  $\frac{(x-a)(x-b) + x(x-c)}{ab}$

when  $2x = a + b + c.$

- (2) Prove that the value of the expression

$$\frac{b+c}{a} + \frac{c+a}{b} + \frac{a+b}{c}$$

is unchanged when the quantities  $a, b, c$  are replaced by their reciprocals.

- IX. State precisely the meaning of " $\frac{a}{b} \times \frac{c}{d}$ ,"

and prove that this is equal to  $\frac{ac}{bd}.$

$$\text{Divide } \frac{a+b}{a-b} - \frac{a-b}{a+b} \text{ by } \frac{a^2+b^2}{a^2-b^2} - \frac{a^2-b^2}{a^2+b^2}.$$



X. Solve the equation

$$\frac{5x}{6} - \frac{3x}{4} - 1 = \frac{x}{2} - \frac{x}{3},$$

and justify each step of the process.

XI. In an election the winner had a majority of 168, which was  $\frac{3}{11}$  of the whole number of voters ; find the numbers on each side.

## GEOMETRY.

- I. Explain the terms *Problem*, *Theorem*, *Converse* ; and give examples.
- II. In the two triangles FGH, PQR the two sides FG, GH are equal to the two PQ, QR each to each, and the angle FGH is equal to the angle PQR ; prove that the two triangles are equal in all respects.
- III. In the two triangles FGH, PQR the angles at F, G are equal to the angles at P, Q, respectively, and the sides FH, PR are also equal ; prove that the two triangles are equal in all respects.  
 Prove that if two triangles are equal in all respects, the perpendiculars drawn from the vertices to the bases are also equal.
- IV. PQ is equal and parallel to RS ; prove that PR is equal and parallel to QS, and that PS, QR bisect one another.
- V. The complements of the parallelograms about the diagonal of any parallelogram are equal.
- VI. PQR is a triangle, and the squares on PR, RQ are together equal to the square on PQ ; prove that the angle at R is a right angle.  
 Give a formal proof that if two squares are equal in area their sides are equal.
- VII. P, Q, R are in a straight line, and O is the middle point of QR ; prove that the square on PO is equal to the rectangle PQ.PR, together with the square on QO.
- VIII. In a straight line PQ it is required to find a point O such that the rectangle PQ.OQ shall be equal to the square on PO.  
 Prove that the squares on PQ, OQ will be together equal to three times the square on OP.

## ENGLISH LANGUAGE.

I. Write the following passage :—

“For the fatherland of the English race, we must look far away from England itself. In the fifth century after the birth of Christ, the one country which bore the name of England was that which we now call Sleswick, a district in the heart of the peninsula which parts the Baltic from the Northern seas. *Its pleasant pastures, its black-timbered homesteads, its prim little townships looking down on inlets of purple water, were then but a wild waste of heather and sand, girt along the coast with sunless woodland, broken only on the western side by meadows which crept down to the marshes, and the sea.* The dwellers in this district were one out of three tribes, all belonging to the same low German branch of the Teutonic family, who, at the moment when history discovers them, were bound together in some loose fashion, by the ties of a common blood and a common speech.”—J. R. GREENE.

II. Trace the derivation of the following words :—Fatherland, century, district, peninsula, pleasant, pastures, prim, inlet, purple, waste, crept, tribes, moment, history, discover, common.

III. Analyze the sentence printed in italics.

IV. Quote from the whole passage the prepositions, with the nouns or clauses which they govern.

V. What is meant by “apposition?” Quote an illustration from the passage above.

VI. Define the “verb,” and mention its inflexions, with examples.

VII. What is a strong and what a weak inflexion? Why are they so named? Give six illustrations of each.

VIII. Give illustrations of the different kinds of adverbs.

IX. What are the fundamental laws of Syntax?

X. Write a short essay on “The Electric Telegraph.”

## ENGLISH HISTORY.

- I. Give a short sketch of the life of King Richard the First.
- II. Who was Roger Bacon? When did he live? For what was he famous?
- III. What was the character of King Edward the Second?
- IV. Write a short account of the "Wars of the Roses."
- V. It is customary to speak of the "glorious" reign of Queen Elizabeth. Why should her reign be specially characterised as "glorious?"
- VI. On what grounds did Queen Mary, of Scotland, base her claim to the Crown of England?
- VII. Name the great dramatists of the time of Queen Elizabeth and King James the First, and the prominent writers of the time of King William the Third and Queen Anne.
- VIII. When were the terms Whig and Tory first brought into use, and what is their signification?
- IX. What great inventions and discoveries distinguish the eighteenth century?
- X. Give the dates of the following events:—
  - Death of Thomas a'Beckett.
  - Signing of "Magna Charta."
  - Battle of Bannockburn.
  - Death of King Charles the First.
  - Puritan Emigration to New England.
  - Plague of London.
  - Passing of "Habeas Corpus" Act.
  - Massacre of Glencoe.
  - Invention of the Steam Engine.
  - Impeachment of Warren Hastings.

## GEOGRAPHY.

- I. On an outline map of the settled districts of South Australia insert Rivers Murray, Onkaparinga, Torrens, Gawler, Light, Wakefield; the Mount Lofty, Barossa, Flinders, and Gawler Ranges; Capes Northumberland, Jervis, Willoughby, Borda; the Port, Northern, Kingston and Narracoote, Rivoli Bay and Mount Gambier, Port Pirie and Jamestown Railways, marking the most important stations.
  - II. State exactly the position of the following places :—Port Augusta, Eucla, Bathurst, Echuca, Maryborough, Jellalabad, Pietermaritzburg, Callao, Havanna, Denver.
  - III. Give an account of the principal productions of Queensland.
  - IV. On an outline map of France insert the principal mountain ranges and rivers, and eight large towns.
  - V. Describe the mail route from Sydney to London *via* San Francisco.
  - VI. From what countries are the principal supplies of the following articles obtained :—Arrowroot, blacklead, coffee, currants, deal, ivory, mahogany, pearls, quinine, sugar?
  - VII. Explain and illustrate the terms—monsoon, watershed, cyclone, barrier-reef, atoll, great circle.
  - VIII. Account for the fact that the rainfall is greater on the western side of England than on the eastern.
  - IX. Where are Goa, Alexandria, Barcelona, Liège, Rotterdam, Sebastopol, Ravenna, Quebec, Trieste, Basle?
  - X. What do you know about each of the above places?
-

## NATURAL HISTORY.

- I. Explain in writing the geological diagram before you.
- II. Name the specimens of rocks on the table.
- III. How do you account for the different qualities of fresh water  
Name some well-known mineral springs and the substances  
which give them particularity.
- IV. Describe the action of frost as a geological agent.
- V. What are the chief products of volcanic eruptions?
- VI. What are the proofs that South Australia is slowly rising?
- VII. Account for the *rippled surface* of some sandstone rocks occurring  
in the Adelaide hills.
- VIII. What are *joints*; how have they been formed?
- IX. A stratum strikes N. 10° E. and S. 10° W., what is the direction  
of its dip?
- X. Explain the term "extinct fauna."

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## CHEMISTRY.

- I. I give you a jar containing a mixture of N and CO<sub>2</sub>; how would  
you determine the volume of each gas?
- II. Write out a list of the non-metallic elements, with their symbols  
and combining numbers.
- III. What is the weight of carbon in one pound of carbonic oxide?
- IV. State as accurately as you can the composition of atmospheric air.
- V. Is atmospheric air a *mechanical mixture* or a *chemical compound*?  
Give a reason for your answer.
- VI. Explain the terms *soluble* and *insoluble*; what substances readily  
dissolve sulphur, iodine, and camphor, respectively?
- VII. By what means would you detect the presence of starch in a  
sample of powdered gum adulterated therewith?
- VIII. Give the symbolic formulæ of the following compounds:—Chloric  
acid, iodide of potassium, aquafortis, oil of vitriol, and laugh-  
ing gas; and express in words, H<sub>2</sub>S, CH<sub>4</sub>, NH<sub>3</sub>, N<sub>2</sub>O<sub>5</sub>, and  
H<sub>2</sub>SO<sub>3</sub>.
- IX. How is hydrogen prepared; what are its chief properties?
- X. What substances are formed by the combustion of each of the  
following bodies in atmospheric air:—Hydrogen, coal gas,  
carbonic oxide, and sulphur?

## FRENCH PAPER.

- I. Write down throughout the Imperfect Subjunctive of *être*, the Present Conditional of *recevoir*, the Preterite Indicative of *rendre*, the Imperative of *avoir*, the Future of *finir*.
- II. Write down the 1st sing. Present Indicative of *appeler*, *jeter*, *appuyer*, *créer*, *payer*; the 1st plur. Imperfect Subjunctive of *venir*, *tenir*, *mentir*, *conquérir*, *fuir*; the 3rd sing. Imperative of *pleuvoir*, *savoir*, *voir*, *pouvoir*, *devoir*; the 2nd sing. Preterite Indicative of *naitre*, *lire*, *vivre*, *prendre*, *coudre*.
- III. Translate the following passage—

C'est l'heure où Paris se montre dans toute sa beauté. Pendant la journée, le plâtre des façades fatigue l'œil par sa blancheur monotone, les chariots pesamment chargés font trembler les pavés sous leurs roues colossales, la foule empressée se croise et se heurte, uniquement occupée de ne point manquer l'instant des affaires; l'aspect de la ville entière a quelque chose d'âpre, d'inquiet et de haletant; mais dès que les étoiles se lèvent, tout change; les blanches maisons s'éteignent dans une ombre vaporeuse; on n'entend plus que le roulement des voitures qui courent à quelque fête; on ne voit que passants flâneurs ou joyeux; le travail a fait place aux loisirs. Maintenant chacun respire de cette course ardente à travers les occupations du jour; ce qui reste de force est donné au plaisir!

- IV. Read aloud and construe the following passage—

La préparation de son café est, pour un solitaire, l'opération domestique la plus délicate et la plus attrayante; c'est le *grand œuvre* des ménages de garçon. Le café tient, pour ainsi dire, le milieu entre la nourriture corporelle et la nourriture spirituelle. Il agit agréablement, tout à la fois, sur les sens et sur la pensée. Son arôme seul donne à l'esprit je ne sais quelle activité joyeuse; c'est un génie qui prête ses ailes à notre fantaisie et l'emporte au pays des *Mille et une nuits*. Quand je suis plongé dans mon vieux fauteuil, les pieds en espalier devant un feu flambant, l'oreille caressée par le gazouillement de la cafetière qui semble causer avec mes chenets, l'odorat doucement excité par les effluves de la fève arabique, et les yeux à demi voilés sous mon bonnet rabattu, il me semble souvent que chaque flocon de la vapeur odorante prend une forme distincte: j'y vois tour à tour, comme dans les mirages du désert, les différentes images dont mes souhaits voudraient faire des réalités.

- V. Give the French for a coffee-pot, a frog, some vegetables, an overcoat, a tailor, a sempstress, a medical student, moonlight, the mariner's compass, a whirlwind, despair, hope.

Give the English for un fruit à noyau, de braves gens, un automne pluvieux, un enfant de cœur, maladie de cœur, les aigles impériales, un aigle noir, l'incendie de Moscou.

- VI. Write out the cardinal numbers up to 25.

- VII. Translate two out of the three following sentences—

This summer is pronounced by many old colonists to be the hottest they have known in South Australia for the last twenty years.

Ten years ago the facilities which we now enjoy for frequent communication with Europe were undreamed of. No telegraph yet existed.

In those days the arrival of the monthly mail was an event full of excitement and importance for the Australian colonies. The news of the battle of Sedan and the fall of the Empire produced a profound sensation.

- VIII. Translate into English—

La guillotine était dressée, ce jour là, au milieu de la place de la Révolution, devant la grande allée du jardin des Tuileries, en face et comme en dérision du palais des rois, non loin de l'endroit où la fontaine jaillissante la plus rapprochée de la Seine semble aujourd'hui laver éternellement le pavé.

Depuis l'aube du jour, les abords de l'échafaud, le Pont Louis XVI., les terrasses des Tuileries, les parapets du fleuve, les toits des maisons de la rue Royale, les branches dépouillées des Champs Elysées, étaient chargés d'une innombrable multitude qui attendait l'évènement dans l'agitation, dans le tumulte et dans le bruit d'une ruche d'hommes, comme si cette foule n'eût pu croire au supplice d'un roi avant de l'avoir vu de ses yeux. Les abords immédiats de l'échafaud avaient été envahis, grâce aux faveurs de la commune et à la connivence des commandants des troupes, par les hommes des Cordeliers, des Jacobins et des journées de septembre, incapables d'hésitation et de pitié.

## GERMAN PAPER.

## I. Read the following passage :—

— — — Schon  
Den Hals entblößt, kniet' ich auf meinem Mantel,  
Den Streich erwartend, als mich scharfer Saladin  
In's Auge faßt, mir näher springt, und winkt.—  
Man hebt mich auf; ich bin entfesselt; will  
Ihm danken; seh' sein Aug in Thränen; — stumm  
Ist er, bin ich; er geht, ich bleibe.—Wie  
Nun das zusammenhängt, enträthsele  
Der Patriarch sich selbst.—

## II. Translate the same into English.

## III. Translate into English :

— — — Meint Ihr etwa,  
Ich fühle meinen Werth als Christin nicht?  
Auch mir ward's vor der Wiege nicht geungen,  
Daß ich nur darum meinem Ehemahl  
Nach Palästina folgen würd', um da  
Ein Judenmädchen zu erziehn.—

## IV. Translate into English :

Ich will nun einmal Euch nicht weiter sehn!  
Nicht hören! Will von Euch an eine That  
Nicht fort und fort erinnert sein, bei der  
Ich Nichts gedacht; die, wenn ich drüber denke,  
Zum Räthsel vor mir selbst mir wird.—

## V. Translate in English :

— — — Von heut' an thut  
Mir den Gefallen wenigstens, und kennt  
Mich weiter nicht.—Ich bitt Euch drum.—Auch laßt  
Den Vater mir vom Halse.—Jud' ist Jude.  
Ich bin ein plumper Schwab.—Des Mädchens Bild  
Ist längst aus meiner Seele, wenn es je  
Da war.—

## VI. Translate into English :

In einem Thal bei armen Hirten  
Erschien mit jedem jungen Jahr,  
Sobald die ersten Lerchen schwirrten,  
Ein Mädchen schön und wunderbar.  
Sie war nicht in dem Thal geboren,  
Man wußte nicht, woher sie kam;  
Doch schnell war ihre Spur verloren,  
Sobald das Mädchen Abschied nahm.



## VII. Translate into German :

About four years ago old Melnotte died, and left his son well to do in the world.—We then all observed that a great change came over young Claude: he took to reading and Latin, and hired a Professor from Lyons, who had so much in his head that he was forced to wear a great wig to cover it.

## VIII. Parse the following lines :

Alf mein Schuen will ich, all mein Denken,  
 Zu des Lethe stillen Strom versenken,  
 Aber meine Liebe nicht.—

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NOVEMBER, 1880.

ORDINARY EXAMINATIONS.

FIRST YEAR.

MATHEMATICS I.

PROFESSOR LAMB.

- I. Define parallel straight lines. What is the nature of the difficulty in the theory of parallels?

Assuming that through a given point only one line can be drawn parallel to a given straight line, prove that a straight line meeting two parallel straight lines makes the alternate angles equal.

- II. State and prove the geometrical proposition corresponding to the algebraical identity

$$a(b+c+d) = ab+ac+ad.$$

$A, B, C, D$  are four points in a straight line; prove that  $AB.CD + BC.AD = AC.BD$ .

- III. State completely the relation connecting the square on one side of a triangle with the squares on the other two sides, for the various cases, and prove it for *one* of these cases.

- IV. Angles in the same segment of a circle are equal.

$OA, OB$  are chords of a circle, and are produced to meet a tangent at the other extremity of the diameter through  $O$  in  $P, Q$ . Prove that the triangles  $OPQ, OBA$  are equiangular.

- V. A point  $R$  is taken on a chord  $PQ$  of a circle whose centre is  $O$ . Prove that the rectangle  $PR.RQ$  is equal to the difference of the squares on  $OP, OR$ .

- VI. Construct a triangle having each of its base-angles double the vertical angle.

All the diagonals of a regular pentagon being drawn, prove that they form, by their intersections, another regular pentagon.

VII. Define commensurable magnitudes; and give a definition of proportion applicable to such magnitudes.

Prove from your definition that triangles of the same altitude are proportional to their bases.

VIII.  $ABCD$  is a trapezium, the parallel sides being  $AB, DC$ ; and the diagonals  $AC, BD$  intersect in  $E$ . Prove that the triangles  $AED, BEC$  are equal.

IX. Prove that the ratio of the circumference to the diameter of a circle lies between 3 and 4.

If an arc of ten feet on a circle of eight feet diameter subtend at the centre an angle  $143^{\circ} 14' 22''$ , find the value of  $\pi$  to four decimal places.

X. Give a general definition of the sine of an angle.

Trace the changes in the magnitude and sign of  $\sin A$ , as  $A$  increases from  $0^{\circ}$  to  $360^{\circ}$ , and exhibit these changes in a diagram.

Also do the same for  $\sin^2 A$ .

## MATHEMATICS II.

PROFESSOR LAMB.

I. (1) Divide  $1 + x + x^2 + x^3 + x^4 + x^7 + x^8 + x^9 + x^{15}$  by  $1 - x^5 + x^8$ .

(2) Prove that

$$(y - z)(y + z)^3 + (z - x)(z + x)^3 + (x - y)(x + y)^3 \\ = 2yz(y^2 - z^2) + 2zx(z^2 - x^2) + 2xy(x^2 - y^2)$$

II. What meanings are assigned to

$$a^o, a^{-n}, a^{\frac{p}{q}}, \text{ and why?}$$

III. Prove the rule for finding the G.C.M. of two numbers.

Find the H.C.D. of

$$5x^3 + 11xy^2 - 18x^2y - 6y^3 \\ \text{and } 6y^2 + 7x^2 - 23xy.$$

IV. Solve the equations

$$(1) (5x + 3)(7x - 4) - (3x + 5)(8x + 11) = (11x - 2)(x + 1)$$

$$(2) 13x^2 - 17x = 66$$

$$(3) \begin{cases} 3x^2 - 7xy + 4y^2 = 5 \\ 4x^2 - 7xy + 3y^2 = 2. \end{cases}$$

V. Two steamers ply between the same two ports a distance of 420 miles. One travels half-a-mile per hour faster than the other, and is two hours less on the journey. At what rates do they go?

VI. Define *Harmonic Progression*, and find the Harmonic mean between two given quantities  $a, b$ .

The  $p$ th term of a H.P. is  $q$ , and the  $q$ th term is  $p$ . Find the  $r$ th term.

VII. Define the terms *Permutation* and *Combination*.

Prove the formula for the number of combinations of  $n$  things taken  $r$  at a time.

VIII. Prove the formulæ for  $\sin 2A$ ,  $\cos 2A$ ,  $\tan 2A$ .

Prove that

$$\tan(45^\circ + A) - \tan(45^\circ - A) = 2 \tan 2A.$$

IX. Define the terms *Logarithm*, *Characteristic*, *Mantissa*, and prove that

$$\log mn = \log m + \log n.$$

Find (with the help of a table of logarithms) the value of

$$\frac{n^4 S}{4\pi a^2}, \text{ having given } n = 240\pi, a = 1120, S = \cdot 251.$$

X. In a plane triangle prove that

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

and that each of these expressions =  $\frac{2\Delta}{abc}$ , where  $\Delta$  is the area of the triangle.

## NATURAL PHILOSOPHY I.

PROFESSOR LAMB.

I. State precisely (1) the effect of a constant force acting on a body in a constant direction, and (2) the comparative effects of the same force acting on different bodies.

A force which would in one minute generate a velocity of 60 miles an hour in a mass of 1 lb., acts for one day on a mass of 100 tons. Find the velocity generated.

- II. Distinguish carefully between *gravity* and *mass*.  
Describe (1) a rough and ready, and (2) a rigorous experimental proof that the gravity of a body is proportional to its mass.
- III. A balloon is ascending at the rate of five feet per second, and a stone is dropped from it at the height of one mile. Find the position and the velocity of the stone ten seconds afterwards.
- IV. State the rules for the composition of two parallel forces.  
Explain how you would compound together any number of parallel forces. In what case does the process fail to give a single resultant? Give a practical illustration of this case.
- V. Find the mechanical advantage in that system of pulleys in which each pulley is supported by a separate string, the number of moveable pulleys being four. [Neglect the weights of the pulleys.]  
If the weights of the pulleys be taken into account, and if they be 10, 8, 4, 4 lbs. respectively (reckoned from below upwards), find what weight can be sustained by a power of 100 lbs.
- VI. State the fundamental property of a Fluid.  
Prove that in a liquid at rest the pressure increases proportionately with the depth.  
Find in grammes per square centimetre the pressure at a depth of a kilometre in sea-water of density 1.025, neglecting the atmospheric pressure.
- VII. State and prove the principle of Archimedes, and describe an experimental verification.  
A body lighter than water weighs in air 102 lbs.; a sinker which weighs in water 50 lbs. is attached; the joint weight of the two in water is 23 lbs.; find the specific gravity of the body.
- VIII. State Boyle's law of gaseous pressure, and describe an experiment in verification of it.  
A bladder containing 500 cubic centimetres of air at the atmospheric pressure of 760 mm. is sunk to a depth of a kilometre in the sea; find the volume which the air then occupies, taking the specific gravity of mercury = 13.6.  
[See Question VI.]

## NATURAL PHILOSOPHY II.

PROFESSOR LAMB.

- I. Describe the process of construction of a Mercurial Thermometer.  
 Explain the various thermometric scales in common use.  
 A copper bar expands by .000018 of its length for each degree Centigrade. Find the increase in length of a bar six feet long when the temperature rises ten degrees Fahrenheit.
- II. Explain the terms *Specific Heat*, *Latent Heat*.  
 Ten grammes of steam are passed from a boiler into a vessel containing 1,000 grammes of water at  $10^{\circ}\text{C}$  and are there condensed. The final temperature is found to be  $15^{\circ}\text{C}$ . Calculate its latent heat of steam, neglecting losses of heat by radiation, &c.
- III. Describe fully the deportment of a vapour with respect to pressure and temperature.  
 What is meant by *Saturated Vapour*?  
 A barometer with a deep cistern has a long space above the top of the mercurial column. If this space contain a little aqueous vapour, state how the height of the column will vary as the tube is gradually depressed into the cistern?
- IV. Explain the propagation of a sound-wave through the air.  
 Does the velocity of sound vary (1) with the atmospheric pressure, (2) with the temperature? Give reasons for your answers.
- V. Find the series of notes which can be sounded by a stretched string.  
 What are *Nodes* and *Loops* in a vibrating string? How may their existence be experimentally demonstrated?
- VI. Describe and explain the phenomena of beats.  
 Two stopped organ-pipes are in approximate unison. How would you ascertain (acoustically) which is the higher in pitch; and how would you tune it to exact unison with the other?
- VII. Explain and illustrate by a careful diagram the formation of a virtual image by a convex lens.  
 A candle is placed behind a large convex lens. State how the position, size, and character of the image will vary as the candle is gradually brought from a distance close up to the lens.
- VIII. Explain the construction and action of the Astronomical Telescope, and give a careful diagram showing the course of a pencil of rays through the instrument.

## LATIN.

PROFESSOR KELLY.

HORACE AND CICERO.

Translate—

Ille gravem duro terram qui vertit aratro,  
 Perfidus hic caupo, miles nautæque, per omne  
 Audaces mare qui currunt, hac mente laborem  
 Sese ferre, senes ut in otia tuta recedant,  
 Aiunt, quum sibi sint congesta cibaria : sicut  
 Parvula, nam exemplo est, magni formica laboris  
 Ore trahit quodcunque potest atque addit acervo,  
 Quem struit, haud ignara ac non incauta futuri.  
 Quæ, simul inversum contristat Aquarius annum,  
 Non usquam prorepat et illis utitur ante  
 Quæsitis sapiens, quum te neque fervidus æstus  
 Demoveat lucro, neque hiems, ignis, mare, ferrum,  
 Nil obstat tibi, dum ne sit te ditior alter.  
 Quid juvat immensum te argenti pondus et auri  
 Furtim defossa timidum deponere terra?  
 “Quod si comminuas, vilem redigatur ad assem.”

What varieties of reading have been suggested for the second  
 line in this passage?

Also—

Hoc iter ignavi divisimus, altius ac nos  
 Præcinctis unum ; minus est gravis Appia tardis.  
 Hic ego propter aquam, quod erat deterrima, ventri  
 Indico bellum, cœnantes haud animo æquo  
 Expectans comites. Jam nox inducere terris  
 Umbras et cœlo diffundere signa parabat.  
 Tum pueri nautis, pueris convicia nautæ  
 Ingerere. “Huc appelle.” “Trecentos inseris : ohe  
 Jam satis est !” Dum æs exigitur, dum mula ligatur,  
 Tota abit hora. Mali culices ranæque palustres  
 Avertunt somnos. Absentem ut cantat amicam  
 Multa prolutus vappa nauta atque viator  
 Certatim, tandem fessus dormire viator  
 Incipit, ac missæ pastum retinacula mulæ  
 Nauta piger saxo religat stertitque supinus.

Comment on the eighth line in this passage.

Also—

Qui species alias veris scelerisque tumultu  
 Permixtas capiet, commotus habebitur, atque,  
 Stultitiane erret, nihilum distabit, an ira.

Ajax immeritos quum occidit, desipit, agnos ;  
 Quum prudens scelus ob titulos admittis inanes,  
 Stas animo et purum est vitio tibi, quum tumidum est, cor ?  
 Si quis lectica nitidam gestare amet agnani,  
 Huic vestem, ut gnatae, paret ancillas, paret aurum,  
 Rufam aut Pusillam appellet, fortique marito  
 Destinet uxorem ; interdicto huic omne adimat jus  
 Praetor et ad sanos abeat tutela propinquos.

Translate—

Quonam igitur pacto probari potest, insidias Miloni fecisse Clodium ? Satis est in illa quidem tam audaci, tam nefaria bellua, docere, magnam ei caussam, magnam spem in Milonis morte propositam, magnas utilitates fuisse. Itaque illud Cassianum, CUI BOXO FUERIT, in his personis valeat : etsi boni nullo emolumento impelluntur in fraudem, improbi saepe parvo. Atqui, Milone interfecto, Clodius hoc assequebatur, non modo ut praetor esset, non eo consule, quo sceleris facere nihil posset : sed etiam, ut iis consulibus praetor esset, quibus si non adiuvantibus, at comiventibus certe, speraret se posse rempublicam eludere in illis suis cogitatis furoribus—cuius illi conatus, ut ipse ratiocinabatur, nec, si possent, reprimere cuperent, quum tantum beneficium ei se debere arbitrarentur ; et, si vellent, fortasse vix possent frangere hominis sceleratissimi corroboratam iam vetustate audaciam. An vero, iudices, vos soli ignoratis ? vos hospites in hac urbe versamini ? vestrae peregrinantur aures, neque in hoc pervagato civitatis sermone versantur, quas ille leges, (si leges nominandae sunt, ac non faces urbis et pestes reipublicae) fuerit impositurus nobis omnibus atque inustus ?

Also—

Non timeo, iudices, ne odio inimicitiarum mearum inflammatus, libentius haec in illum evomere videar, quam verius. Etenim etsi praecipuum esse debebat ; tamen ita communis erat omnium ille hostis, ut in communi odio paene aequaliter versaretur odium meum. Non potest dici satis, ne cogitari quidem, quantum in illo sceleris, quantum exitii fuerit. Quin sic attendite, iudices. Nempe haec est quaestio de interitu P. Clodii. Fingite animis ; (liberae enim sunt cogitationes nostrae et, quae volunt, sic intuentur, ut ea cernimus, quae videmus ;) fingite igitur cogitatione imaginem huius conditionis meae : si possim efficere, ut Milonem absolvatis, sed ita, si P. Clodius revixerit. Quid vultu extimistis ? quonam modo ille vos vivus efficeret, quos mortuus inani cogitatione percussit ? Quid ? si ipse Cn. Pompeius, qui ea virtute ac fortuna est, ut ea potuerit semper, quae nemo praeter illum : si is, inquam,



potuisset, aut quaestionem de morte P. Clodii ferre, aut ipsum ab inferis excitare, utrum putatis potius facturum fuisse? Etiamsi propter amicitiam vellet illum ab inferis revocare, propter rempublicam non fecisset. Eius igitur mortis sedetis ultores, cuius vitam si putetis per vos restitui posse, nolitis: et de eius nece lata quaestio est, qui si eadem lege reviviscere posset, lata lex numquam esset. Huius ergo interfector qui esset, in confitendo ab iisne poenam timeret, quos liberavisset? Give a brief account of the political crisis at Rome during the time to which this speech belongs.

## GREEK.

PROFESSOR KELLY.

HOMER.

PLATO.

THEOPHRASTUS.

## I. Translate—

“Σαρπηθόν, Λυκίων βουλευφόρε, τίς τοι ἀνάγκη  
 πτώσσειν ἐνθάδ' ἔόντι μάχης ἀδαήμονι φωτί;  
 ψευδόμενοι δέ σέ φασι Διὸς γόνον αἰγιόχοιο  
 εἶναι, ἐπεὶ πολλὸν κείνων ἐπιδείξαι ἀνδρῶν  
 οἳ Διὸς ξεγεγόνοντο ἐπὶ προτέρων ἀνθρώπων,  
 ἀλλ' οἷόν τινά φασι βίην Ἑρακληΐην  
 εἶναι, ἐμὸν πατέρα θρασυμέμονα θυμολέοντα·  
 ὅς ποτε δεῦρ' ἔλθων ἔνεχ' ἵππων Λαομέδοντος  
 ἐξ οἴης σὺν νηυσὶ καὶ ἀνδράσι παυροτέροισιν  
 Ἴλιον ἐξαλάπαξε πόλιν, χήρωσε δ' ἀγυιάς·  
 σοὶ δὲ κακὸς μὲν θυμὸς, ἀποφθινύθουσι δὲ λαοί.  
 οὐδέ τί σε Τρώεσσιν ὀϊομαι ἄλκαρ ἔσσεσθαι  
 ἔλθόντ' ἐκ Λυκίης, οὐδ' εἰ μάλα καρτερός ἔσσι,  
 ἀλλ' ὑπ' ἐμοὶ δμηθέντα πύλας Ἀΐδαο περήσειν.”

Also,

Τὸν δ' αὖθ' Ἴππολόχοιο προσηΐδα φαίδιμος υἱός  
 “Τυδείδη μεγάθυμε, τίη γενεὴν ἐρείνεις;  
 οἴη περ φύλλων γενεή, τοίη δὲ καὶ ἀνδρῶν.  
 φύλλα τὰ μὲν τ' ἀνεμος χαμάδις χέει, ἄλλα δὲ θ' ὕλη  
 τηλεθώσα φύει, ἔαρος δ' ἐπιγίγνεται ὥρη·  
 ὡς ἀνδρῶν γενεή ἢ μὲν φύει, ἢ δ' ἀπολήγει.  
 εἰ δ' ἐθέλεις καὶ ταῦτα δαήμεναι, ὄφρ' εὔ εἰδῆς  
 ἡμετέρεην γενεήν, πολλοὶ δὲ μὴ ἄνδρες ἴσασιν·  
 ἔστι πόλις Ἐφύρη μυχῶ Ἄργεος ἵπποβότοιο,  
 εἵνθα δὲ Σίσυφος ἔσκει, ὃ κέρδιστος γένετ' ἀνδρῶν,  
 Σίσυφος Αἰολίδης· ὃ δ' ἄρα Γλαῦκον τέκεθ' υἱόν,

αὐτὰρ Γλαῦκος ἔτικτεν ἀμύμονα Βελλεροφόντην·  
τῷ δὲ θεοὶ κάλλος τε καὶ ἡνωρέην ἐρατεινὴν  
ᾤπασαν. αὐτὰρ οἱ Προΐτος κακὰ μῆσατο θυμῷ,  
ὅς ρ' ἐκ' δήμου ἔλασεν, ἐπεὶ πολὺ φέρτερος ἦεν,  
'Αργείων· Ζεὺς γάρ οἱ ὑπὸ σκῆπτρῳ ἐδάμασεν.

Also,

“Ἐκτορ, υἱὲ Πριάμοιο, Διὶ μῆτιν ἀτάλαντε,  
ἧ ῥά νύ μοί τι πίθοιο; κασίγνητος δέ τοί εἰμι·  
ἄλλους μὲν κάθισον Τρώας καὶ πάντας Ἀχαιοὺς,  
αὐτὸς δὲ προκάλεσσαι Ἀχαιῶν ὅστις ἄριστος  
ἀντίβιον μαχέσασθαι ἐν αἰνῇ δηϊότητι·  
οὐ γάρ πώ τοι μοῖρα θανεῖν καὶ πότμον ἐπισπεῖν.  
ὡς γὰρ ἐγὼν ὅπ' ἀκούσα θεῶν αἰειγενετάων.”

“Ὡς ἔφαθ', Ἐκτορ δ' αὐτ' ἐχάρη μέγα, μῦθον ἀκούσας,  
καὶ ῥ' ἐς μέσσον ἰὼν Τρώων ἀνέεργε φάλαγγας,  
μέσσον δουρὸς ἑλών· τοὶ δ' ἰδρύνθησαν ἅπαντες.  
καὶ δ' Ἀγαμέμνων εἶσεν εὐκνήμιδας Ἀχαιοὺς.  
καὶ δ' ἄρ' Ἀθηναίῃ τε καὶ ἀργυρότοξος Ἀπόλλων  
ἔξεσθην, ὄρνισιν ἑοικότες αἰγυπιοῖσιν,  
φηγῶ ἐφ' ὑψηλῇ πατρὸς Διὸς αἰγιόχοιο,  
ἀνδράσι τερπόμενοι τῶν δὲ στίχες εἴατο πυκναὶ,  
ἀσπίσι καὶ κορύθεσσι καὶ ἔγχεσι πεφρικυῖαι.  
οἷη δὲ Ζεφύροιο ἐχεύατο πόντον ἐπι φριξί  
ὄρνυμένιοι νέον, μελανεὶ δέ τε πόντος ὑπ' αὐτῆς.

Parse the words—ἐπιδείουαι, δηθηντα, προσηύδα,  
δαήμεναι, ἔσκειν, ἔλασεν, εἴατο.

## II. Translate—

Χωρὶς δὲ τῆς δόξης, ὧ ἄνδρες, οὐδὲ δίκαιόν μοι δοκεῖ εἶναι δεῖσθαι  
τοῦ δικαστοῦ οὐδὲ δεόμενον ἀποφεύγειν, ἀλλὰ διδάσκειν καὶ πείθειν.  
οὐ γὰρ ἐπὶ τούτῳ κάθηται ὁ δικαστής, ἐπὶ τῷ καταχαρίζεσθαι τὰ  
δίκαια, ἀλλ' ἐπὶ τῷ κρίνειν ταῦτα· καὶ ὁμώμοκεν οὐ χαιρεῖσθαι  
οἷς ἂν δοκῇ αὐτῷ, ἀλλὰ δικάσειν κατὰ τοὺς νόμους. οὐκον χρῆ  
οὔτε ἡμᾶς ἐθίζειν ὑμᾶς ἐπιορκεῖν, οὔθ' ὑμᾶς ἐθίζεσθαι· οὐδέτεροι  
γὰρ ἂν ἡμῶν εὐσεβοῖεν. μὴ οὖν ἀξιοῦτέ με, ὧ ἄνδρες Ἀθηναῖοι,  
τοιαῦτα δεῖν πρὸς ὑμᾶς πράττειν, ἃ μήτε ἡγοῦμαι καλὰ εἶναι μήτε  
δίκαια μήτε ὅσια, ἄλλως τε μέντοι νῆ Δία πάντως καὶ ἀσεβείας  
φεύγοντα ὑπὸ Μελήστου τουτουῖ.

Also,

Ἄλλὰ καὶ ὑμᾶς χρῆ, ὧ ἄνδρες δικασταί, εὐέλπιδας εἶναι πρὸς τὸν  
θάνατον, καὶ ἐν τι τούτῳ διανοεῖσθαι ἀληθές, ὅτι οὐκ ἔστιν ἀνδρὶ  
ἀγαθῷ κακὸν οὐδὲν οὔτε ζῶντι οὔτε τελευτήσαντι, οὐδὲ ἀμελείται  
ὑπὸ θεῶν τὰ τούτου πράγματα· οὐδὲ τὰ ἐμὰ νῦν ἀπὸ τοῦ αὐτομάτου  
γέγονεν, ἀλλὰ μοι δῆλόν ἐστι τούτο, ὅτι ἤδη τεθνᾶναι καὶ ἀπῆλ-

λάχθαι πραγμάτων βέλτιον ἦν μοι. διὰ τοῦτο καὶ ἐμὲ οὐδαμοῦ ἀπέτρεψε τὸ σημεῖον, καὶ ἔγωγε τοῖς καταψήφισαμένοις μου καὶ τοῖς κατηγοροῖς οὐ πάνυ χαλεπαίνω.

III. Write a short account of the life and teaching of Socrates.

IV. Translate—

Ἡ δὲ ἀδολεσχία ἐστὶ μὲν διήγησις λόγων μακρῶν καὶ ἀπροβουλεύτων· ὁ δὲ ἀδολέσχης τοιοῦτός ἐστιν, ὅσος, ὃν μὴ γινώσκει, τοῦτω παρακαθεζόμενος πλησίον πρῶτον μὲν τῆς αὐτοῦ γυναικὸς εἰπεῖν ἐγκώμιον· εἶτα, ὃ τῆς νυκτὸς εἶδεν ἐνύπνιον, τοῦτο διηγῆσασθαι· εἶθ', ὧν εἶχεν ἐπὶ τῷ δεῖπνῳ, τὰ καθ' ἕκαστα διεξελεθῆναι· εἶτα δὴ προχωροῦντος τοῦ πράγματος λέγειν, ὡς πολὺ πονηρότεροί εἰσιν οἱ νῦν ἄνθρωποι τῶν ἀρχαίων, καὶ ὡς ἄξιοι γεγόνασιν οἱ πυροὶ ἐν τῇ ἀγορῇ, καὶ ὡς πολλοὶ ἐπιδημοῦσι ξένοι·

Also,

Ἡ δὲ μικρολογία ἐστὶ φειδωλία τοῦ διαφόρου ὑπὲρ τὸν καιρὸν, ὁ δὲ μικρολόγος τοιοῦτός τις, ὅσος ἐν τῷ μηνὶ ἡμιωβόλιον ἀπαιτεῖν ἔλθων ἐπὶ τὴν οἰκίαν· καὶ σισσιτῶν ἀριθμεῖν τὰς κύλικας, πόσας ἕκαστος πέπωκε, καὶ ἀπάρχεσθαι ἐλάχιστον τῇ Ἀρτέμιδι τῶν συνδειπνούντων· καὶ ὅσα μικροῦ τις πριάμενος λογίζεται, πάντα φάσκειν εἶναι ἄγαν· καὶ οἰκέτου χύτραν ἢ λοπάδα κατάξαντος εἰσπράξαι ἀπὸ τῶν ἐπιτηδείων· καὶ τῆς γυναικὸς ἐκβαλούσης τρίχαλκον ὅσος μεταφέρειν τὰ σκεύη καὶ κλῖνας καὶ τὰς κιβωτοὺς καὶ διφάν τὰ καλύμματα·

V. Explain the Greek method of computing interest as fully as you can.

## CLASSICAL COMPOSITION.

PROFESSOR KELLY.

I. Decline in full the words

Ἀνὴρ—Ἄρης—Ζεὺς—κύων—Σωκράτης—Πινύξ—εὐνοῦς—πολύς.

II. Compare—ταχύς—ὀλίγος—καλός—ῥάδιος—ἄνω—ἐγγύς.

III. Write down the Indefinite Demonstrative and Relative Pronouns corresponding to

πηλίκος—πότερος—τίς—πόσος.

IV. Give in full the Present Optative Active of εἶω; the Present Subjunctive middle of χρυσώω; and the Present Imperative middle of πολεμέω.

V. Give the perfect indicative, supine, and present infinitive of *lavo*—*tollo*—*sino*—*arcesso*—*pinso*—*pario*—*verro*—*occulo*—*indo*—*sisto*.

VI. Explain the construction of *Interest*—*Opus est*—*miseret*—*licet*.

VII. For Latin Prose.

The tribe which took this course were the Senones, as all authors say, and therefore we may suppose they were Gaelic; but it has been thought that they were mixed with Cymri, since the name of their king or chief was *Brennus*, and *Brenhin* is Cymric for *a king*. They are described as large-limbed, with yellow hair and blue eyes, in all respects contrasted with the natives of Southern Italy. Their courage was high, but their tempers fickle. They were more fitted for action than endurance; able to conquer, but not steady enough to maintain and secure their conquests.

VIII. On hearing of this insult the general hastened by forced marches to Capua.

The conquest of Veii very nearly proved the ruin of Rome.

Cicero and the ancients always praise the conduct of Ahala, and represent him to have saved the commonwealth by his firmness and decision.

In the year after the establishment of Military Tribunes, two new officers, called Censors, were appointed.

IX. For Greek Prose.

*Venus*. How in the world is it, Cupid, that you, who have mastered all the other gods, and even me, your mother, yet never try your hand upon Minerva? In her case your torch seems to lose its fire, your quiver has no arrows, and your skill and cunning is all at fault.

*Cupid*. I am afraid of her, mother; she has such a terrible look, and such stern eyes, and is so horribly man-like.

X. When he might have gone to the city he remained at home.

Everyone must admire a man like you.

He is just the sort of man to say that he will come if wanted, and then be false to his word (*ψεύδομαι*).

## INORGANIC CHEMISTRY.

PROFESSOR TATE.

- I. Give the names, symbols, and specific gravities of six inflammable gases. What are the products of the combustion of each of them in atmospheric air?
- II. I give you carbonate of ammonia, nitrate of potash, and sulphuric acid; from these materials how would you prepare laughing-gas?
- III. Explain how the various phosphoric acids are obtained.
- IV. Represent by equations the reactions which take place when  $\text{SO}_2$  and  $\text{N}_2\text{O}_2$  are prepared after the ordinary laboratory methods.
- V. How much oxygen by weight and volume is required to convert 6 grams of carbon into carbonic oxide? And, what is the weight and volume of  $\text{SO}_2$  obtained by the combustion of 10 grams of sulphur?
- VI. What are the tests for soluble chlorides, iodides, and sulphates respectively?
- VII. Describe a Davy Lamp, and explain the principle of its construction; under what circumstances does it cease to be secure?
- VIII. What are the distinguishing features of chlorine, bromine, and iodine?
- IX. Describe the formation of ammonium amalgam and give reasons why the group of elements  $\text{NH}_4$  is considered to be a metal.
- X. Describe the apparatus which you would use for generating  $\text{H}_2\text{S}$ , and state in what manner you would collect the gas. What is its action upon chlorine? Refer to experiments illustrating its use in the laboratory.

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## ENGLISH LITERATURE.

PROFESSOR DAVIDSON.

- I. Divide the History of English Literature during the eighteenth century into periods. State briefly their characteristics, and mention the leading writers belonging to each.
- II. Contrast the Literature of the Time of Queen Anne with that of the previous generation, and try to account for the peculiar change of tone.
- III. Give some account of the Essayists and of the influence of their work, both upon contemporary and subsequent Literature and Manners.

- IV. In what rank does Addison stand as a poet? In what does the special greatness of Pope consist? What is the peculiar value of his "Essay on Man," and of his "Essay on Criticism"?
- V. Give a short sketch of Swift and Defoe, and indicate the comparative merits of "Gulliver's Travels," and "Robinson Crusoe."
- VI. Who were the great Novelists of the last century? Name their principal works? In what respects does the *Novel* differ from such works of fiction as those mentioned above?
- VII. Name, and characterize the chief poems of James Thomson.
- VIII. Indicate the chief beauties of Gray's *Elegy*, and quote passages to illustrate your opinion of them.
- IX. What was the nature of Johnson's influence upon his own time? And, what are the characteristics of his works?
- X. Sketch briefly the Life of Goldsmith, and shew wherein lies the excellence of his style?
- XI. Contrast the lives and poems of Cowper and Burns. Shew by quotations from Burns that many words in the "Scottish dialect" are identical with words in common use in England in the fifteenth and sixteenth centuries.
- XII. Give some account of Chatterton. Name the great Historians, and the authors of the following works:—"Beggars' Opera," "Ode on the Passions," "Night Thoughts," "Pleasures of Imagination," "The Gentle Shepherd," "The Rosciad," "The Shipwreck," "The Minstrel," "The Man of Feeling," "Essay on the Sublime and Beautiful," "Loves of the Plants."
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## SECOND YEAR.

## PURE MATHEMATICS. I.

PROFESSOR LAMB.

- I. Give the geometrical interpretations of the symbols  $a + ib$ ,  $\cos \theta + i \sin \theta$ , (1) as vectors, (2) as operators.

Prove that multiplication of complex quantities follows the commutative law.

By means of the geometrical interpretation prove that

$$(\cos \theta + i \sin \theta)^n = \cos n\theta + i \sin n\theta,$$

where  $n$  is a positive or negative integer.

- II. State precisely the meaning of  $e^x$  when  $x$  is complex, and prove that

$$e^x \cdot e^y = e^{x+y}.$$

By means of the "exponential values" of the sine and cosine, verify the formulæ

$$\cos^2 \theta + \sin^2 \theta = 1,$$

$$\cos^2 \theta - \sin^2 \theta = \cos 2\theta.$$

- III. Sum the series—

$$(1) \quad 1 + \cos \theta + \cos 2\theta + \cos 3\theta + \dots$$

to  $n$  terms.

$$(2) \quad 1 + 2x \cos \theta + 2x^2 \cos 2\theta + 2x^3 \cos 3\theta + \dots$$

to infinity [ $x < 1$ ]

- IV. Prove that every equation of the first degree represents a straight line.

What is the geometrical meaning of the "degree" of an equation?

Find the equation to the line drawn through the intersection of  $A_1x + B_1y + C_1 = 0$  and  $A_2x + B_2y + C_2 = 0$  perpendicular to  $A_3x + B_3y + C_3 = 0$  [Rectangular axes.]

- V. Prove that the locus of a point  $P$ , which moves so that the sum of its perpendicular distances from any number of given straight lines is constant, is a straight line.

Can you give a statical interpretation of this theorem?

VI. Find the general equation to a circle referred to rectangular axes.

Trace the curves

$$(1) x^2 + y^2 + 5x + 6y = 0$$

$$(2) (x - x_1)(x - x_2) + (y - y_1)(y - y_2) = 0$$

Show that (2) expresses that the angle in a semicircle is a right angle.

VII. Define the *Radical Axis* of two circles, find its equation, and state its chief properties.

A circle is drawn cutting each of two given circles at right angles; prove that the locus of its centre is the radical axis.

VIII. State the fundamental property of the parabola, and find its equation referred to the vertex as origin.

$AA^1$  is the major axis,  $BB^1$  the minor axis,  $S$  a focus, of an ellipse. Prove that if a parabola be drawn having  $S$  as focus and passing through  $B, B^1$  its vertex will bisect either  $SA$  or  $SA^1$

IX. Find the locus of the middle points of a system of parallel chords in a central conic.

If from any point on the conic lines be drawn parallel to a pair of conjugate diameters, the points where they meet the curve again will be the extremities of a diameter.

X. Investigate the condition that the straight line

$$Px + Qy = 1$$

should be a tangent to the curve

$$Ax^2 + By^2 = 1.$$

Find the locus of the pole with respect to a given ellipse of a tangent to a fixed co-axial ellipse.

## PURE MATHEMATICS II.

### ALGEBRA AND TRIGONOMETRY.

J. J. STUCKEY, Esq., M.A.

I. Find the coefficient of

$$x^8 \text{ in } \left( 1 - \frac{x}{2} + \frac{x^4}{4} \right)^{-1}$$

Express  $\sqrt{27}$  as a continued fraction.

II. Find the present value of an annuity  $A$ , to commence at the end of  $p$  years and continue then for  $q$  years.



- III. Find three proper fractions in Arithmetical Progression whose denominators shall be 6, 9, 18, and sum  $2\frac{2}{3}$ .
- IV. Show how to find the sum of the series  $1^4 + 2^4 + 3^4 + \dots + n^4$ .
- V. If  $S$  be the sum of  $n$  terms of each of the two series,  $8 + 12 + 16 + \dots$  and  $1 + 4 + 9 + 16 + \dots$ . Find  $S$  and  $n$ .  
Find the number of divisors of 1845.
- VI. There are three parcels of books in another room, and a particular book is one of them. The odds that it is in one particular parcel are 3 to 2; if not in that one, it is equally likely to be in either of the others. If I send for this parcel, giving a description of it, and the odds I get the one I describe are 2 to 1, what is my chance of getting the book I want?
- VII. Show how to expand a number in a series of ascending powers of its logarithm to a given base.  
Find the logarithm of  $625 \sqrt[7]{25}$  to the base  $\sqrt{5}$ .
- VIII. Express the sine, cosine, and tangent of half an angle of a triangle in terms of the sides. Show how these results may be obtained from the figures for the construction of the inscribed and escribed circles of a triangle, and show which lines represent  $s$ ,  $s - a$ , &c.
- IX. A man ascends a path direct to the top of a mountain, the inclination of the path is first  $\alpha$  and then  $\beta$  to the horizon. If he ascends  $n$  feet in vertical height, and  $\gamma$  is the angle of depression of his starting point, find the distance travelled in the ascent.

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## APPLIED MATHEMATICS. I.

### ELEMENTARY DYNAMICS AND HYDROSTATICS.

J. J. STUCKEY, Esq., M.A.

- I. Define velocity, uniform and variable? How is the latter measured?  
Compare the velocity of a train going sixty miles an hour with that of a stone acted on by gravity alone, and having fallen from rest for three seconds?
- II. Give the three laws of motion, and indicate the process by which they are established?

III. Investigate the velocity and momentum of two inelastic bodies of unequal masses and velocities after direct impact on one another.

If an inelastic sphere ten pounds in weight move from left to right with a velocity of 9 feet per second and impinge directly on another inelastic sphere eleven pounds in weight, and moving from right to left with a velocity of 7 feet per second, what is the velocity of each after impact?

IV. Give an explanation of Attwood's machine? What is its use?

A stone is thrown up with a velocity of 100 feet per second; to what height will it rise, and when will it reach the ground?

V. A body is projected up a smooth inclined plane. Find the space described and the velocity at the end of a given time. Find the range and time of flight if the direction of projection makes an angle with the inclined plane.

VI. Describe the Bramah press. State the principles on which its action depends. Find the relation between the power and the weight in such a press?

VII. What is meant by the metacentre of a body. Show how its position affects the stability of the equilibrium of a floating body?

VIII. Describe the common air-pump, and explain its action?

If  $w_1 w_2 w_3$  be the apparent weights of a body when weighed in three fluids whose densities are  $\rho_1 \rho_2 \rho_3$ , show that  $w_1 (\rho_2 \rho_3) + w_2 (\rho_1 \rho_3) + w_3 (\rho_2 \rho_1) = 0$ .

IX. What is known as Boyle's Law? Indicate how it may be proved?

Investigate the formulæ connecting the pressure and density of an elastic fluid (1°) when the temperature is constant (2°) variable.

In a circular tube two contiguous fluids occupy  $90^\circ$  each, and the diameter joining the open surfaces is at an inclination of  $60^\circ$  to the vertical. Find the relation of the densities of the fluids?

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## APPLIED MATHEMATICS, II.

PROFESSOR LAMB.

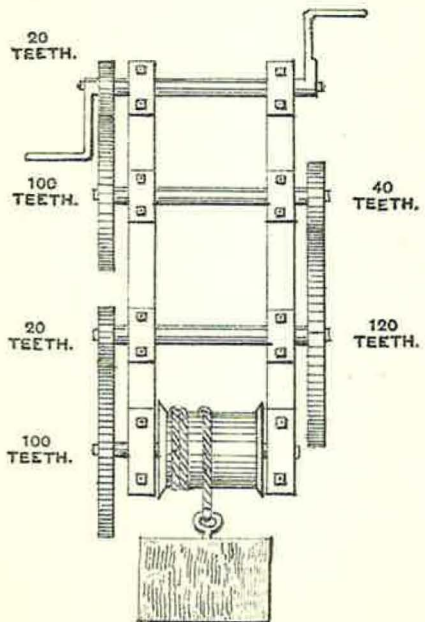
I. Define completely the moment of a force about any point in the same plane with it.

Prove that the sum of the moments of two forces is equal to the moment of their "resultant" found according to the parallelogram law.

Prove that the moment of a couple is the same about all points in its plane.

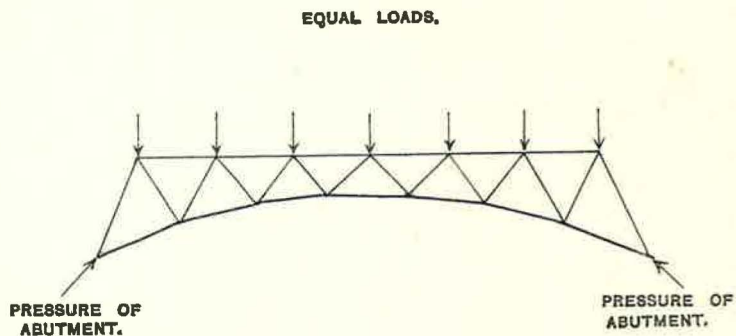
- II. Prove that if the sum of the moments of a system of forces in one plane be zero with respect to each of three points not in the same straight line, the system is in equilibrium.
- III. Define the *Center of Mass* of a material system; and prove that its distance from any plane is equal to the mean distance of all the particles of the system from that plane.
- A body consists of two parts, and one of them is moved into any other position; prove that the line joining the two positions of the center of mass of the whole system is parallel, and bears a fixed ratio to, the line joining the two positions of the center of mass of the part moved.
- IV. Investigate a formula for the inclination of the beam of a balance having unequal weights in the scale pans; and infer the conditions for sensibility.
- What condition must be satisfied in order that the sensibility may be independent of the total load?
- V. Investigate the relation between the "power" and the "weight" in the case of a train of toothed wheels.
- Find the weight which can be supported by a force of 60lbs. applied at right angles to the arms of the windlass shown in the annexed sketch.
- VI. State the Laws of Friction.
- Prove that a body cannot rest on an inclined plane whose slope is greater than  $\phi$ , where  $\tan\phi = \mu$ , the coefficient of friction.
- A ladder rests against a wall. Prove that it is on the point of slipping when the inclination to the horizontal is  $2\phi$ , where  $\tan\phi$  is the coefficient of friction, as well between the ladder and the wall as between the ladder and the ground.
- VII. Define the terms *Work*, *Energy*, *Kinetic Energy*, *Static Energy*.
- Verify that if friction be neglected, the work necessary to raise a weight by means of the windlass in Question V. is exactly the same as if the weight were raised directly (*i.e.*, without the aid of any machine.)
- VIII. Explain what is meant by a *Reciprocal Diagram* in Statics? What are the properties of such a diagram?
- Draw the diagram of forces (1) for the funicular polygon, (2) for the framed arch shown in the annexed sketch.

DIAGRAM TO QUESTION V.



LENGTH OF CRANK = DIAMETER OF DRUM.

DIAGRAM TO QUESTION VIII.



IX. Prove that the attraction of a thin uniform spherical shell on any external point is the same as if the whole mass were collected at its center.

Calculate the pressure due to the mutual attraction of two equal spheres of iron, one metre in diameter, placed in contact on a smooth horizontal table. [Earth's mean density =  $5\frac{2}{3}$ , radius = 6,300,000 metres; density of iron = 7.5.]

## PHYSICS. I.

T. C. CLOUD, Esq.

- I. Describe the principles concerned in the working of the hydraulic press, and also the mechanical device by which the press has been rendered a practical machine.
- II. A piece of glass apparatus, containing water, is weighed against platinum weights—on the first occasion with the bar. at 715 mm., and on the second occasion with the bar. at 760 mm., the temperature in both cases being the same. Calculate the difference in the apparent weight of the apparatus and its contents on the two occasions—

	grms.
Weight of air displaced by the apparatus and water,	
bar. at 715 m.m.     ...     ...     ...     ...	1.889
Weight of air displaced by the weights,	
bar. at 715 m.m.     ...     ...     ...     ...	.0546

- III. Describe experiments to prove that gases diffuse through porous bodies. State the law relating to the rate of gaseous diffusion.
- IV. What influence has the temperature of the air on the velocity of sound in it?
- V. How would you proceed to find the number of vibrations which a tuning fork executes in a second; and supposing the number of vibrations to be 250 per sec., what is the length of the sound wave?
- VI. An elastic string, 3 feet long, is stretched with a force of 100 lbs., and produces, when sounded, its fundamental note. Describe two methods by which you can obtain the next higher octave note.
- VII. Under what circumstances does total reflection occur; how is it generally effected in practice? Give instances in the case of some optical instruments where this phenomenon is made use of.
- VIII. What do you understand by the terms Spherical aberration and chromatic aberration as applied to lenses?  
Explain the construction of an achromatic lens.
- IX. Trace the paths of the extreme rays from a distant object in the case of the astronomical telescope—the eyepiece to consist of a single lens. Indicate the proper position for the cross wire, and explain why this latter cannot be used in connection with the Galilean telescope.

- X. What is the origin of the so-called Fraunhöfer's lines? To what conclusion do they point as regards the constitution of the sun?
- XI. Does the solar spectrum extend beyond the visible portion? If so, describe some method of rendering this extension sensible.
- XII. Describe one of the methods by which the velocity of light has been measured.

## PHYSICS II.

PROFESSOR LAMB.

- I. Describe the plan of Regnault's experiments made to test the accuracy of Boyle's Law, and give a general account of his results.
- II. Define the terms *shear*, *rigidity*.  
 Prove that a uniform elongation in one direction, accompanied by an equal contraction in a perpendicular direction, is equivalent to a simple shear.
- III. Give a general explanation of the propagation of a wave along a uniform shallow canal.  
 If the canal opens at one end into a wide sheet of water, examine the reflection of a wave at this end.
- IV. Investigate the series of proper tones which can be sounded by an open organ-pipe.  
 Explain a method of experimentally verifying your result, and the principles on which this method is based.
- V. Explain the phenomena of Beats.  
 Describe the essential parts of Helmholtz's double-siren, and the method of using it to verify the law of frequency of beats :  
 (1) For beats of fundamental tones, and  
 (2) For beats of harmonics.
- VI. Rays diverging from a luminous point fall on a spherical surface ; describe accurately the configuration of the system of reflected rays, and account for the formation of the primary and secondary focal lines of an oblique pencil.  
 Show that if the surface be ellipsoidal, and not spherical, there will be astigmatism, even in the case of direct pencils.

VII. Describe a spectroscope fitted with some means of registering the positions of the fixed lines, and explain carefully the functions of the various parts.

Give a diagram showing the course of two pencils, one of red rays, the other of blue rays, through the instrument.

VIII. Describe and explain Fresnel's experiment with the Bi-prism; and give the reasons for the various precautions necessary to ensure success.

IX. Explain the origin of the alternately bright and dark bands observed in the interior of the shadow of a narrow wire thrown by a luminous point.

X. Describe the various means usually employed to obtain a beam of polarized light, and state the direction (relative to the apparatus) of the "plane of polarization" in each case.

A thin film of selenite is placed between a pair of crossed Nicol prisms; describe and explain the appearance presented, and state how this varies when one of the Nicols is rotated through a right angle.

If the film be too thick to show colour, describe and explain the appearance presented when the emergent light is analyzed with a spectroscope.

## LATIN.

### HORACE, ODES.

T. H. Y. TROTTER, Esq., B.A.

I. Translate—

Mercuri, facunde nepos Atlantis,  
 Qui feros cultus hominum recentum  
 Voce formasti catus et decoræ  
 More palæstræ,  
 Te canam, magni Jovis et deorum  
 Nuntium curvæque lyræ parentem,  
 Callidum, quidquid placuit, jocoso  
 Condere furto.  
 Te, boves olim nisi reddidisses  
 Per dolum amotas, puerum minaci  
 Voce dum terret, viduus pharetra  
 Risit Apollo.



Quin et Atridas duce te superbos  
 Ilio dives Priamus relicto  
 Thessalosque ignes et iniqua Trojæ  
 Castra fefellit.  
 Tu piæ lætis animas reponis  
 Sedibus virgaque levem coerces  
 Aurea tur bam, superis deorum  
 Gratus et imis.

II. Note the construction in—

Callidum condere.  
 Te, boves olim nisi reddidisses . . . . .  
 Risit Apollo.

III. Translate and explain—

- (a) fuge suspicari  
 Cujus octavum trepidavit ætas  
 Claudere lustrum.  
 (b) ex quo destituit deos  
 Mercede pactâ Laomedon.  
 (c) Cœmentis licet occupes  
 Tyrrhenum omne tuis et mare Apulicum.  
 (d) vitreo daturus  
 Nomina ponto.

IV. Explain the construction in the following sentences—

- (a) Mutat terra vices.  
 (b) Fies nobilium tu quoque fontium.  
 (c) Vino et lucernis Medus acinaces  
 Immane quantum discrepat.

V. Translate—

Vel nos in Capitolium,  
 Quo clamor vocat et turba faventium,  
 Vel nos in mare proximum  
 Gemmas et lapides, aurum et inutile  
 Summi materiem mali,  
 Mittamus, scelorum si bene poenitet.  
 Eradenda cupidinis  
 Pravi sunt elementa, et teneræ nimis  
 Mentis asperioribus  
 Formandæ studiis. Nescit equo rudis  
 Haerere ingenuus puer,  
 Venarique timet, ludere doctior,  
 Seu Graeco jubeas trocho  
 Seu malis vetita legibus alea ;

Quum perjura patris fides  
 Consortem, socium fallat, et hospitem,  
 Indignoque pecuniam  
 Heredi properet. Scilicet improbae  
 Crescunt divitiae ; tamen  
 Curtæ nescio quid semper abest rei.

VI. Derive—Scilicet, improbus, securus, expedio, irritus.

VII. Dicar . . . .  
 ex humili potens  
 Princeps Aeolium carmen ad Italos  
 Deduxisse modos.  
 Examine this statement.

PROFESSOR KELLY.

Translate—

Eadem aestate cohors Usipiorum per Germanias conscripta et in Britanniam transmissa magnum ac memorabile facinus ausa est. Occiso centurione ac militibus, qui ad tradendam disciplinam immisti manipulis exemplum et rectores habebantur, tres liburnicas adactis per vim gubernatoribus ascendere ; et uno remigante, suspectis duobus eoque interfectis, nondum vulgato rumore ut miraculum praevehebantur. Mox ad aquam atque utilia rapientes cum plerisque Britannorum sua defensantium proelio congressi, ac saepe victores, aliquando pulsus, eo ad extremum inopiae venere, ut infirmissimos suorum, mox sorte ductos vescerentur. Atque ita circumvecti Britanniam, amissis per inscitiam regendi navibus, pro praedonibus habiti, primum a Suevis, mox a Frisiis intercepti sunt. Ac fuere, quos per commercia venundatos et in nostram usque ripam mutatione ementium adductos indicium tanti casus illustravit.

Comment on any difficulties you find in the above passage.

Also—

Id filiae quoque uxorique praeceperim, sic patris, sic mariti memoriam venerari, ut omnia facta dictaque eius secum revolvant, formamque ac figuram animi magis quam corporis complectantur ; non quia intercedendum putem imaginibus, quae marmore aut aere finguntur ; sed ut vultus hominum, ita simulacra vultus imbecilla ac mortalia sunt, forma mentis aeterna, quam tenere et exprimere non per alienam materiam et artem, sed tuis ipse moribus possis.

Also—

Fenus agitare et in usuras extendere ignotum, ideoque magis servatur quam si vetitum esset. Agri pro numero cultorum ab universis in vices occupantur, quos mox inter se secundum dignationem partiuntur. Facilitatem partiendi camporum spatia praestant. Arva per annos mutant, et superest ager. Nec enim cum ubertate et amplitudine soli labore contendunt, ut pomaria conserant, et prata separent, et hortos rigent; sola terrae seges imperatur. Unde annum quoque ipsum non in totidem digerunt species; hiems et ver et aestas intellectum ac vocabula habent, autumnus perinde nomen ac bona ignorantur.

Also—

Censusque quorundam senatorum iuvit. quo magis mirum fuit, quod preces Marci Hortali, nobilis iuvenis, in paupertate manifesta superbius accepisset. nepos erat oratoris Hortensii, inlectus a divo Augusto liberalitate decies sestertii ducere uxorem, suscipere liberos, ne clarissima familia extingueretur. igitur quattuor filiis ante limen curiae adstantibus, loco sententiae, cum in Palatio senatus haberetur, modo Hortensii inter oratores sitam imaginem modo Augusti intuens, ad hunc modum coepit: 'patres conscripti, hos, quorum numerum et pueritiam videtis, non sponte sustuli, sed quia princeps monebat; simul maiores mei meruerant ut posteros haberent. nam ego, qui non pecuniam, non studia populi neque eloquentiam, gentile domus nostrae bonum, varietate temporum accipere vel parare potuissem, satis habebam, si tenues res meae nec mihi pudori nec cuiquam oneri forent. iussus ab imperatore uxorem duxi. en strips et progenies tot consulum, tot dictatorum. nec ad invidiam ista, sed conciliandae misericordiae refero. adsequentur florente te, Caesar, quos dederis honores: interim Q. Hortensii pronepotes, divi Augusti alumnos ab inopia defende.'

Write out a sketch of the history of Britain as related by Tacitus up to the date of Agricola's arrival there.

GREEK.  
DEMOSTHENES.  
PROFESSOR KELLY.

## I. Translate—

## ΟΜΟΛΟΓΙΑ ΦΙΛΙΠΠΟΥ ΚΑΙ ΦΩΚΕΩΝ.

Ἄκούετε, ὦ ἄνδρες Ἀθηναῖοι. ὁμολογία Φιλίππου καὶ Φωκέων, φησὶν, οὐχὶ Θηβαίων καὶ Φωκέων, οὐδὲ Θετταλῶν καὶ Φωκέων, οὐδὲ Λοκρῶν, οὐδ' ἄλλου τῶν παρόντων οὐδενός· καὶ πάλιν παραδύναται δὲ τὰς πόλεις Φωκέας φησὶ Φιλίππῳ, οὐχὶ Θηβαίοις οὐδὲ Θετταλοῖς οὐδὲ ἄλλῳ οὐδενί. διὰ τί; ὅτι Φίλιππος ἀπηγγέλλετο πρὸς ὑμᾶς ὑπὸ τούτου ἐπὶ τῇ τῶν Φωκέων σωτηρίᾳ παρεληλυθέναι. τούτῳ δὴ πάντ' ἐπίστανται, καὶ πρὸς τούτον πάντ' ἐσκόπουσι, πρὸς τούτον ἐπιούσιν τὴν εἰρήνην. λέγε δὴ τὰπίλοιπα καὶ σκοπεῖτε, τί πιστεύσαντες τί ἔπαθον. ἀρά γε ὅμοια ἢ παραπλήσια οἷς οὗτος ἀπήγγελλεν; λέγε.

## II. Translate—

Λογογράφους τοίνυν καὶ σοφιστὰς ἀποκαλῶν τοὺς ἄλλους καὶ ὑβρίζειν πειρώμενος, αὐτὸς ἐξελεγχθήσεται τοῖσι τούτοις ὧν ἔνοχος. ταῦτα μὲν γὰρ τὰ ἰαμβεῖα ἐκ Φοίνικός ἐστιν Εὐριπίδου. τούτο δὲ τὸ δρᾶμα οὐδὲ πάποτε οὔτε Θεόδωρος οὔτε Ἀριστόδημος ὑπεκρίναντο, οἷς οὗτος τὰ τρίτα λέγων διετέλεσεν, ἀλλὰ Μόλων ἠγωνίζετο καὶ εἰ δὴ τις ἄλλος τῶν παλαιῶν ὑποκριτῶν. Ἀντιγόνη δὲ Σοφοκλέους πολλάκις μὲν Θεόδωρος πολλάκις δὲ Ἀριστόδημος ὑποκρίεται, ἐν ἣ πεποιημένα ἰαμβεῖα καλῶς καὶ συμφερόντως ἡμῖν πολλάκις αὐτὸς εἰρηκῶς καὶ ἀκριβῶς ἐξεπιστάμενος παρέλιπεν. ἴστε γὰρ δῆπου τοῦθ', ὅτι ἐν ἅπασιν τοῖς δρᾶμασι τοῖς τραγικοῖς ἐξαιρετόν ἐστιν ὡςπερ γέρας τοῖς τριταγωνισταῖς τὸ τοὺς τυράννους καὶ τοὺς τὰ σκῆπτρα ἔχοντας εἰσιέναι. ταῦτα τοίνυν ἐν τῷ δρᾶματι τούτῳ σκέψασθε ὁ Κρέων Αἰσχίνης οἷα λέγων πεποιήται τῷ ποιητῇ, ἃ οὔτε πρὸς αὐτὸν οὗτος ὑπὲρ τῆς πρεσβείας διελέχθη οὔτε πρὸς τοὺς δικαστὰς εἶπεν.

## III. Translate—

Εἶτα ὑπὲρ μὲν συγγενῶν καὶ ἀναγκαίων ἀνθρώπων οὐκ ἀναβαίνει, ὑπὲρ Αἰσχίνου δὲ ἀναβήσει, ὅς, ἡνίκ' ἔκρινεν Ἀριστοφῶν Φιλόδικον καὶ δι' ἐκείνου τῶν σοῖ πεπραγμένων κατηγορεῖ, συγκατηγόρει μετ' ἐκείνου σοῦ καὶ τῶν ἐχθρῶν τῶν σὸν εἰς ἐξητάζετο. ἐπειδὴ δὲ σὺ μὲν τουτουσὶ δειδιξάμενος, καὶ φήσας καταβαίνειν εἰς Πειραιᾶ δεῖν ἤδη καὶ χρήματ' εἰσφέρειν καὶ τὰ θεωρικὰ στρατιωτικὰ ποιεῖν, ἢ χειροτονεῖν ἃ συνείπε μὲν οὗτος ἔγραψε δ' ὁ βδελυρὸς Φλοκράτης, ἐξ ὧν αἰσχροὺς ἀντ' ἴσης συνέβη γενέσθαι τὴν εἰρήνην, οὗτοι δὲ τοῖς μετὰ ταύτ' ἀδικήμασι πάντ' ἀπολωλέκασι τηρικαῦτα διήλλαξαι.

IV. Write a brief account of the *Sacred War*.

## V. Translate—

Καὶ ταῦτα πάντα ποιεῖ δῆλον ὅτι οὐδὲν ἄλλο ἐνδεικνύμενος ἢ ὅτι “ἐγὼ πέπονθα οὐδὲν ὑπὸ τῆς καταχειροτονίας, οὐδὲ δέδοικα οὐδὲ φοβοῦμαι τὸν μέλλοντα ἀγῶνα.” ὅς οὖν, ὡ ἄνδρες Ἀθηναῖοι, τὸ μὲν ὑμᾶς δεδιέναι δοκεῖν αἰσχρὸν ἡγείται, τὸ δὲ μηδὲν φροντίζειν ὑμῶν νεανικὸν, τοῦτον οὐκ ἀπολωλέναι δεκάκις προσθήκει; οὐδὲ γὰρ ἔξειν ὑμᾶς ὅ, τι χρῆσεσθε αὐτῷ νομίζει. πλοῦσιος, θρασὺς, μέγα φρονῶν, μέγα φθεγγόμενος, βίαιος, ἀναιδής. ποῦ ληφθήσεται νῦν ἔαν διακροῖσθαι;

## HOMER.

T. H. Y. TROTTER, ESQ., B.A.

I. Translate Homer's *Iliad*, Book XIII. 673—684.

Ὡς οἱ μὲν μάρναντο δέμας πυρὸς αἰθομένοιο·  
 Ἐκτωρ δ' οὐκ ἐπέπυστο Διίφιλος, οὐδέ τι ἦδη  
 ὅτι μὰ οἱ νῶϊν ἐπ' ἀριστερὰ δηϊώωντο  
 λαοὶ ὑπ' Ἀργείων· τάχα δ' ἂν καὶ κῦδος Ἀχαιῶν  
 ἔπλετο· τοῖος γὰρ γαίηοχος ἐννοσίγαιος  
 ὦπριν' Ἀργείους, πρὸς δὲ σθένει αὐτὸς ἄμνην·  
 ἀλλ' ἔχεν ἢ τὰ πρῶτα πύλας καὶ τείχος ἐσᾶλτο,  
 ῥηξάμενος Δαναῶν πεκνυᾶς στίχας ἀπιστάων,  
 ἐνθ' ἔσαν Ἄϊαντός τε νέες καὶ Πρωτεσιλάου  
 θῖν' ἐφ' ἁλὸς πολιῆς εἰρυμένα· αὐτὰρ ὑπερθεν  
 τείχος ἐδέδητο χθαμαλώτατον, ἐνθα μάλιστα  
 ζαχρηεῖς γίγοντο μάχῃ αὐτοῖ τε καὶ ἵππο.

## II. Parse the words—

ἐπέπυστο, ἐσᾶλτο, ῥηξάμενος, ἐδέδητο.

## III. What is the derivation of the following words—

γαίηοχος, Διίφιλος, ἐννοσίγαιος.

IV. Translate Homer's *Iliad*, Book XV. 390—404.

Πάτροκλος δ', εἶως μὲν Ἀχαιοὶ τε Τρῶές τε  
 τείχεος ἀμφεμάχοντο θοᾶων ἔκτοθι νηῶν,  
 τόφρ' ὄγ' ἐνὶ κλισίῃ ἀγαπήνορος Εὐρυπύλοιο  
 ἦστο τε καὶ τὸν ἕτερπε λόγοις, ἐπὶ δ' ἔλκει λυγρῷ  
 φάρμακ' ἀκέσματ' ἔπασσε μελαινάων ὀδυνάων.  
 αὐτὰρ ἐπειδὴ τείχος ἐπεσσυμένους ἐνόησεν  
 Τρῶας, ἀτὰρ Δαναῶν γένετο ἰαχὴ τε φόβος τε  
 ὦμωξέν τ' ἄρ' ἐπειτα καὶ ὦ πεπλήγετο μηρῷ  
 χερσὶ καταπρηγέσθ', ὀλοφυρόμενος δ' ἔπος ἠΐδα

“Ἐυρύπυλ’; οὐκέτι τοι δύναιμαι, χατέοντί, περ ἔμπης,  
 ἐνθάδε παρμενεμεν· δὴ γὰρ μέγα νεῖκος ὄρωρεν  
 ἀλλὰ σὲ μὲν θεράπων ποτιτερπέτω, αὐτὰρ ἔγωγε  
 σπεύσομαι εἰς Ἀχιλῆα, ἵν’ ὀτρύνω πολέμιζεν.  
 τίς δ’ οἶδ’, εἴ κέν οἱ σὺν δαίμονι θυμὸν ὀρίνω  
 παρειπῶν; ἀγαθὴ δὲ παραίφασίς ἐστὶν ἑταίρου.”

- V. Explain and illustrate the force of *παρα* in the words *παρειπῶν παραίφασις*.
- VI. What are the different meanings of the word *ὄφρα* in the Homeric Poems? Give the constructions with which it is used.
- VII. What value do you consider the Homeric Poems to have, considered as a history?

## COMPARATIVE PHILOLOGY.

T. H. Y. TROTTER, Esq., B.A.

- I. “The Latin consonant system is in much closer relation with the original Indo-Germanic language than that of the Greeks, while, on the other hand, in the case of the vowels, Latin is monotonous and weak in comparison with the manifold development and subtle divisions of the Greek vowel system.” Examine and illustrate this statement.
- II. What is meant by the expression “Primary and Secondary Roots?” Illustrate your answer.
- III. What was the original case-ending of the Genitive singular? Show how the forms in use in Greek and Latin were derived from it.
- IV. What light does philology throw on Greek and Latin mythology?
- V. Analyse the words *βλέπω*—*ἔτυψα*—*ἡ δίων*—*ἵππος*—*parant*—*stella*—*magistros*—*jussit*—*showing* in each case the process of formation the words have undergone.
- VI. What knowledge can you obtain from the study of philology of the condition of the Græco-Italian race before its separation?

## PROSE COMPOSITION.

T. H. Y. TROTTER, ESQ., B.A.

Translate into Latin prose:—

“But there was something vicious in the nature of Philip, which led him soon to rid himself of the watchful eye of Antigonus and to spend his time, like an eastern youth, in voluptuousness. Yet he possessed high abilities; he had decided talents as a military commander, great courage, and the power of using and increasing the resources of his kingdom, which became more particularly manifest after his peace with the Romans. After having lost a part of his dominions, he availed himself so prudently of his circumstances, as to make the Romans themselves contribute to increase his power. Hence he left to his son the kingdom in a more prosperous condition than it was in when he succeeded to the throne; for the Macedonian empire had fallen into decay under Antigonus Gonatas.”

PROFESSOR KELLY.

I. Translate into Greek Prose—

Once a youth and a maiden resolved to meet in a beautiful spot, where was a lake in the midst of mountains. The youth, who had a large and faithful dog, went out (accompanied by him) to the place that was determined on. And he was so eager to see the maiden that he arrived at the lake considerably before the time. And since he had to wait a long time, and the sun was very hot, he resolved to bathe. So he undressed, and bade the dog watch them, and jumped into the lake. At last, having enjoyed the water enough, and expecting the maiden to arrive soon, he came out and tried to recover his clothes. But the dog, not knowing who he was, owing to his being naked, would not even let him come near. And he, after vainly calling the dog many times, shuddering and at a loss what to do, at last saw the maiden approaching far off. And as he could not get to her without any clothes, he was compelled to go back into the water and hide behind a rock. And she came up, and seeing only the clothes, naturally thought he was drowned, and began to wail most bitterly.

Determined on	...	<i>εἰρημένος.</i>
Before the time	...	<i>πρωϊώτερον.</i>
Bathe	...	<i>λούεσθαι.</i>
Undress	...	<i>ἀποδύεσθαι.</i>
Recover	...	<i>ἀναδέξασθαι.</i>

Naked	...	...	γυμνός.
Shudder	...	...	ρίγος.
Drowned	...	...	ἀπολωλέναι.
Wail	...	...	ὀδύρομαι.
Bitter	...	...	οἰκτρός.

- II. Give an account of the Constitution of Athens during the Peloponnesian War. Also—Write a short history of Cleon.
- III. Write a short history of the lives of the two Scipios, Africanus Major and Minor.

## CHEMISTRY.

T. C. CLOUD, Esq., F.C.S., &c.

- I. Describe Clark's process for the determination of the hardness of water.
- II. Describe the manufacture of sodic carbonate by Leblanc's process
- III. How would you convert baric sulphate into baric nitrate?
- IV. Enumerate some of the chief compounds of iron which illustrate the varying atomicity of this element.
- V. How many pounds of silver are required to prepare 25 lbs. of argentic nitrate?  
Give such details as will show the mode of calculation—  
 $\text{Ag} = 108 \quad \text{N} = 14 \quad \text{O} = 16$
- VI. I place before you a solution containing the metals silver, copper, and lead, in combination with nitric acid; you are required to separate and finally obtain the metals in the metallic state. How would you proceed?
- VII. What reaction occurs when a solution of mercuric chloride is added to a solution of ammonia in excess? Give the equation.
- VIII. How would you determine the presence of nitrogen in an organic substance?
- IX. What is the formula of ordinary tartaric acid, and how is it prepared?
- X. Describe the action which takes place when oxalic acid is heated, and express the same by an equation.



- XI. Mention the first four homologues of methylic alcohol with their formulæ; show the analogy existing between them as regards their constitution; give the general formula for the series, and state generally the change in the physical characters of the members of this series in proceeding from the lowest to the highest?
- XII. Explain the changes which take place when a solution of cane sugar is submitted to fermentation.  
Express the general results by equations.
- XIII. Mention a characteristic test for starch, and explain the nature of the change which takes place when starch is boiled with dilute sulphuric acid.

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## BIOLOGY.

### BOTANY.

PROFESSOR TATE.

- I. What are the principal distinctions between *Exogens*, *Endogens*, and *Acrogens*.
- II. Describe the various modifications of *vascular tissue*.
- III. Describe the structures termed *spathe*, *corymb*, and *bract*.
- IV. Describe the several modes of *dehiscence* of the *anther*.
- V. Interpret fully—"Sepals 5 or 4, sometimes *gamosepalous*. Petals 5 or 3, *clawed*. Stamens as many or twice as many as petals, *free* or *connected* at the base. Ovary *one*, often *stalked*. Stigmas 2-5, *sessile*, *filiform*. Capsule *one-celled*, *dehiscing by teeth*. Placenta *central*, *free*. Embryo *curved* round a *mealy albumen*. Leaves *opposite*, without, or rarely with *scarious stipules*.  
To what Order do these characters belong?
- VI. What are the distinguishing characters of the Order *Orchidacæ*?
- VII. Examine and describe the preparations (1-2) under the microscope, and give an opinion as to the nature of each of one of them.
- VIII. Fill up the accompanying schedules with reference to the plants (1-2) placed before you.
- IX. Refer the specimens (1-12) to their Natural Orders.

## BIOLOGY.

## ZOOLOGY.

T. G. PONTON, Esq., F.Z.S.

- I. Describe the nature and properties of living protoplasm.
- II. Explain the terms—*carapace*, *sepiostaire*, *lanule*, *scaphognathite*, *zoöid*, *heterogangliata*, *artiodactyle*, *solidungule*.
- III. Describe the chief anatomical features of *Helix*, and state in what it differs from a sea-snail.
- IV. Give the distinctive characters of the order Hymenoptera, indicating the broad distinctions between the larger groups into which it is divided; and mention the habits of some of the familiar forms.
- V. Describe the circulatory system of a fish, and indicate in what it differs from that of a reptile.
- VI. Give a *resumé* of the characters of the orders of the class Reptilia, indicating the distinguishing features of each and pointing out the approach in any of them to the structure of birds.
- VII. Describe the chief modifications of the sacrum and hind limbs in the various classes of the Vertebrata, indicating any forms in which either one or both are absent, and pointing out in what manner they are replaced.
- VIII. To what classes and orders do the following belong:—add notes as to their distribution in time and space and describe any marked peculiarity:—*Terebratulina*, *Cliona*, *Mactra*, *Belemnites*, *Ceratodus*, *Psittacus*, *Ursus*, *Macropus*, *Limax*, *Salmo*, *Boltonia*, *Musca*.
- IX. Describe the external characters of an earth-worm.
- X. Name the zoo-geographical regions into which the world is divided, and give the characteristics of any of them.

## DEDUCTIVE LOGIC.

REV. W. R. FLETCHER, M.A.

- I. What definitions have been given of "logic"? Which do you adopt? Explain and justify your definition.
- II. What are "Categories"? Give Aristotle's list, and criticise it. Give also Mill's list.
- III. What are the opinions which are severally assigned to Nominalists, Realists, and Conceptualists?

- IV. What is meant by speaking of terms as connotative and non-connotative? What other words are used to express the same distinction?
- V. Enumerate and explain the "predicables."
- VI. What are the fundamental laws of thinking.
- VII. Is it true that every syllogism is only a *petitio principii*.
- VIII. Distinguish between mediate and immediate inferences. Give examples.
- IX. What are the rules of syllogism and state whether these rules are broken or not by the following modes:—AAA, AAO, EAA, IAI, III, EEI. If not valid in one figure are they allowable in any other figure?
- X. Quote and explain the mnemonic lines *Barbara*, &c.
- XI. What is meant by "quantifying the predicate"? What additional judgments would be sanctioned if the predicate be considered as quantified?
- XII. What systems of notation have been invented to make logical processes apparent to the eye? Write out according to each system the following moods:—*Celarent*, *Darii*, *Felapton*, *Datisi*, and also the following argument:—
- Men are so constituted, that on reflection they approve virtue; and, being so constituted, are conscious of an obligation to act virtuously; and, as all law implies penalty for breach of that law, man is liable to punishment and cannot plead his propensities as a ground for exemption from punishment.

## THIRD YEAR.

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### PHYSICS. I.

T. C. CLOUD, Esq.

- I. Describe the principles concerned in the working of the hydraulic press, and also the mechanical device by which the press has been rendered a practical machine.
- II. A piece of glass apparatus, containing water, is weighed against platinum weights—on the first occasion with the bar. at 715 mm., and on the second occasion with the bar. at 760 mm., the temperature in both cases being the same. Calculate the difference in the apparent weight of the apparatus and its contents on the two occasions—

Weight of air displaced by the apparatus and water,	grms.
bar. at 715 m.m.     ...     ...     ...     ...	1.889
Weight of air displaced by the weights,	
bar. at 715 m.m.     ...     ...     ...     ...	.0546

- III. Describe experiments to prove that gases diffuse through porous bodies. State the law relating to the rate of gaseous diffusion.
- IV. What influence has the temperature of the air on the velocity of sound in it?
- V. How would you proceed to find the number of vibrations which a tuning fork executes in a second; and supposing the number of vibrations to be 250 per sec., what is the length of the sound wave?
- VI. An elastic string, 3 feet long, is stretched with a force of 100 lbs., and produces, when sounded, its fundamental note. Describe two methods by which you can obtain the next higher octave note.
- VII. Under what circumstances does total reflection occur; how is it generally effected in practice? Give instances in the case of some optical instruments where this phenomenon is made use of.
- VIII. What do you understand by the terms Spherical aberration and chromatic aberration as applied to lenses?  
Explain the construction of an achromatic lens.

- IX. Trace the paths of the extreme rays from a distant object in the case of the astronomical telescope—the eyepiece to consist of a single lens. Indicate the proper position for the cross wire, and explain why this latter cannot be used in connection with the Galilean telescope.
- X. What is the origin of the so-called Fraunhofer's lines? To what conclusion do they point as regards the constitution of the sun?
- XI. Does the solar spectrum extend beyond the visible portion? If so, describe some method of rendering this extension sensible.
- XII. Describe one of the methods by which the velocity of light has been measured.

## PHYSICS II.

PROFESSOR LAMB.

- I. Describe the plan of Regnault's experiments made to test the accuracy of Boyle's Law, and give a general account of his results.
- II. Define the terms *shear*, *rigidity*.  
 Prove that a uniform elongation in one direction, accompanied by an equal contraction in a perpendicular direction, is equivalent to a simple shear.
- III. Give a general explanation of the propagation of a wave along a uniform shallow canal.  
 If the canal opens at one end into a wide sheet of water, examine the reflection of a wave at this end.
- IV. Investigate the series of proper tones which can be sounded by an open organ-pipe.  
 Explain a method of experimentally verifying your result, and the principles on which this method is based.
- V. Explain the phenomena of Beats.  
 Describe the essential parts of Helmholtz's double-siren, and the method of using it to verify the law of frequency of beats :  
 (1) For beats of fundamental tones, and  
 (2) For beats of harmonics.
- VI. Rays diverging from a luminous point fall on a spherical surface ; describe accurately the configuration of the system of reflected rays, and account for the formation of the primary and secondary focal lines of an oblique pencil.  
 Show that if the surface be ellipsoidal, and not spherical, there will be astigmatism, even in the case of direct pencils.

VII. Describe a spectroscope fitted with some means of registering the positions of the fixed lines, and explain carefully the functions of the various parts.

Give a diagram showing the course of two pencils, one of red rays, the other of blue rays, through the instrument.

VIII. Describe and explain Fresnel's experiment with the Bi-prism; and give the reasons for the various precautions necessary to ensure success.

IX. Explain the origin of the alternately bright and dark bands observed in the interior of the shadow of a narrow wire thrown by a luminous point.

X. Describe the various means usually employed to obtain a beam of polarized light, and state the direction (relative to the apparatus) of the "plane of polarization" in each case.

A thin film of selenite is placed between a pair of crossed Nicol prisms; describe and explain the appearance presented, and state how this varies when one of the Nicols is rotated through a right angle.

If the film be too thick to show colour, describe and explain the appearance presented when the emergent light is analyzed with a spectroscope.

## LATIN.

### HORACE, ODES.

T. H. Y. TROTTER, Esq., B.A.

I. Translate—

Mercuri, facunde nepos Atlantis,  
Qui feros cultus hominum recentum  
Voce formasti catus et decoræ

More palæstræ,

Te canam, magni Jovis et decorum  
Nuntium curvæque lyræ parentem,  
Callidum, quidquid placuit, jocosum  
Condere furto.

Te, boves olim nisi reddidisses  
Per dolum amotas, puerum minaci  
Voce dum terret, viduus pharetra  
Risit Apollo.

Quin et Atridas duce te superbos  
 Ilio dives Priamus relicto  
 Thessalosque ignes et iniqua Trojæ  
 Castra fefellit.  
 Tu pijs lætis animas reponis  
 Sedibus virgaque levem coerces  
 Aurea tur bam, superis deorum  
 Gratus et imis.

II. Note the construction in—

Callidum condere.  
 Te, boves olim nisi reddidisses . . . .  
 Risit Apollo.

III. Translate and explain—

- (a) fuge suspicari  
 Cujus octavum trepidavit ætas  
 Claudere lustrum.  
 (b) ex quo destituit deos  
 Mercede pactâ Laomedon.  
 (c) Cœmentis licet occupes  
 Tyrrhenum omne tuis et mare Apulicum.  
 (d) vitreo daturus  
 Nomina ponto.

IV. Explain the construction in the following sentences—

- (a) Mutat terra vices.  
 (b) Fies nobilium tu quoque fontium.  
 (c) Vino et lucernis Medus acinaces  
 Immane quantum discrepat.

V. Translate—

Vel nos in Capitolium,  
 Quo clamor vocat et turba faventium,  
 Vel nos in mare proximum  
 Gemmas et lapides, aurum et inutile  
 Summi materiem mali,  
 Mittamus, scelorum si bene poenitet.  
 Eradenda cupidinis  
 Pravi sunt elementa, et teneræ nimis  
 Mentis asperioribus  
 Formandæ studiis. Nescit equo rudis  
 Haerere ingenuus puer,  
 Venarique timet, ludere doctior,  
 Seu Graeco jubeas trocho  
 Seu malis vetita legibus alea ;

Quum perjura patris fides  
 Consortem, socium fallat, et hospitem,  
 Indignoque pecuniam  
 Heredi properet. Scilicet improbæ  
 Crescunt divitiæ; tamen  
 Curtæ nescio quid semper abest rei.

VI. Derive—Scilicet, improbus, securus, expedio, irritus.

VII. Dicar . . . .  
 ex humili potens  
 Princeps Aeolium carmen ad Italos  
 Deduxisse modos.  
 Examine this statement.

PROFESSOR KELLY.

Translate—

Eadem æstate cohors Usipiorum per Germanias conscripta et in Britanniam transmissa magnum ac memorabile facinus ausa est. Occiso centurione ac militibus, qui ad tradendam disciplinam immisti manipulis exemplum et rectores habebantur, tres liburnicas adactis per vim gubernatoribus ascendere; et uno remigante, suspectis duobus eoque interfectis, nondum vulgato rumore ut miraculum praevehebantur. Mox ad aquam atque utilia rapientes cum plerisque Britannorum sua defensantium proelio congressi, ac saepe victores, aliquando pulsus, eo ad extremum inopiae venere, ut infirmissimos suorum, mox sorte ductos vescerentur. Atque ita circumvecti Britanniam, amissis per inscitiam regendi navibus, pro praedonibus habiti, primum a Suevis, mox a Frisiis intercepti sunt. Ac fuere, quos per commercia venundatos et in nostram usque ripam mutatione ementium adductos indicium tanti casus illustravit.

Comment on any difficulties you find in the above passage.

Also—

Id filiae quoque uxori praeceperim, sic patris, sic mariti memoriam venerari, ut omnia facta dictaque eius secum revolvant, formamque ac figuram animi magis quam corporis complectantur; non quia intercedendum putem imaginibus, quae marmore aut aere finguntur; sed ut vultus hominum, ita simulacra vultus imbecilla ac mortalia sunt, forma mentis aeterna, quam tenere et exprimere non per alienam materiam, et artem, sed tuis ipse moribus possis.



Also—

Fenus agitare et in usuras extendere ignotum, ideoque magis servatur quam si vetitum esset. Agri pro numero cultorum ab universis in vices occupantur, quos mox inter se secundum dignationem partiuntur. Facilitatem partiendi camporum spatia praestant. Arva per annos mutant, et superest ager. Nec enim cum ubertate et amplitudine soli labore contendunt, ut pomaria conserant, et prata separent, et hortos rigent; sola terrae seges imperatur. Unde annum quoque ipsum non in totidem digerunt species; hiems et ver et aestas intellectum ac vocabula habent, autumnus perinde nomen ac bona ignorantur.

Also—

Censusque quorundam senatorum iuvit. quo magis mirum fuit, quod preces Marci Hortali, nobilis iuvenis, in paupertate manifesta superbius accepisset. nepos erat oratoris Hortensii, inlectus a divo Augusto liberalitate decies sestertii ducere uxorem, suscipere liberos, ne clarissima familia extingueretur. igitur quattuor filiis ante limen curiae adstantibus, loco sententiae, cum in Palatio senatus haberetur, modo Hortensii inter oratores sitam imaginem modo Augusti intuens, ad hunc modum coepit: 'patres conscripti, hos, quorum numerum et pueritiam videtis, non sponte sustuli, sed quia princeps monebat; simul maiores mei meruerant ut posteros haberent. nam ego, qui non pecuniam, non studia populi neque eloquentiam, gentile domus nostrae bonum, varietate temporum accipere vel parare potuissem, satis habebam, si tenues res meae nec mihi pudori nec cuiquam oneri forent. iussus ab imperatore uxorem duxi. en strips et progenies tot consulum, tot dictatorum. nec ad invidiam ista, sed conciliandae misericordiae refero. adsequentur florente te, Caesar, quos dederis honores: interim Q. Hortensii pronepotes, divi Augusti alumnos ab inopia defende.'

Write out a sketch of the history of Britain as related by Tacitus up to the date of Agricola's arrival there.

**GREEK.**  
**DEMOSTHENES.**  
**PROFESSOR KELLY.**

## I. Translate—

## ΟΜΟΛΟΓΙΑ ΦΙΛΙΠΠΟΥ ΚΑΙ ΦΩΚΕΩΝ.

Ἄκουετε, ὦ ἄνδρες Ἀθηναῖοι. ὁμολογία Φιλίππου καὶ Φωκέων, φησὶν, οὐχὶ Θηβαίων καὶ Φωκέων, οὐδὲ Θετταλῶν καὶ Φωκέων, οὐδὲ Λοκρῶν, οὐδ' ἄλλου τῶν παρόντων οὐδενός· καὶ πάλιν παραδοῦναι δὲ τὰς πόλεις Φωκέας φησὶ Φιλίππῳ, οὐχὶ Θηβαίοις οὐδὲ Θετταλοῖς οὐδὲ ἄλλῳ οὐδενί. διὰ τί; ὅτι Φίλιππος ἀπηγγέλλετο πρὸς ὑμᾶς ὑπὸ τούτου ἐπὶ τῇ τῶν Φωκέων σωτηρίᾳ παρεληλυθέναι. τούτῳ δὴ πάντ' ἐπίστευον, καὶ πρὸς τούτον πάντ' ἐσκόπων, πρὸς τούτον ἐποιοῦντο τὴν εἰρήνην. λέγε δὴ τάπιλοιπα καὶ σκοπεῖτε, τί πιστεύσαντες τί ἐπαθον. ἄρά γε ὅμοια ἢ παραπλήσια οἷς οὗτος ἀπήγγελλεν; λέγε.

## II. Translate—

Λογογράφους τοίνυν καὶ σοφιστὰς ἀποκαλῶν τοὺς ἄλλους καὶ ὑβρίζειν πειρώμενος, αὐτὸς ἐξελεγχθήσεται τούτοις ὧν ἐνοχος. ταῦτα μὲν γὰρ τὰ ἱαμβεῖα ἐκ Φοίνικὸς ἐστὶν Εὐριπίδου. τοῦτο δὲ τὸ δράμα οὐδὲ πρόποτε οὔτε Θεόδωρος οὔτε Ἀριστόδημος ὑπεκρίναντο, οἷς οὗτος τὰ τρίτα λέγων διετέλεσεν, ἀλλὰ Μόλων ἠγωνίζετο καὶ εἰ δὴ τις ἄλλος τῶν παλαιῶν ὑποκριτῶν. Ἀντιγόνη δὲ Σοφοκλέους πολλάκις μὲν Θεόδωρος πολλάκις δὲ Ἀριστόδημος ὑποκρίεται, ἐν ἣ πεποιημένα ἱαμβεῖα καλῶς καὶ συμφερόντως ὑμῖν πολλάκις αὐτὸς εἰρηκῶς καὶ ἀκριβῶς ἐξεπιστάμενος παρέλιπεν. ἕτε γὰρ δήπου τούθ', ὅτι ἐν ἅπασι τοῖς δράμασι τοῖς τραγικοῖς ἐξαιρετόν ἐστιν ὥσπερ γέρας τοῖς τριταγωνισταῖς τὸ τοὺς τυράνους καὶ τοὺς τὰ σκῆπτρα ἔχοντας εἰσιέναι. ταῦτα τοίνυν ἐν τῷ δράματι τούτῳ σκέψασθε ὁ Κρέων Αἰσχίνης οἷα λέγων πεποιήται τῷ ποιητῇ, ἃ οὔτε πρὸς αὐτὸν οὗτος ὑπὲρ τῆς πρεσβείας διελέχθη οὔτε πρὸς τοὺς δικαστὰς εἶπεν.

## III. Translate—

Ἔγω ὑπὲρ μὲν συγγενῶν καὶ ἀναγκαίων ἀνθρώπων οὐκ ἀναβαίνεις, ὑπὲρ Αἰσχίνου δὲ ἀναβήσει, ὅς, ἠνίκ' ἔκρινεν Ἀριστοφῶν Φιλόκον καὶ δι' ἐκείνου τῶν σοῖ πεπραγμένων κατηγορεῖ, συγκατηγορεῖ μετ' ἐκείνου σοῦ καὶ τῶν εχθρῶν τῶν σῶν εἰς ἐξητάζετο. ἐπειδὴ δὲ σὺ μὲν τουτουσί δεδιξάμενος, καὶ φήσας καταβαίνειν εἰς Πειραιᾶ δεῖν ἤδη καὶ χρήματ' εἰσφέρειν καὶ τὰ θεωρικὰ στρατιωτικὰ ποιεῖν, ἢ χειροτονεῖν ἃ συνείπε μὲν οὗτος ἔγραψε δ' ὁ βδελυρὸς Φιλοκράτης, ἐξ ὧν αἰσχρὰν ἀντ' ὕψης συνέβη γενέσθαι τὴν εἰρήνην, οὗτοι δὲ τοὺς μετὰ πάντ' ἀδικήμασι πάντ' ἀπολωλέκασι τηρικαῦτα διήλλαξαι.

IV. Write a brief account of the *Sacred War*.

## V. Translate—

Καὶ ταῦτα πάντα ποιεῖ δῆλον ὅτι οὐδὲν ἄλλο ἐνδεικνύμενος ἢ ὅτι “ἐγὼ πέπονθα οὐδὲν ὑπὸ τῆς καταχειροτονίας, οὐδὲ Δέδοικα οὐδὲ φοβοῦμαι τὸν μέλλοντα ἀγῶνα.” ὃς οὖν, ὦ ἄνδρες Ἀθηναῖοι, τὸ μὲν ὑμᾶς δεδιέναι δοκεῖν αἰσχροὺς ἡγέται, τὸ δὲ μηδὲν φροντίζειν ὑμῶν νεανικόν, τοῦτον οὐκ ἀπολωλέναι δεκάκις προσήκει; οὐδὲ γὰρ ἔξειν ὑμᾶς ὅ, τι χρήσεσθε αὐτῷ νομίζει. πλούσιος, θρασύς, μέγα φρονῶν, μέγα φθεγγόμενος, βίαιος, ἀναιδής. ποῦ ληφθήσεται νῦν ἐὰν διακρούσῃται;

## HOMER.

T. H. Y. TROTTER, Esq., B.A.

## I. Translate Homer's Iliad, Book XIII. 673—684.

“Ὡς οἱ μὲν μάρναντο δέμας πυρὸς αἰθομένοιο·  
Ἐκτωρ δ' οὐκ ἐπέπυστο Διίφιλος, οὐδέ τι ἕδη  
ὅττι βᾶ οἱ νηῶν ἐπ' ἀριστερὰ δηϊώοντο  
λαοὶ ὑπ' Ἀργείων· τάχα δ' ἂν καὶ κῦδος Ἀχαιῶν  
ἔπλετο· τοίος γὰρ γαίηοχος ἐννοσίγαιος  
ᾧτρυν' Ἀργείους, πρὸς δὲ σθένει αὐτὸς ἄμνεν·  
ἀλλ' ἔχεν ἦ τὰ πρῶτα πύλας καὶ τείχος ἐσᾶλτο,  
ῤηξάμενος Δαναῶν πυκινὰς στίχας ἀπιστᾶων,  
ἐνθ' ἔσαν Ἄϊαντός τε νέες καὶ Πρωτεσιλάου  
θῖν' ἔφ' ἄλδος πολυῆς εἰρυμένα· αὐτὰρ ἕπερθεν  
τείχος ἐδέδμητο χθαμαλώτατον, ἐνθα μάλιστα  
ζαχρηεῖς γίγοντο μάχη αὐτοῖ τε καὶ ἵπποι.

## II. Parse the words—

ἐπέπυστο, ἐσᾶλτο, ῤηξάμενος, ἐδέδμητο.

## III. What is the derivation of the following words—

γαίηοχος, διίφιλος, ἐννοσίγαιος.

## IV. Translate Homer's Iliad, Book XV. 390—404.

Πάτροκλος δ', εἴως μὲν Ἀχαιοὶ τε Τρῶές τε  
τείχεος ἀμφεμάχοντο θοᾶων ἔκτοθι νηῶν,  
τόφρ' ὅγ' ἐνὶ κλισίῃ ἀγαπήνορος Εὐρύπυλοιο  
ἦστό τε καὶ τὸν ἔτερπε λόγους, ἐπὶ δ' ἔλκει λυγρῷ  
φάρμακ' ἀκέσματ' ἔπασσε μελαινάων ὀδυνῶν.  
αὐτὰρ ἐπειδὴ τείχος ἐπεσσυμένους ἐνόησεν  
Τρῶας, ἀτὰρ Δαναῶν γένετο ἰαχὴ τε φόβος τε  
ᾧμωξέν τ' ἄρ' ἔπειτα καὶ ὦ πεπλήγητο μηρῷ  
χερσὶ καταπρηνέσσ', ὀλοφυρόμενος δ' ἔπος ἠΐδα

“Εὐρύπυλ', οὐκέτι τοι δύναιμι, χατέοντί, περ ἔμπης,  
 ἐνθάδε παρμενεμεν· δὴ γὰρ μέγα νείκος ὄρωρεν·  
 ἀλλὰ σὲ μὲν θεράπων ποτιτερπέτω, αὐτὰρ ἔγωγε  
 σπείσομαι εἰς Ἀχιλλῆα, ἵν' ὀτρύνω πολεμίζειν.  
 τίς δ' οἶδ', εἴ κέν οἱ σὺν δαίμονι θυμὸν ὀρίνω  
 παρειπῶν; ἀγαθὴ δὲ παραίφασίς ἐστιν ἑταίρου.”

- V. Explain and illustrate the force of *παρα* in the words *παρειπῶν παραίφασίς*.
- VI. What are the different meanings of the word *ὄφρα* in the Homeric Poems? Give the constructions with which it is used.
- VII. What value do you consider the Homeric Poems to have, considered as a history?

## COMPARATIVE PHILOLOGY.

T. H. Y. TROTTER, Esq., B.A.

- I. “The Latin consonant system is in much closer relation with the original Indo-Germanic language than that of the Greeks, while, on the other hand, in the case of the vowels, Latin is monotonous and weak in comparison with the manifold development and subtle divisions of the Greek vowel system.” Examine and illustrate this statement.
- II. What is meant by the expression “Primary and Secondary Roots?” Illustrate your answer.
- III. What was the original case-ending of the Genitive singular? Show how the forms in use in Greek and Latin were derived from it.
- IV. What light does philology throw on Greek and Latin mythology?
- V. Analyse the words *βλέπω*—*ἔτυψα*—*ἠδίων*—*ἱππος*—*parant*—*stella*—*magistros*—*jussit*—showing in each case the process of formation the words have undergone.
- VI. What knowledge can you obtain from the study of philology of the condition of the Græco-Italian race before its separation?

## PROSE COMPOSITION.

T. H. Y. TROTTER, ESQ., B.A.

Translate into Latin prose :—

“ But there was something vicious in the nature of Philip, which led him soon to rid himself of the watchful eye of Antigonus and to spend his time, like an eastern youth, in voluptuousness. Yet he possessed high abilities; he had decided talents as a military commander, great courage, and the power of using and increasing the resources of his kingdom, which became more particularly manifest after his peace with the Romans. After having lost a part of his dominions, he availed himself so prudently of his circumstances, as to make the Romans themselves contribute to increase his power. Hence he left to his son the kingdom in a more prosperous condition than it was in when he succeeded to the throne; for the Macedonian empire had fallen into decay under Antigonus Gonatas.”

PROFESSOR KELLY.

I. Translate into Greek Prose—

Once a youth and a maiden resolved to meet in a beautiful spot, where was a lake in the midst of mountains. The youth, who had a large and faithful dog, went out (accompanied by him) to the place that was determined on. And he was so eager to see the maiden that he arrived at the lake considerably before the time. And since he had to wait a long time, and the sun was very hot, he resolved to bathe. So he undressed, and bade the dog watch them, and jumped into the lake. At last, having enjoyed the water enough, and expecting the maiden to arrive soon, he came out and tried to recover his clothes. But the dog, not knowing who he was, owing to his being naked, would not even let him come near. And he, after vainly calling the dog many times, shuddering and at a loss what to do, at last saw the maiden approaching far off. And as he could not get to her without any clothes, he was compelled to go back into the water and hide behind a rock. And she came up, and seeing only the clothes, naturally thought he was drowned, and began to wail most bitterly.

Determined on	...	...	<i>εἰρημένος.</i>
Before the time	...	...	<i>πρωϊώτερον.</i>
Bathe	...	...	<i>λούεσθαι.</i>
Undress	...	...	<i>ἀποδύεσθαι.</i>
Recover	...	...	<i>ἀναδέξασθαι.</i>

Naked	...	...	γυμνός.
Shudder	...	...	ρίγω.
Drowned	...	...	ἀπολωλέναι.
Wail	...	...	ὀδύρομαι.
Bitter	...	...	οἰκτρός.

- II. Give an account of the Constitution of Athens during the Peloponnesian War. Also—Write a short history of Cleon.
- III. Write a short history of the lives of the two Scipios, Africanus Major and Minor.

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## INDUCTIVE LOGIC.

REV. W. R. FLETCHER, M.A.

- I. Define Induction, Deduction, and Traduction, with examples.
- II. What is a perfect Induction? Can a precise line be drawn between a perfect induction and other imperfect inductive processes, which are yet allowable modes of discovery or proof?
- III. Is it true that a universal proposition represents nothing more than a hitherto uncontradicted experience?
- IV. State and explain Mill's four methods of experimental enquiry.
- V. Supposing any one to be unacquainted with the causes of the following phenomena, by what methods should he investigate each?
1. The sounds heard in a telephone.
  2. The coincidence of bad trade with a good harvest in this current year.
- VI. How would you investigate and test the following statement?—  
 Man's practical applications of his moral sense are constantly liable to change and are often contradictory, nevertheless we must conclude that man has a moral nature and is therefore under the law of moral obligation and amenable to punishment.
- VII. What do we mean by the law of Causation? Is causation resolvable into unvariable sequence? What is Reid's theory as to the origin of the idea of Cause and state how Mill criticises it?

VIII. A certain man, named X, in a neighbouring colony, proposes to cure many diseases, without medicine, by simple imposition of hands. Very many persons state that they have been so cured. Their cure is testified to by many eyewitnesses, though the cures are admitted, in some instances, to be only temporary. The work of this man is spoken of as "absurd," "impossible," "against all the laws of nature," as a "violation of proved scientific truths," &c. How ought the occurrence of such a phenomenon in social life to be investigated and tested?

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DECEMBER, 1880.

## MATRICULATION EXAMINATION.

## ARITHMETIC AND ALGEBRA.

PROFESSOR LAMB.

- I. Divide the difference of the squares of 9604 and 10404 by the sum of the squares of 98 and 102.
- II. The twenty-ninth of February this year was a Sunday; when did this happen last, and when will it happen again?
- III. A down train going at the rate of thirty miles an hour passes an up train of twice the length going at the rate of twenty miles an hour in nine seconds. How long will the up train take to pass completely through a station a hundred yards in length?
- IV. Define a *Fraction*; and prove that the value of a fraction is not altered if both numerator and denominator are divided by the same number.

Add together  $\frac{17}{33}$ ,  $\frac{5}{12}$ ,  $\frac{8}{44}$ ,  $\frac{3}{28}$ ,  $\frac{15}{56}$

- V. Explain the notation of decimal fractions. Prove that if the denominator of a vulgar fraction in its lowest terms contains any factor other than 2 or 5 it will give rise to a circulating decimal.
- Convert  $\frac{1}{19}$  into a circulating decimal.
- VI. Extract the square roots of 6877219041 and 1.361.
- VII. Which is the better investment, three per cent. stock at 87, or six per cent. stock at 168? What difference of annual income will it make whether a sum of £541 6s. 8d. be invested in the one or other of these stocks?
- VIII. Prove that

$$ab = ba,$$

$$\text{and } a - (b - c) = a - b + c,$$

where the letters stand for ordinary numbers.

Form the product of the three factors  $bc - ad$ ,  $ca - bd$ ,  $ab - cd$ .



- IX. Divide  $1 - 10x^3 + 15x^4 - 6x^5$  by  $(1 - x)^3$
- X. Why do you change the sign of a quantity when you transfer it from one side of an equation to the other?  
Solve the equation
- $$\frac{3x - 2}{5} - \frac{1}{6} \left( x - \frac{1}{6} \right) = \frac{2x}{5}$$
- XI. A tradesman purchases goods for £1000, and having sold a portion at 10 per cent. profit, sells off the remainder at 20 per cent. under cost price, and then finds that as the result of the sale he has made 4 per cent. on his money; how much did he lose on the portion which he sold off?

## GEOMETRY.

PROFESSOR LAMB.

- I. What is the fundamental property of the straight line? State where it is first explicitly, and where first implicitly, made use of.
- II. From any point within a triangle straight lines are drawn to the extremities of the base. Prove that these lines are together less than the two sides of the triangle, but contains a greater angle.
- III. Two triangles have two sides of the one equal to two sides of the other, each to each, but the angles included by these sides are unequal; prove that the bases are unequal, that being the greater which is opposite the greater angle.  
*D* is the middle point of the side *BC* of the triangle *ABC*, and the points *A, D* are joined. Prove that if *AB* is greater than *AC*, the angle *ADB* is obtuse.
- IV. Define parallel straight lines.  
Prove that it is possible for two straight lines to be parallel.  
*AD, BE, CF* are three equal and parallel straight lines; prove that the triangle *ABC* is equal to the triangle *DEF* in all respects.
- V. On a given base construct a rectangle equal to a given triangle.
- VI. If the square on one side of a triangle be equal to the sum of the squares on the other two sides, the triangle is right-angled.  
Construct a square having half the area of a given square.

- VII. If a straight line be divided equally and unequally the squares on the unequal parts are together double of the squares on half the original line and on the line between the points of section.
- VIII. Divide a straight line into two parts such that the rectangle contained by the whole and one part shall be equal to the square on the other part.

Prove that this is equivalent to finding a solution of the equation

$$x^2 - 3x + 1 = 0$$

## NATURAL PHILOSOPHY.

PROFESSOR LAMB.

- I. Define the terms *Acceleration*, *Momentum*, *Force*.  
State precisely the comparative effects of the same force on different bodies?
- II. State and explain the Law of Action and Re-action?  
A shot weighing 400lbs. is fired with a velocity of 1000 feet per second into a vessel which is stationary on the water. If the inertia of the vessel be equivalent to 2000 tons, find the velocity with which the vessel will begin to move.
- III. State the proposition known as the Parallelogram of Forces.  
Two equal forces act in opposite directions at right angles to a given straight line  $AB$  at the points  $A$ ,  $B$  of it, and a third, equal, force acts along  $AB$ . Find, by a diagram, the magnitude and the line of action of the resultant.
- IV. Define *Centre of Gravity*.  
Prove the principle of the Plumb-line.  
A block of stone, whose section is a square of two feet in the side and whose height is five feet, is placed symmetrically on another block which is a cube of three feet in the side. Find the centre of gravity of the combination.
- V. What is the essential difference between a fluid and a solid?  
Prove that in a fluid at rest the pressure has the same intensity at all points at the same level.
- VI. State and prove the principle of Archimedes.  
If a solid is immersed in a fluid, the latter experiences a downward pressure equal to the weight of the fluid displaced. Describe an experimental verification of this fact.

- VII. Describe the process of construction of a mercurial thermometer.  
 Why is alcohol sometimes substituted for mercury as the thermometric substance?  
 How is an alcohol thermometer graduated?  
 What is the precise meaning of the statement that the temperature of a given flame is  $500^{\circ}$  C.? [Mercury boils at  $350^{\circ}$  C.]
- VIII. Define the terms *Specific Heat* and *Latent Heat*.  
 Describe an experiment illustrating the differences in specific heat of various metals.  
 Find how much water would be cooled one degree by a pound of ice at a temperature of  $-5^{\circ}$  C. [Specific heat of ice =  $\cdot 5$ ; latent heat of melting of ice = 80.]

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### LATIN—VIRGIL.

PROFESSOR KELLY.

Translate—

Est in secessu longo locus : insula portum  
 Efficit obiectu laterum, quibus omnis ab alto  
 Frangitur inque sinus scindit sese unda reductos ;  
 Hinc atque hinc vastae rupes gemiisque minantur  
 In caelum scopuli, quorum sub vertice late  
 Aequora tuta silent ; tum silvis scaena coruscis  
 Desuper horrentique atrum nemus imminet umbra ;  
 Fronte sub adversa scopulis pendentibus antrum,  
 Intus aquae dulces vivoque sedilia saxo,  
 Nympharum domus : hic fessas non vincula navis  
 Ulla tenent, unco non alligat ancora morsu.

Also—

Atque illum talis iactantem pectore curas  
 Tristior et lacrimis oculos suffusa nitentis  
 Adloquitur Venus : O qui res hominumque deumque  
 Aeternis regis inperiis, et fulmine terres,  
 Quid meus Aeneas in te committere tantum,  
 Quid Troes potuere, quibus, tot fumera passis,  
 Cunctus ob Italiam terrarum clauditur orbis ?  
 Certe hinc Romanos olim, volventibus annis,  
 Hinc fore ductores, revocato a sanguine Teuceri,  
 Qui mare, qui terras omni ditione tenerent,  
 Pollicitus. Quae te, genitor, sententia vertit ?

Hoc equidem occasum Troiae tristisque ruinas  
 Solabar, fatis contraria fata rependens ;  
 Nunc eadem fortuna viros tot casibus actos  
 Insequitur. Quem das finem, rex magne, laborum ?

Also—

Cui mater media sese tulit obvia silva,  
 Virginis os habitumque gerens et virginis arma,  
 Spartanae, vel qualis equos Threissa fatigat  
 Harpalyce volucremque fuga praevertitur Hebrum.  
 Namque humeris de more habilem suspenderit arcum.  
 Venatrix, dederatque comam diffundere ventis,  
 Nuda genu, nodoque sinus collecta fluentis.  
 Ac prior, Heus, inquit, iuvenes, monstrate, mearum  
 Vidistis si quam hic errantem forte sororum,  
 Succinctam pharetra et maculosae tegmine lynceis,  
 Aut spumantis apri cursum clamore prementem.

Also—

Instant ardentem Tyrii pars ducere muros  
 Molirique arcem et manibus subvolvere saxa,  
 Pars optare locum tecto et concludere sulco ;  
 Iura magistratusque legunt sanctumque senatum  
 Hic portus alii effodiunt : hic alta theatri  
 Fundamenta locant alii, inmanisque columnas  
 Rupibus excidunt, scaenis decora alta futuris.  
 Qualis apes aestate nova per florea rura  
 Exercet sub sole labor, cum gentis adultos  
 Educunt fetus, aut cum liquentia mella  
 Stipant et dulci distendunt nectare cellas,  
 Aut onera accipiunt venientum aut agmine facto  
 Ignavum fucos pecus a praesepibus arcent :  
 Fervet opus, redolentque thymo fragrantia mella.

Also—

Dant famuli manibus lymphas, Cereremque canistris  
 Expediunt, tonsisque ferunt mantelia villis.  
 Quinquaginta intus famulae, quibus ordine longam  
 Cura penum struere, et flammis adolere Penatis ;  
 Centum aliae totidemque pares aetate ministri,  
 Qui dapibus mensas onerent et pocula ponant.

Write notes on the grammatical construction of the following sentences :—

a. *Urbem quam statuo vestra est.*

β. *Parce metu Cytherea ; manent immota tuorum Fata tibi.*

γ. *Frater ut Aeneas pelago tuus omnia circum Littora jactetur odiis Junonis iniquae Nota tibi.*

δ. *Nec vox hominem sonat.*

I. Compound con with *quatio*, *claudio*, *spargo* ; ob with *caedo*, *audio*, *fero* ; sub with *rapio*, *teneo*, *rego*.

II. Construct short sentences illustrating the construction of the following words :—*Jubeo*, *doceo*, *juro*, *ardeo*, *utor*, *potior*.

III. Decline *olus*, *penus*, and compare *arduus*, *pious*, *sacer*, *benevolus*.

IV. Derive the following :—*Fetus*, *immanis*, *olim*, *fatigo*, *pharetra*, *senatus*, *ancora*.

For Latin Prose :—Then the Master of the People and the Master of the Horse went together into the forum, and bade every man shut up his booth, and stopped all causes at law, and ordered that every man who was of an age to go out to battle should be ready in the Field of Mars before sunset, and should have with him victuals for five days and twelve stakes.

## GREEK.—XENOPHON.

PROFESSOR KELLY.

I. Translate—

“ Ἄνδρες στρατιῶται, τὰ μὲν δὴ Κύρου δῆλον ὅτι οὕτως ἔχει πρὸς ἡμᾶς, ὡς περ τὰ ἡμέτερα πρὸς ἐκείνον· οὔτε γὰρ ἡμεῖς ἐτι ἐκείνου στρατιῶται, (ἐπεὶ γε οὐ συνεπόμεθα αὐτῷ,) οὔτε ἐκείνος ἡμῖν ἐτι μισθοδότης. Ὅτι μέντοι ἀδικεῖσθαι νομίζει ὑφ’ ἡμῶν, οἶδα· ὥστε καὶ, μεταπεμπομένου αὐτοῦ, οὐκ ἐθέλω ἐλθεῖν, τὸ μὲν μέγιστον, αἰσχυνόμενος, ὅτι σύννοϊδα ἑμαυτῷ πάντα ἐψευσμένος αὐτόν· ἔπειτα δὲ καὶ δεδιώς, μὴ, λαβὼν με, δίκην ἐπιθῆ, ὣν νομίζει ὑπ’ ἐμοῦ ἠδικῆσθαι. Ἐμοὶ οὖν δοκεῖ οὐχ’ ὥρα εἶναι ἡμῖν καθεῦδειν, οὐδ’ ἀμελεῖν ἡμῶν αὐτῶν, ἀλλὰ βουλευέσθαι, ὅ τι χρῆ ποιεῖν ἐκ τούτων.”

II. Parse the words—

δεδιώς,

λαβὼν,

ἐπιθῆ.

Also,

“ Ἄπαν δὲ τὸ μέσον τῶν τειχῶν ἦσαν στάδιοι τρεῖς· καὶ παρελθεῖν οὐκ ἦν βίβη. ἦν γὰρ ἡ πόροδος στενὴ, καὶ τὰ τεῖχη εἰς τὴν θάλατταν καθήκοντα, ὑπερθεν δὲ ἦσαν πέτραι ἠλιβατοὶ· ἐπὶ δὲ τοῖς τείχεσιν ἀμφοτέρους ἐφειστήκεισαν πύλαι. Ταύτης οὖν ἕνεκα τῆς παρόδου Κύρος τὰς καὶς μετεπέμψατο, ὅπως ὀπλίτας ἀποβιβάσειεν εἰςω καὶ ἔξω τῶν πυλῶν, καὶ βιασάμενοι τοὺς πολεμίους παρέλθοιεν, εἰ φυλάττοιεν ἐπὶ ταῖς Συρίας πύλαις.

## III. Parse the words—

τειχῶν, ἐφειστήκεσαν, ἀποβιβάσειεν, παρέλθοιεν.

Also,

“Ο μέντοι Κῦρος εἶπεν, ὅτε καλέσας παρεκελεύετο τοῖς Ἕλλησι, τὴν κραυγὴν τῶν βαρβάρων ἀνέχεσθαι, ἐψεύσθη τοῦτο οὐ γὰρ κραυγῇ, ἀλλὰ σιγῇ, ὡς ἀνυστόν, καὶ ἡσυχῇ ἐν ἴσῳ καὶ βραδέως προσήσαν. Καὶ ἐν τούτῳ Κῦρος, παρελαύνων αὐτὸς σὺν Πίγρητι τῷ ἑρμηνεῖ καὶ ἄλλοις τρισὶν ἢ τέτταρσι, τῷ Κλεάρχῳ ἐβόα, ἄγειν τὸ στράτευμα κατὰ μέσον τὸ τῶν πολεμίων, ὅτι ἐκεῖ βασιλεὺς εἶη· “κὰν τοῦτο,” εἶφη, “νικῶμεν, πᾶνθ’ ἡμῖν πεποιήται.”

## IV. Parse the words—

καλέσας, ἐψεύσθη, ἀνυστόν, προσήεσαν,  
ἑρμηνεῖ, ἐβόα.

## V. Write out the moods of all the tenses of the verb ἴημι.

## VI. Give the principal tenses of the following verbs:—

ἐλαύνω, φέρω, τίκτω, αἰρέω, ῥήγνυμι.

## VII. Decline—

θρίξ, ἀναξ, χάρις, τεθνεώς, δοκῶν.

## VIII. Write out a list of the Greek Prepositions, mentioning the cases they govern.

## IX. Translate into Greek—

They said that Cyrus was dead, and Ariaeus had fled.  
He says that if you will only mention what, he will do anything that does not bring him shame.  
They went away saying that they would send ambassadors.  
We perceive that we are ridiculous.

## ENGLISH LANGUAGE.

PROFESSOR DAVIDSON.

## I. Insert correct points in the following passage:—

A sound mind in a sound body is a short but full description of a happy state in this world he that has these two has little more to wish for and he that wants either of them will be but little the better for anything else mens happiness or misery is most part of their own making he whose mind directs not wisely will never take the right way and he whose body is crazy and feeble will never be able to advance in it I confess there are some mens constitutions

of body and mind so vigorous and well framed by nature that they need not much assistance from others but by the strength of their natural genius they are from their cradles carried towards what is excellent and by the privilege of their happy constitutions are able to do wonders but examples of this kind are but few and I think I may say that of all the men we meet with nine parts of ten are what they are good or evil useful or not by their education it is that which makes the great difference in mankind

JOHN LOCKE

- II. Parse the sentence beginning with "But examples of this kind."
- III. Analyze the sentence beginning with "He whose mind."
- IV. What is the derivation of the following words :—Sound (adj.), Sound (noun), Description, Happy, State, Else, Directs, Right, Assistance, Excellent, Example, Meet (adj.), Meet (verb), Useful, Education.
- V. Define the term "Conjunction." Give a classified list of conjunctions. Show, with illustrations, the various modes in which For, Yet, Then, Since, That, and Still, are used.
- VI. What is a Verb? What is the difference between the active and passive voice of an Intransitive Verb? In what ways is the past participle formed?
- VII. Correct errors (if any) in the following sentences :—
- (a) If any one can answer the question, let them do so at once.
- (b) The Smiths and us formed a party, and went to the Exhibition.
- (c) I would have liked to have been with them on that occasion.
- (d) No one could have witnessed the storm without feeling that it was awful grand.
- (e) Both him and I was alarmed.
- (f) "So hand in hand they passed.  
\* \* \* \* \*
- Adam, the goodliest man of men since born  
His sons, the fairest of her daughters, Eve."
- (g) "Is your gold and silver ewes and rams?"
- (h) We admire the two first stanzas much more than the two last.
- VIII. Define "Syntax," and state the principal rules.

- IX. Give examples of the various kinds of Adverbs, arranging them in separate columns.
- X. What rules regulate the comparison of Adjectives and Adverbs?
- XI. Write a description of the stranding and floating of the S.S. *Sorata*.

## ENGLISH HISTORY.

PROFESSOR DAVIDSON.

- I. Give a short sketch of the career and character of William the Conqueror.
- II. Under what circumstances did Stephen become king? What was the character of his reign? and what were the principal incidents of it?
- III. Give a short account of the Lollards, their principles, and their influence upon the times immediately following.
- IV. Describe the relations of Thomas Cromwell to King Henry VIII., Cardinal Wolsey, Sir Thomas More, and Bishop Fisher.
- V. In what respect did the country make remarkable progress during the time of Queen Elizabeth?
- VI. Draw a genealogical table showing the descent of King James VI. of Scotland, from King Edward IV. of England.
- VII. Sketch the career of Sir Walter Raleigh, and explain the causes of delay between the pronouncing of sentence against him, and his execution.
- VIII. How did Cromwell conduct the affairs of the nation during his Protectorate?
- IX. What reasons were assigned for inviting William of Orange to occupy the throne of King James II.?
- X. Mention the principal Authors of the eighteenth century, and attach the title of one work to the name of each.
- XI. Who discovered the law of Gravitation?  
 “ “ “ Circulation of the Blood?  
 “ “ “ Vaccination, as a remedy for Small Pox?  
 Who invented the Spinning Jenny?  
 “ “ Steam Engine?  
 “ “ Spinning Machine?



Who wrote the	“ Castle of Indolence ? ”
“ “	“ Faëry Queen ? ”
“ “	“ Vicar of Wakefield ? ”
“ “	“ Task ? ”
“ “	“ Paradise Regained ? ”

XII. Give the dates of the following events :—

- Crusade of Richard the First.
- Conquest of Wales.
- Battle of Cressy.
- Battle of Agincourt.
- Union of the Crowns of England and Scotland.
- Revolt of the American Colonies.

## GEOGRAPHY.

G. LEM. GRETTON, ESQ.

- I. Draw an outline map of Europe.
- II. On it show—
  - (a) The different countries.
  - (b) The Rhine, the Rhone, the Danube, Genoa, Constantinople, Copenhagen, Cape Matapan, Cape la Hogue, the Pyrenees Mountains, the Gulf of Bothnia.
- III. Give the names and positions of the British possessions in all parts of the world. Add any information as to climate, productions, trade, nature of population, and the means by which England became possessed of each.
 

(Candidates are at liberty to draw a rough outline map of the world in answering this question.)
- IV. Where are the following places ?
 

Kandahar, Yeddo, New Orleans, Zanzibar, Dunedin, San Francisco, Marseilles, Lisbon, Glasgow, Wilcannia, Albany.
- V. In what country are the largest lakes in the world ?
- VI. Draw a rough outline map of Victoria, showing thereon the principal towns.
- VII. State in what countries of the world tigers are found.
- VIII. Name the principal mountain-ranges in the world, and state where they are situated.

## NATURAL HISTORY.

PROFESSOR TATE.

## I.

- I. Show by a diagram what you consider to be the arrangement of the materials deposited in the bed of a lake. Justify your opinion.
- II. Into what classes are rocks divided according to their origin, and what are their chief divisions according to mineral composition?
- III. How is it proved that the original position of some rocks has been altered?
- IV. Describe the action of wind as a geological agent; in what parts of the earth's surface is it most marked?
- V. Discuss the question:—Are running water and volcanic action two antagonistic powers?
- VI. Define the terms *superposition*, *fossil*, *fault*, and *talus*.
- VII. Account for the serpentine course of the creeks of the Adelaide Plain.
- VIII. Make a reduced drawing of the geological diagram hanging before you, and explain it in writing.
- IX. Name the accompanying rock specimens.

## II.

- I. Distinguish between the *venation* and *vernation* of the leaf.
- II. Describe the accompanying leaves as to the following particulars:—*position*, *insertion*, *division*, *margin*, and *shape*.
- III. What are *bracts*?
- IV. Describe and represent by drawings the common *sorts of inflorescence*.
- V. What is meant by a *regular polypetalous corolla*?
- VI. What separate parts compose a *perfect pistil*?
- VII. Of the six plants placed before you, which have *inferior* and which have *superior pistils*.
- VIII. Fill up the accompanying schedule with reference to the plant placed before you.
- IX. What is the *placenta*? What is its position in the lily and in the pea?
- X. Explain the terms *legume*, *dehiscence*, *albumen*, *involucre*, and *disk*?

## CHEMISTRY.

PROFESSOR TATE.

- I. Name three inflammable gases, and state what substances are formed when each of them is burned in atmospheric air.
- II. How is oxygen prepared, and what are its chief properties?
- III. By what other names is hydrochloric acid known; how came it to receive those names?
- IV. I give you iron filings, flowers of sulphur, and dilute hydrochloric acid; what different chemical changes can you produce with them?
- V. What are the chemical names and composition of *fire-damp* and *choke-damp*; why have these names been given to them?
- VI. What chemical changes can be produced with black oxide of manganese, concentrated hydrochloric acid, and metallic antimony?
- VII. Represent by symbols and give the chemical names of *spirits of hartshorn*, *oil of vitriol*, *saltpetre*, *water*, and *marsh gas*?
- VIII. What do you understand by the terms *ternary compound*, *hydrous solution*, *evaporation*, and *animal charcoal*?
- IX. What weight of carbon is contained in fifty grains of carbon monoxide?

## FRENCH.

G. LEM. GRETTON, ESQ.

- I. Write down throughout the Imperative of *finir*, the Present Subjunctive of *être*, the Present Conditional of *faire*, the Preterite Definite of *mener*.
- II. Write down the Present Participle of *manger*, the Past Participle of *dormir*, *prendre*, *vendre*, *voir*, *envoyer*; the 2nd Singular Present Indicative of *dormir*, the 3rd Singular Present Indicative of *venir*, the 1st Plural Present Subjunctive of *haïr*, the 1st Singular Present Indicative, the 1st Singular Present Subjunctive, and the 1st Singular Future Indicative of *appeler*, *vivre*, *agir*, *vouloir*, *couvrir*.]
- III. Read aloud and translate the following passage :—  
 Vos larmes Josabeth, n'ont rien de criminel;  
 Mais Dieu veut qu'on espère en son soin paternel.  
 Il ne recherche point, aveugle en sa colère,  
 Sur le fils qui le craint l'impiété du père.

Tout ce qui reste encor de fidèles Hébreux  
 Lui viendront aujourd'hui renouveler leurs vœux :  
 Autant que de David la race est respectée,  
 Autant de Jézabel la fille est détestée.  
 Joas les touchera par sa noble pudeur,  
 Où semble de son sang reluire la splendeur ;  
 Et Dieu, par sa voix même appuyant notre exemple,  
 De plus près à leur cœur parlera dans son temple.

Translate the following on paper :—

Celui qui met un frein à la fureur des flots  
 Sait aussi des méchans arrêter les complots.  
 Soumis avec respect à sa volonté sainte,  
 Je crains Dieu, cher Abner, et n'ai point d'autre crainte.  
 Cependant je rends grâce au zèle officieux  
 Qui sur tous mes périls vous fait ouvrir les yeux.  
 Je vois que l'injustice en secret vous irrite,  
 Que vous avez encor le cœur israélite.  
 Le ciel en soit béni ! mais ce secret courroux,  
 Cette oisive vertu, vous en contentez-vous ?  
 La foi qui n'agit point, est-ce une foi sincère ?

IV. Give the French for—the hat, the horses, the hairs, a town, a cow, a wall.

Give the English for—autrefois, pleurer, pleuvoir, le soir, la soirée, un cadeau, une maison, cueilli, caché.

V. Put into French—

- (1) Do you think it will be fine ?
- (2) I am going into the country.
- (3) He asked me for a piece of bread, and I gave some to him.
- (4) Who told you that she was gone away ?
- (5) The two Frenchmen you saw yesterday are very distinguished men.
- (6) Come and dine with me tomorrow, and after dinner we will go to the theatre.

VI. Translate into English :—

Christine, reine de Suède était fille de Gustave Adolphe, un des plus grands rois que la Suède ait eus, et l'un des plus fameux capitaines qu'il y ait eu au dix-septième siècle. Cette princesse n'a régné que huit ans, mais le peu d'années qu'elle a passées sur le trône ont suffi pour lui faire acquérir autant de gloire que son père en avait acquis dans les combats. Ce qui l'a principalement illustrée c'est l'amour qu'elle a montré pour les

arts et les sciences, et la protection qu'elle a accordée à ceux qui les ont cultivés. Elle avait l'esprit extrêmement orné ; huit langues qu'elle a parlées comme la sienne propre, prouvent la facilité dont elle était douée ; enfin elle avait cultivé tous les arts dans un pays où ils étaient, pour ainsi dire, inconnus.

## GERMAN.

A. VON TREUER, ESQ.

### I. Read the following passage :—

Als nun der wohlgebildete Sohn ins Zimmer hereintrat,  
Schaute der Prediger ihm mit scharfen Blicken entgegen,  
Und betrachtete seine Gestalt und sein ganzes Benehmen  
Mit dem Auge des Forschers, der leicht die Mienen enträthelt ;  
Lächelte dann, und sprach zu ihm mit traulichen Worten :  
„Kommt Ihr doch als ein veränderter Mensch ! Ich hab' noch niemals  
Euch so munter gesehen und Eure Blicke so lebhaft.  
Fröhlich kommt Ihr und heiter ; man sieht, Ihr habet die Gaben  
Unter die Armen vertheilt und ihren Segen empfangen.“

### II. Translate the same into English.

### III. Translate into English :—

Als nun der Pfarrer darauf noch weiter zu sprechen geneigt war,  
Und das Schicksal des Manns und der Seinen zu hören verlangte,  
Sagte behend der Gefährte mit heimlichen Worten ins Ohr ihm :  
„Sprecht mit dem Richter nur fort, und bringt das Gespräch auf  
das Mädchen,  
Aber ich gehe herum, sie aufzusuchen, und komme  
Wieder, sobald ich sie finde.“

### IV. Translate into English :—

Denkend schaute Hermann zur Erde ; dann hob er die Blicke  
Ruhig gegen sie auf, und sah ihr freundlich ins Auge,  
Fühlte sich still und getrost.—Jedoch ihr von Liebe zu sprechen,  
Wär' ihm unmöglich gewesen ; ihr Auge blickte nicht Liebe,  
Aber hellen Verstand, und gebot verständig zu reden.—

### V. Translate into English :—

Am Fenster stand die Mutter,  
Im Bette lag der Sohn :—  
„Willst Du nicht aufstehn, Wilhelm,  
Zu schaun die Procession ?“  
„Ich bin so krank, o Mutter,  
Daß ich nicht hör' und seh' ;  
Ich denk an's todte Gretchen,  
Da thut das Herz mir weh.“

## VI. Translate into German :—

Henry Kirke White was a native of Nottingham, and born on the 21st March, 1785. His father was a butcher, and his mother, whose maiden name was Neville, belonged to a respectable family in Staffordshire. Henry was their second son. At the age of three years he was sent to a school, kept by Mrs. Garrington, who taught him to read, and who was the first person to observe his quickness in learning and his extraordinary love for books.

## VII. Conjugate „essen“ in the indicative mood only.

## VIII. Parse the following lines :—

— Thoren sind es,  
Welche suchen in den Sternen,  
Was geschieht wird. —

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# THE SOUTH AUSTRALIAN SCHOLARSHIP EXAMINATION.

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## LATIN.

PROFESSOR KELLY.

Translate—

“Hoc quoque, Tiresia, præter narrata petenti  
 Responde, quibus amissas reparare queam res  
 Artibus atque modis.—Quid rides?”—“Jamne doloso  
 Non satis est Ithacam revehi patriosque penates  
 Adspicere?” “O nulli quidquam mentite, vides, ut  
 Nudus inopsque domum redeam, te vate, neque illic  
 Aut apotheca precis intacta est aut pecus; atqui  
 Et genus et virtus nisi cum re vilior alga est.”  
 “Quando pauperiem missis ambagibus horres,  
 Accipe, qua ratione queas ditescere. Turdus  
 Sive aliud privum dabitur tibi, devolet illuc,  
 Res ubi magna nitet, domino sene; dulcia poma  
 Et quoscunque feret cultus tibi fundus honores  
 Ante larem gustet venerabilior lare dives;  
 Qui quamvis perjurus erit, sine gente, cruentus  
 Sanguine fraterno, fugitivus, ne tamen illi  
 Tu comes exterior, si postulet, ire recuses.”  
 “Utne tegam spurco Damae latus? haud ita Trojæ  
 Me gessi certans semper melioribus.” “Ergo  
 Pauper eris.” “Fortem hoc animum tolerare jubebo;  
 Et quondam majora tuli. Tu protinus, unde  
 Divitias ærisque ruam, dic augur, acervos.”

Also—

Diffugere nives, redeunt jam gramina campis,  
 Arboribusque comæ;  
 Mutat terra vices et decrescencia ripas  
 Flumina prætereunt;  
 Gratia cum Nymphis geminisque sororibus audet  
 Ducere nuda choros.

Immortalia ne speres monet annus et alnum  
 Quæ rapit hora diem.  
 Frigora mitescunt Zephyris ; ver proterit æstas  
 Interitura, simul  
 Pomifer Auctumnus fruges effuderit, et mox  
 Bruma recurrit iners.  
 Damna tamen celeres reparant cœlestia lunæ :  
 Nos, ubi decidimus,  
 Quo pater Æneas, quo dives Tullus et Ancus,  
 Pulvis et umbra sumus.  
 Quis scit an adjiciant hodiernæ crastina summæ  
 Tempora Di superi ?  
 Cuncta manus avidas fugient heredis, amico  
 Quæ dederis animo.  
 Quum semel occideris et de te splendida Minos  
 Fecerit arbitria,  
 Non, Torquate, genus, nonte facundia, non te  
 Restituet pietas ;  
 Infernis neque enim tenebris Diana pudicum  
 Liberat Hippolytum,  
 Nec Lethæa valet Theseus abrumperè caro  
 Vincula Pirithoo.

Also—

Corpora sunt porro partim primordia rerum,  
 Partim concilio quæ constant principiorum.  
 Sed, quæ sunt rerum primordia, nulla potest vis  
 Stringere ; nam solido vincunt ea corpore demum ;  
 Etsi difficile esse videtur credere, quidquam  
 In rebus solido reperiri corpore posse :  
 Transit enim fulmen cœli per sæpta domorum,  
 Clamor ut, ac voces : ferrum candescit in igni ;  
 Dissiliuntque fere ferventi saxa vapore :  
 Collabefactatus rigor auri solvitur æstu :  
 Tum glacies æris, flamma devicta, liquescit :  
 Permanat calor argentum, penetræque frigus :  
 Quando utrumque manu, retinentes pocula rite,  
 Sensimus, infuso lympharum rore superne :  
 Usque adeo in rebus solidi nihil esse videtur.  
 Sed quia vera tamen ratio, naturaque rerum  
 Cogit, ades, pauceis dum versibus expediamus  
 Esse ea, quæ solido atque æterno corpore constant ;  
 Semina quæ rerum, primordiaque, esse docemus :  
 Unde omnis rerum nunc constet summa creata.



Also—

Non vidit Agricola obsessam curiam et clausum armis senatum, et eadem strage tot consularium caedes, tot nobilissimarum feminarum exilia et fugas. Una adhuc victoria Carus Metius censebatur, et intra Albanam arcem sententia Messalini strepebat, et Massa Baebius tum reus erat. Mox nostrae duxere Helvidium in carcerem manus, nos Maurici Rusticique visus, nos innocenti sanguine Senecio perfudit. Nero tamen subtraxit oculos suos, iussitque scelera, non spectavit; praecipua sub Domitiano miseriarum pars erat videre et aspici, quum suspiria nostra subscriberentur, quum denotandis tot hominum palloribus sufficeret saevus ille vultus et rubor, quo se contra pudorem muniebat.

Tu vero felix, Agricola, non vitae tantum claritate, sed etiam opportunitate mortis. Ut perhibent, qui interfuerunt novissimis sermonibus tuis, constans et libens fatum excepisti, tamquam pro virili portione innocentiam principi donares. Sed mihi filiaeque eius praeter acerbitatem parentis crepti auget maestitiam, quod assidere valetudini, fovere deficientem, satiari vultu complexuque non contigit. Excepissemus certe mandata vocesque, quas penitus animo figeremus. Noster hic dolor, nostrum vulnus; nobis tum longae absentiae condicione ante quadriennium amissus est. Omnia sine dubio, optime parentum, assidente amantissima uxore superfuere honori tuo; paucioribus tamen lacrimis compositus es, et novissima in luce desideravere aliquid oculi tui.

Also—

Tertia deinde philosophiae pars, quae erat in ratione et in disserendo, sic tractabatur ab utrisque: quamquam oriretur a sensibus, tamen non esse iudicium veritatis in sensibus. Mentem volebant rerum esse iudicem: solam censebant idoneam, cui crederetur, quia sola cerneret id, quod semper esset simplex et uniusmodi, et tale, quale esset. Hanc illi *ideam* appellabant, iam a Platone ita nominatam, nos recte speciem possumus dicere. Sensus autem omnes hebetes et tardos esse arbitrabantur, nec percipere ullo modo res eas, quae subiectae sensibus viderentur; quae essent aut ita parvae, ut sub sensum cadere non possent; aut ita mobiles et concitatae, ut nihil unquam unum esset constans; ne idem quidem, quia continenter laberentur et fluerent omnia. Itaque hanc omnem partem rerum opinabilem appellabant. Scientiam autem nusquam esse censebant, nisi in animi notionibus atque rationibus: quae de caussa definitiones rerum probabant, et has ad omnia, de quibus disceptabatur, adhibebant.

GREEK.

PROFESSOR KELLY.

I. Translate—

Τὸν δὲ δολοφρονέουσα προσήυδα πότνια "Ἡρη  
 "ἔρχομαι ὀψομένη πολυφόρβου πείρατα γαίης,  
 Ὕκεανόν τε, θεῶν γένεσιν, καὶ μητέρα Τηθῶν,  
 οἳ μ' ἐν σφοῖσι δόμοισιν εὖ τρέφον ἠδ' ἀτίταλλον·  
 τοὺς εἰμ' ὀψομένη, καὶ σφ' ἄκριτα νείκεα λύσω.  
 ἤδη γὰρ δηρὸν χρόνον ἀλλήλων ἀπέχονται  
 εὐνῆς καὶ φιλότητος, ἐπεὶ χόλος ἔμπεσε θυμῷ.  
 ἵπποι δ' ἐν πρυμνωρείῃ πολυτίδακος Ἰδῆς  
 ἑστάσ', οἳ μ' οἴσουσιν ἐπὶ τραφερῆν τε καὶ ὕγρην.  
 νῦν δὲ σεῦ εἵνεκα δεῦρο κατ' Οὐλύμπου τόδ' ἱκάνω,  
 μή πῶς μοι μετέπειτα χολώσῃαι, αἶ' κε σιωπῇ  
 οἴχωμαι πρὸς δῶμα βαθυρρόου Ὕκεανοῖο."

II. Translate—

Τὰ μὲν πυλωρῶν κληθρά μ' εἰσεδέξατο  
 δι' εὐπετείας τειχέων εἴσω μολεῖν.  
 ὃ καὶ δέδοικα μὴ με δικτύων ἔσω  
 λαβόντες οὐκ ἐκφρῶσ' ἀναίμακτον χροῶα.  
 ὦν οὐνεκ' ὄμμα πανταχῇ διοιστέον,  
 κάκεισε καὶ τὸ δεῦρο, μὴ δόλος τις ἦ.  
 ὠπλισμένος δὲ χεῖρα τῷδε φασγάνῳ  
 τὰ πίστ' ἐμαντῷ τοῦ θράσους παρέξομαι.  
 ὦη, τίς οὗτος; ἢ κτύπον φοβούμεθα;  
 ἅπαντα γὰρ τολμῶσι δεινὰ φαίνεται,  
 ὅταν δι' ἐχθρᾶς ποὺς ἀμείβηται χθονός.  
 πέποιθα μέντοι μητρί κοῦ πέποιθ' ἅμα,  
 ἥτις μ' ἔπεισε δεῦρ' ὑπόσπονδον μολεῖν.  
 ἀλλ' ἐγγὺς ἀλκή· βῶμοι γὰρ ἐσχάροι  
 πέλας ἀρείσι, κοῦκ ἔρημα δώματα.  
 φέρ' ἐς σκοτεινὰς περιβολὰς μεθῷ ξίφος,  
 καὶ τάσδ' ἔρωμαι τίνες ἐφιστάσιν δόμοις.  
 ξένοι γυναῖκες, εἶπατ' ἐκ ποίας πάτρας  
 Ἑλληνικοῖσι δώμασιν πελάσσετε.

III. Translate—

"Ἴσως οὖν ἂν τις εἴποι· σιγῶν δὲ καὶ ἡσυχίαν ἄγων, ὦ Σώκρατες,  
 οὐχ οἷός τ' ἔσει ἡμῖν ἐξεληθῶν ζῆν; τοῦτ' ἴσθι πάντων χαλεπώ-  
 τατον πείσθαι τινὰς ὑμῶν. εἰάν τε γὰρ λέγω ὅτι τῷ θεῷ ἀπειθεῖν τοῦτ'  
 ἔσθι καὶ διὰ τοῦτ' ἀδύνατον ἡσυχίαν ἄγειν, οὐ πείσεσθέ μοι ὡς  
 εἰρωνευομένῳ. εἰάν τ' αὖ λέγω ὅτι καὶ τυγχάνει μέγιστον ἀγαθὸν ὄν  
 ἀνθρώπῳ τοῦτο, ἐκάστης ἡμέρας περὶ ἀρετῆς τοὺς λόγους ποιείσθαι  
 καὶ τῶν ἄλλων, περὶ ὧν ὑμεῖς ἐμοῦ ἀκούετε διαλεγόμενον καὶ

εμαντὸν καὶ ἄλλους ἐξετάζοντας, ὁ δὲ ἀνεξέταστος βίος οὐ βιωτὸς ἀνθρώπῳ, ταῦτα δ' ἐπι ἤττον πείσεσθέ μοι λέγοντι. τὰ δὲ ἔχει μὲν οὕτως, ὡς ἐγὼ φημι, ὦ ἄνδρες, πείθειν δὲ οὐκ ἴσθιδιον. καὶ ἐγὼ ἄρ' οὐκ εἴθισμαι ἐμαντὸν ἀξιῶν κακοῦ οὐδενός. εἰ μὲν γὰρ ἦν μοι χρήματα, ἐτιμωσάμην ἂν χρημάτων ὅσα ἐμέλλον ἐκτίσειν. οὐδὲν γὰρ ἂν ἐβλαβην. νῦν δὲ — οὐ γὰρ ἔστιν, εἰ μὴ ἄρα ὅσον ἂν ἐγὼ δυνάιμην ἐκτίσαι, τοσούτου βούλεσθέ μοι τιμῆσαι. ἴσως δ' ἂν δυνάιμην ἐκτίσαι ὑμῖν μῶν ἀργυρίου τοσούτου οὖν τιμῶμαι. Πλάτων δὲ ὅδε, ὦ ἄνδρες Ἀθηναῖοι, καὶ Κρίτων καὶ Κριτόβουλος καὶ Ἀπολλόδορος κελεύουσί με τριάκοντα μῶν τιμῆσθαι, αὐτοὶ δ' ἐγγυᾶσθαι τιμῶμαι οὖν τοσούτου, ἐγγυηταὶ δ' ὑμῖν ἔσονται τοῦ ἀργυρίου οὗτοι ἀξιόχρεοι.

IV. Translate—

Ἐνθένδε μὲν τοίνυν αὐτοὺς ἐξήγαγον οὕτως ἄκοντας, ὡς καθαρῶς οἷς μετὰ ταῦτ' ἐποίουν εἴσεσθε. ἐπειδὴ δὲ ἀφικόμεθ' εἰς Ὀρεὸν καὶ συνειμίξαμεν τῷ Προξένῳ, ἀμελήσαντες οὗτοι τοῦ πλείν καὶ τὰ προστεταγμένα πράττειν ἐπορεύοντο κύκλῳ, καὶ πρὶν εἰς Μακεδονίαν ἐλθεῖν, τρεῖς καὶ ἑκοσιν ἡμέρας ἀνηλώσαμεν τὰς δὲ ἄλλας πάσας καθήμεθ' ἐν Πέλλῃ, πρὶν Φίλιππον ἐλθεῖν, σὺν αἷς ἐπορεύθημεν ὁμοῦ πεντήκονθ' ὄλας. ἐν δὲ τούτῳ Δορίσκοι, Θράκη, τὰ ἐπὶ τειχεῶν, Ἱερὸν ὄρος, πάντα τὰ πράγματα ἐν εἰρήνῃ καὶ σπονδαῖς ἦρει καὶ διωκέϊτο ὁ Φίλιππος, πολλὰ λέγοντος ἐμοῦ καὶ θρυλῶντος αἰεὶ, τὸ μὲν πρῶτον ὡς ἂν εἰς κοινὸν γνώμῃ ἀποφαινομένου, μετὰ ταῦτα δ' ὡς ἀγνοοῦντας διδάσκοντος, τελευτῶντος δὲ ὡς ἂν πρὸς πεπρακότας αὐτοὺς καὶ ἀνοσιωτάτους ἀνθρώπους οὐδὲν ὑποστελλομένου.

V. Translate—

Εἰσὶ γάρ, ὦ παῖ, μάλ' εὖ ἄμουσοι· ἄλλοι δὲ πολὺ κομψότεροι, ὧν μέλλω σοι τὰ μυστήρια λέγειν. ἀρχὴ δέ, ἐξ ἧς καὶ ἂ νῦν δὴ ἐλέγομεν πάντα ἤρτηται, ἦδε αὐτῶν, ὡς τὸ πᾶν κίνησις ἦν καὶ ἄλλο παρὰ τοῦτο οὐδέν, τῆς δὲ κινήσεως δύο εἶδη, πλήθει μὲν ἄπειρον ἑκάτερον, δύναμιν δὲ τὸ μὲν ποιεῖν ἔχον, τὸ δὲ πάσχειν. ἐκ δὲ τῆς τούτων ὁμιλίας τὸ καὶ τρίψεως πρὸς ἄλληλα γίγνεται ἔκγονα πλήθει μὲν ἄπειρα, δίδυμα δέ, τὸ μὲν αἰσθητόν, τὸ δὲ αἰσθησις, αἰεὶ συνεκπίπτουσα καὶ γεννωμένη μετὰ τοῦ αἰσθητοῦ. αἱ μὲν οὖν αἰσθήσεις τὰ τοιαῦδε ἡμῖν ἔχουσιν ὀνόματα, ὄψεις τὲ καὶ ἀκοαὶ καὶ ὀσφρήσεις καὶ ψύξεις τε καὶ καύσεις καὶ ἡδοναὶ γε δὴ καὶ λύπαι καὶ ἐπιθυμίαι καὶ φόβοι κεκλημένα καὶ ἄλλαι, ἀπέραντοι μὲν αἱ ἀνώνυμοι, παμπληθεῖς δὲ αἱ ὀνομασμένα· τὸ δ' αὖ αἰσθητον γένος τούτων ἐκάσταις ὁμόγονοι, ὄψει μὲν χρώματα παντοδαπαῖς παντοδαπά, ἀκοαῖς δὲ ὡσαύτως φωναί, καὶ ταῖς ἄλλαις αἰσθήσεσι τὰ ἄλλα αἰσθητὰ ξηγγενῇ γιγνόμεμα.

## TRANSLATION INTO LATIN.

PROFESSOR KELLY.

Translate into Latin prose—

Hundreds of years ago, in the centre of the City of Rome, there suddenly appeared one morning a deep chasm or pit. No one knew what could have caused it, and no one could fill it up. If earth or stone could have filled it up it would not have remained open long; but although heaps upon heaps of stone and rubbish were cast down, the pit still remained unfilled. The people now began to fear that the gods of Rome might intend to punish the city, and they thought the pit might be a sign of their anger. So they went to the priests to ask them what they ought to do. The high priest replied that the gods had sent the pit in anger to the citizens. "Even though you went on casting in earth for centuries," said he, "the pit would never be closed; it will always remain open until the most precious thing in Rome is cast into it." On learning this the citizens cast in their gold and the women their bracelets and earrings, in the hope that thus they might satisfy the gods and close the pit. But all was in vain, and it seemed as if nothing would be of use. At last a young soldier named Marcus Curtius, clothed in full armour and mounted on his horse, cried out that if a brave man had cast himself into the pit it would have been closed long ago. Saying this he set spurs to his horse and leaped into the pit, which at once closed, and never opened afterwards.

Draw a sketch of the Boeotian territory, and give an account of the part played by its principal cities during the Peloponnesian War.

Write a short history of the origin and development of the Tribunician power in Rome.

"Qui domita nomen ab Africa  
Lucratus rediit."—*Hor.*

To whom do these words refer? Write a short account of the campaign alluded to.

## TRANSLATION INTO GREEK.

PROFESSOR KELLY.

Translate into Greek prose—

"Immediately the whole tribe of frogs who had been watching from a distance, lifted up their voices and began to abuse Jupiter: 'If he had wished to insult us,' cried they, 'he could not have treated us more contemptuously. We should not have minded a strong and somewhat fierce king, even if he had swallowed up a few of us now and then.

Anything would be better than this do-nothing, this King Log. Why may not we have a king as the birds and beasts have? Jupiter should not have treated us thus; he might at least have sent us no king, instead of thus insulting us. We will pray to him no more until he sends us a real king.' So the frogs shut up all their temples, and for a whole day would say no more prayers to Jupiter. But at the end of the day there suddenly hopped down into the pond a monstrous stork to be their king. He began by gobbling up a dozen of the noisiest frogs, and ordered that no frog should croak in any part of the pond while he was asleep. This pleased the rest, who said, 'Now we shall have order; it is worth while having a strong king that we may have peace and quiet.' But when they came swimming round him next morning, to pay their respects, and to ask him to judge their disputes, he would not hear them but ate them up by scores, quiet and noisy alike, choosing the fattest. So now the frogs saw they had made a mistake, and they said, 'If we were once rid of King Stork we would not find fault with King Log, and indeed we could be content to have no king at all.'

What are the rules of *oratio obliqua* in Greek? What are the meanings and constructions of the phrases—*ἐφ' ᾧτε, καίπερ, εἰ γάρ, ὡς ὄφελον, ἄλλο τι ἢ*; ?

Join the particle *ἄν* with each of the different moods and tenses of *πέιθω* with which it may be used, and write down the translation of each.

Analyse philologically the words *δέσποινα, γέντο, τίθεμεν*, gender; and exemplify Grimm's Law by quoting the English equivalents for *φύω, γύνη, πᾶν, δόμος, κύων, θέμις, δρύς*.

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## ENGLISH COMPOSITION.

PROFESSOR DAVIDSON.

- I. What special rules ought always to be observed in the construction of sentences, and in the arrangement of paragraphs and chapters?
- II. In the criticism of Poetry, by what general rules would you be guided in your approval or censure of the Diction? Distinguish these from those which are applicable to Prose Diction.
- III. Name the Figures of Speech.  
Give an illustration of each.  
Specify some of the circumstances in which they are respectively appropriate.

IV. Write an essay on one of the following subjects :—

*a* "The Revolution of A.D. 1688."

*b* "English Literature in the Age of Queen Anne."

*c* "The History of the Colonization of Australasia."

*d* "The Advantages and Responsibilities of a system of National Education."

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# The University of Adelaide.

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## ANNUAL REPORT FOR THE YEAR 1880.

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To His Excellency Sir WILLIAM FRANCIS DRUMMOND JERVOIS, Major-General in Her Majesty's Army, Knight Grand Cross of the Most Distinguished Order of Saint Michael and Saint George, Companion of the Most Honourable Order of the Bath, Governor and Commander-in-Chief in and over the Province of South Australia and the Dependencies thereof, &c., &c., &c.

The Council of The University of Adelaide have the honour to present to your Excellency the following Report of the Proceedings of the University during the year 1880:—

### CHANGES IN THE COUNCIL.

In the month of November—

William Gosse, Esq., M.D., F.R.C.S., England.

Adolph von Treuer, Esq., LL.B.,

Horace Lamb, Esq., M.A., Elder Professor of Mathematics,

The Rev. George Henry Farr, M.A.,

and

John Davies Thomas, Esq., M.D., F.R.C.S. England,

in conformity with the provisions of the Adelaide University Act, ceased to hold office as members of this Council.

On the 1st of December the Senate re-elected them.

### ADMISSIONS TO DEGREES.

Messrs. Stirling Smeaton, Hans Hamilton Mack, Percy Ansell Robin, and James Henderson, having severally completed their undergraduate course, were admitted to the Degree of Bachelor of Arts.

Messrs. James Alexander Greer Hamilton, M.B., T.C.D., and William Lennox Cleland, M.B., Edinburgh, were admitted *ad eundem*.

## UNIVERSITY BUILDING.

The contractors have delivered up the Laboratories, the Museum, portion of the Staircase Hall on the ground floor, and the Basement throughout. Such progress has been made with the remainder of the work that it is anticipated that the whole building will be finished before the 1st of July next.

A contract for the execution, at a cost of £1,355 4s., of various improvements in the interior of the building has been entered into, and steps to procure the necessary furniture and fittings have been taken.

## ROYAL LETTERS PATENT.

The Adelaide University Act Amendment Act, amending the Adelaide University Act in the manner suggested by the Secretary of State for the Colonies, was forwarded to him in 1879, with a request that he would reconsider his refusal to advise Her Majesty to recognise the Degrees of Bachelor and Doctor of Science, and Degrees conferred on Women. The Secretary of State for the Colonies reconsidered the matter, and intimated that he would advise Her Majesty to extend the scope of the Letters Patent, so that the University might be authorized to confer Degrees on Women, and that Degrees in Science granted by it might be duly recognised; but that it would be necessary to defer the preparation of the Letters Patent until a further Act had been passed repealing the third section of the Act of 1879, and again giving power to the University to confer the Degrees of Bachelor of Science and Doctor of Science.

An Act effecting the requisite alterations of the law was passed during the last Session of Parliament, and the Council expect that Letters Patent will be issued without further delay.

The Council beg to thank your Excellency for having, by your exertions and influence, materially assisted them in their efforts to obtain the desired extension of the Letters Patent.

## CADETSHIPS AT THE ROYAL MILITARY COLLEGE.

Her Majesty's Government have consented to allow the allocation of one cadetship per annum at the Royal Military College to students of such of the Colonial Universities as have received a charter by Letters Patent; and have left it to each University to make the nomination after testing the candidates in such a manner as may seem to be the most satisfactory.

## ENDOWMENTS.

Sir Thomas Elder has paid the sum of £20,000, which he had covenanted to contribute towards the maintenance of the University, and at the Council's request has consented to the alteration of the trust-deed so as to permit the investment of the money in the purchase or on first mortgages of freehold lands and buildings in South Australia. Her Majesty's Government have assented to the alterations.



## STUDENTS AND CLASS-LISTS.

In 1880 eleven students matriculated; three completed the first year, four the second year, and one the third year of their studies for the Degree of B.A.

Besides those studying for Degrees fifty-six students attended various courses of lectures. Of these students thirty-two were ladies, and many of them came from the Training College to study Chemistry and Elementary Physics.

The results of the Ordinary and Matriculation Examinations appear in the Class-Lists in Appendix A to this report.

## MATRICULATION EXAMINATIONS.

Eighteen candidates entered themselves for the Matriculation Examination in March, and forty-one for that in December. Of the candidates in March five passed in the First Class and five in the Second. In December ten candidates passed in the First and eighteen in the Second Class.

## UNIVERSITY PRIMARY EXAMINATION.

For the third annual examination, which was held in December, fifty-six candidates, of whom twenty were girls, entered themselves for examination; and thirty, of whom eleven were girls, passed. Three candidates passed in the First Class, fifteen candidates in the Second, and twelve in the Third.

In Appendix B will be found the class-lists showing the number of candidates who passed in the various optional subjects.

## SCHOLARSHIPS.

The examination for the South Australian Scholarship was conducted by Professors Kelly and Davidson in December. Percy Ansell Robin—a Bachelor of Arts of this University—was the only candidate for the Scholarship, and the Council have recommended that it shall be awarded to him.

The Statutes for founding the “John Howard Clark” Scholarships have been passed by the Council, approved by the Senate, and allowed and countersigned by your Excellency.

## FEES.

Statutes altering the Term Fees so as to equalize the payments by all classes of students, have been passed, approved, and allowed.

REPRESENTATION OF THE UNIVERSITY ON THE BOARD OF GOVERNORS  
OF THE SOUTH AUSTRALIAN INSTITUTE.

The Statutes necessary for carrying out the “South Australian Institute Act Amendment Act, 1879” having come into operation, the first meeting of the University to elect two of its members to be members of

the Board of Governors of the South Australian Institute was held in the month of May last, and resulted in the election of the Vice-Chancellor and the Rev. John Crawford Woods, B.A. On the expiration of their term of office, in October, they were re-elected.

ACCOUNTS.

An abstract, duly audited, of the income and expenditure during the year 1880 is annexed to this report.

Signed on behalf of the Council,

A. ADELAIDE,

Chancellor of The University of Adelaide.

Adelaide, January 11th, 1881.

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## APPENDIX A.

### CLASS LISTS.

#### I. MATRICULATION EXAMINATION, MARCH.

##### *First Class.*

(In order of merit.)

Murray, George John Robert—1, 5	Last place of Education. St. Peter's College
Wilson, Charles Stanley—1, 2, 6	Glenelg Grammar School
Kingsmill, Walter—1	St. Peter's College
Hutchinson, Orlando Bingham—1, 5	St. Peter's College
Kerr, Donald Alexander—1	St. Peter's College

##### *Second Class.*

(In alphabetical order.)

Brown, Robert Home—2	North Adelaide Grammar School
Cruickshank, Robert—2	North Adelaide Grammar School
Evan, Griffith Mostyn—2	Prince Alfred College
Hinson, Stanley—3	Dulwich College
Woods, Julian Edmund	Private tuition

The figures attached to the name of any candidate show in which, if any, of the *optional* subjects the candidate passed, as follow :—

1 Passed in Greek	4 Passed in Natural Philosophy
2 " German	5 " Chemistry
3 " French	6 " Natural History.

*Eighteen Candidates, of whom eight failed in the Compulsory Subjects, presented themselves at this Examination. The following Table shows the Number of Candidates who presented themselves for, and of those who (having passed in the Compulsory Subjects), passed also in various Optional Subjects :—*

Optional Subjects.	No. of Boys entered.	No. of Boys Passed.
Greek ... ..	6	5
French ... ..	2	1
German ... ..	6	4
Chemistry ... ..	4	2
Natural Philosophy ... ..	None	
Natural History ... ..	4	1

N. B.—No Girls entered themselves for examination.

II. MATRICULATION EXAMINATION, DECEMBER.

*First Class.*

(In order of merit.)

<p>{ Currie, Thomas—1, 2, 5          { Laycock, William—1, 2          { Williams, Frances Elizabeth—3, 6</p> <p>{ Hopkins, William Fleming—1, 6          { Piper, Arthur William—2, 5          Leitch, James Westwood—2, 5          Robin, Charles Ernest—2, 5          { Colton, Frank Septimus—2, 5          { Goyder, Alick Woodroffe—2, 5          Hill, Alfred William—2, 5</p>	<p>Last place of Education.          St. Peter's College          St. Peter's College          Mr. Hacket (North Adelaide          Grammar School)          Glenelg Grammar School          Prince Alfred College          Prince Alfred College          Prince Alfred College          Prince Alfred College          Prince Alfred College          Prince Alfred College</p>
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*Second Class.*

(In alphabetical order.)

<p>Bennett, Thomas Charles—2          Botten, Joseph          Castle, Robert Andrew Carr          Counsell, Frank Hedley—2, 5          Downer, George Henry—2          Evan, Dudley Gwynne—2          Hunt, Henry William          Joyner, Frederick Allen          May, Guy Morphett—2          Nootnagel, Albert Herman</p> <p>Oldham, Reginald Vautin          Praagst, Lionel Francis—3, 5          Rogers, Oliver Herbert—5          Rowley, Frederick Pelham          Scrymgour, Bernard Vincent—2          Sewell, Charles Edward          Tomkinson, Henry Palmerston          Wilson, Algernon Theodore King</p>	<p>Prince Alfred College          North Adelaide Grammar School          North Adelaide Grammar School          Prince Alfred College          St. Peter's College          Prince Alfred College          Private tuition          North Adelaide Grammar School          St. Peter's College          Central Model School and private          tuition by Mr. Parsons          Private tuition          Prince Alfred College          Prince Alfred College          North Adelaide Grammar School          Prince Alfred College          Private tuition          Haileybury          St. Peter's College</p>
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The figures attached to the name of any candidate show in which, if any, of the *optional* subjects the candidate passed, as follows:—

- |   |  |  |
|---|--|--|
| <p>1. Passed in Greek<br/>         2. " German<br/>         3. " French</p> |  | <p>4. Passed in Natural Philosophy<br/>         5. " Chemistry<br/>         6. " Natural History</p> |
|---|--|--|

*Forty Candidates, of whom twelve failed in the Compulsory Subjects, presented themselves at this Examination. The following Table shows the Number of Candidates who entered themselves for, and of those who (having passed in the Compulsory Subjects), passed also in various Optional Subjects :—*

Optional Subjects.	No. of Girls entered.	Girls passed.	No. of Boys entered.	Boys Passed.
Greek ... ..	None.		8	3
French ... ..	1	1	2	1
German ... ..	None.		19	14
Chemistry ....	None.		16	10
Natural Philosophy ... ..	None.		1	None.
Natural History ... ..	1	1	12	1

N.B.--Only one Girl entered for examination.

III. LIST OF STUDENTS WHO MATRICULATED.

Burnard, Richard Thomas	Teichelmann, Ebenezer
Counsell, Walter Samuel	Threlfall, Arthur Cresswell
Gething, William John	Uffindell, Henry Walter
Hosking, Edwin William Gluyas	Wilson, Charles Stanley
Kerr, Donald Alexander	Woods, Julian Edmund
Neale, William Lewis	

MARCH,

IV. FIRST ORDINARY EXAMINATION FOR THE DEGREE OF B.A.

The undermentioned Students passed the examination.

Cooke, William Ernest	Moore, Edwin Canton
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NOVEMBER,

V. ORDINARY EXAMINATION FOR THE DEGREE OF B.A.

The undermentioned Students passed the examination, and were placed in various classes as follows :—

YEAR.	NAME.	CLASS.
First	Kerr, Donald Alexander	First
Second	Clare, William	First
Second	Holder, Sydney Ernest	First
Second	Gill, Alfred	Second
Second	Rogers, Richard Sanders	Second
Third	Donaldson, Arthur	First

VI. LIST OF STUDENTS NOT STUDYING FOR A DEGREE WHO PASSED IN VARIOUS SUBJECTS AT THE ORDINARY EXAMINATION IN NOVEMBER.

LATIN AND ELEMENTARY GREEK.	Gilbert Marie Jerome
Morcombe, Thomas Yelland	Rodgers, Thomas
NATURAL PHILOSOPHY (ELEMENTARY).	* West, William Arthur
Arnold, Ellen	CHEMISTRY.
Bray, James Henry	* Cook, Edith Agnes
Cherry, William Herbert	* Eckersley, William Henry
Eckersley, William Henry	Fairweather, Francis
Espie, Margaret	Lewis, Frances Sescadorowna
Fairweather, Francis	Price, Elizabeth
George, John Henry	* West, William Arthur

\* An asterisk denotes that the student to whose name it is prefixed passed *with credit*.

VII. Table showing the subjects of the Courses of Lectures and Examinations attended by students not studying for Degrees and the numbers who attended the Lectures and passed the examinations in those subjects :—

Subjects.	Number attending Lectures.	Of whom entered themselves for the Ordinary Examination.	Number passed.
English Literature ...	17	None	
Latin ... ..	4	3	1
Elementary Greek ...	5	3	1
Elementary Mathematics..	None		
Natural Philosophy (Elementary)	27	24	10
Inorganic Chemistry ...	24	6	6

VIII. Holders of the South Australian Scholarship :—

1879—Thomas Hudson Beare.

1880—Percy Ansell Robin, B.A.



## APPENDIX B.

UNIVERSITY PRIMARY EXAMINATION.  
DECEMBER.

## PART I.—CLASS LISTS.

*First Class.*

(In order of merit.)

	SCHOOL.
Chewings, Henry—A*, D*, E.1, 5*	Prince Alfred College
Tucker, William Edgcombe—A, D*, E.1*, 5	Prince Alfred College
Cross, Edith Lucy Mary—A*, C*, E.5	Mrs. Bickford's

*Second Class.*

(In alphabetical order)

	SCHOOL.
Balk, Auguste Anna—A°, C.2°, E.5	Mrs. Marcus's
Cock, Nicholas John—A, D, E.5	Prince Alfred College
Forster, William James—A, D, E.5	Prince Alfred College
Hanson, Edith Annie—A°, C.1°, E.5	Mrs. DeMole's, Glenelg
Harwood, Alice Mary—A*, E.1, 5	Kapunda Model School
Longson, Henry Abraham—A, E.1, D	North Adelaide Grammar School
Mellor, James Taylor—A, D°, E.5	Prince Alfred College
Meyrick, Morgan—A°, E.1	Prince Alfred College
Raymond, Arthur Hartley—A, D, E.5	Prince Alfred College
Robin, Arthur Falconer—A°, D, E.5	Prince Alfred College
Sandover, Alfred—A, B.1, D, E.5	North Adelaide Grammar School
Sibley, Nicholls Joseph—A, D, E.5	Prince Alfred College
Stapleton, Frank Lawrence—A, D°, E.1, 5	Prince Alfred College
Tate, Frances Anne—A, E 3*, 5	Advanced School for Girls
Tomkinson, Mary Harriet—A°, C.1°, E.5	Miss Meek's

*Third Class.*

(In alphabetical order)

	SCHOOL.
Alexander, Elizabeth Jane—A*, E.5	Kapunda Model School
Cayley, Herbert Neame—A*, E.5	Prince Alfred College
Downer, Marion Jane—A°, E.5	Advanced School for Girls
Fowler, James Richard—B.1, D.	Prince Alfred College
Gazard, Esther Emma—A*, E.5	Advanced School for Girls
Grasby, Mary Ellen—A*, E.5	Advanced School for Girls
Henning, Andrew Harriet—A, D.	Prince Alfred College
Kelly, Spencer—E.5	Glenelg Grammar School
Mead, Lilian Staple—C 1, E.5	Advanced School for Girls
Melrose, Alexander—A*, E.5	Prince Alfred College
Moffatt, John Gerald Gordon—E.5	Norwood Model School
Wilcox, Sidney—E 5	Glenelg Grammar School

In the foregoing Lists an asterisk denotes that the subject represented by the letter to which the asterisk is attached, and the letters and figures set opposite a Candidate's name denote that the Candidate passed in the *optional* subjects thereby represented, as follows:—

A. —English  
B. 1—Latin  
C. —French and German  
C. 1—French  
C. 2—German

D. —Mathematics  
E. 1—Chemistry  
E. 3—Botany  
E. 5—Physical Geography

PART II.—Of fifty-six Candidates entered for this Examination one was absent, and fifty-five, of whom twenty-five failed in the Compulsory subjects, presented themselves at it. Of the remaining thirty none failed to satisfy the Examiners in one of the Optional Subjects. The following Table shows the Number of Candidates who entered themselves for, and of those who, (having passed in the Compulsory subjects), passed also in various Optional Subjects:—

Optional Subjects.	No. of Boys entered.	No of Girls entered.	Total.	Boys passed.	Girls passed.	Total.
English ... ..	29	18	47	15	10	25
Latin ... ..	5	None	5	3		3
Greek ... ..	None	None				
French ... ..	None	9	9		4	4
German ... ..	1	3	4	None	2	2
Mathematics ... ..	29	1	30	13	None	13
Chemistry ... ..	27	3	30	4	1	5
Elementary Physics ...	None	None				
Botany ... ..	None	1	1		1	1
Zoology ... ..	None	None				
Physical Geography ...	34	20	54	15	11	26
Animal Physiology ...	None	None				

